COPY-Application Methodist Healthcare-Memphis Hospitals

CN1310-043

MethodistSM
Healthcare

NOV 13 '13 AM 11:16

November 12, 2013

Melanie Hill
Executive Director
State of Tennessee
Health Services and Development Agency
502 Deaderick Street – 9th Floor
Nashville, TN 37243

Dear Ms. Hill:

Methodist Healthcare, centered in Shelby County, is one of Tennessee's largest healthcare providers. Methodist Healthcare's principal acute care subsidiary organization is Methodist Healthcare--Memphis Hospitals that owns and operates five Shelby County hospitals. Methodist is filing two certificates of need in November 2013 as follows:

1) Methodist Healthcare –Memphis Hospitals proposes to establish an integrated comprehensive cancer center under the name WEST CANCER CENTER as an outpatient department of the hospital. The project will include a full array of cancer services and programs.

2) Le Bonheur Children's Hospital proposes to establish a pediatric outpatient center which will be operated as a department of the hospital. The center will include a full array of pediatric outpatient diagnostic, treatment and therapy services.

Enclosed in triplicate are the CON applications for the project, the affidavits with original signature and the checks for the filing fees. The Publication of Intent for this project was filed in the Commercial Appeal on November 8, 2013. Please let us know if you have any questions or need additional information.

Sincerely,

Carol Weidenhoffer

Carol Weidenhoffer
Corporate Director of Planning, Research & Business Development

Cc: Byron Trauger

1407 Union Avenue, Suite 300 • Memphis, Tennessee 38104 • www.methodisthealth.org

THIS CHECK IS VOID WITHOUT A BLUE & RED BACKGROUND AND A TRUE WATERMARK - HOLD UP TO THE LIGHT TO VERIFY

Methodist. Le Bonheur Healthcare

MH - MEMPHIS HOSPITALS
STE 702 CREWS WING (901)516-0625
1265 UNION AVENUE
MEMPHIS TN 38104

WELLS FARGO BANK

02065209 9
66-156/531

DATE :NOV 12 2013

$45,000.00

PAY:*** FORTY-FIVE THOUSAND ***

Void After 90 Days From Check Date

TO THE ORDER OF
STATE OF TENNESSEE HEALTH
SERVICES & DEVELOPMENT AGENCY
502 DEADERICK ST
NASHVILLE TN 37242-0200

THANK YOU FOR YOUR PAYMENT

Health Services and Dev Agency
Office 31607001

Receipt #: 11142828
PAID: 11/13/2013
Batch #: 559253
Trans #: 2
HA01 CON Filing Fees $45,000.00
Check 21 $45,000.00

CHECK IS PRINTED ON SECURITY PAPER WHICH INCLUDES FLUORESCENT & VISIBLE FIBERS, BORDER CONTAINS MICROPRINTING

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STATE OF TENNESSEE
Health Services and Dev Agency
Office 31607001
11/13/2013 11:15 AM

Cashier: annlr0811001
Batch #: 559253
Trans #: 2
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Receipt #: 11142828
HA01 CON Filing Fees $45,000.00
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Transaction Total: $45,000.00

Check 21 $45,000.00

Thank you for your payment.
Have a nice day!

CN1311-043

NOV 13 '13 AM 11:23

METHODIST HEALTHCARE – MEMPHIS HOSPITALS

CERTIFICATE OF NEED APPLICATION TO ESTABLISH THE WEST CANCER CENTER – AN INTEGRATED COMPREHENSIVE CANCER CENTER

MEMPHIS, SHELBY COUNTY

Filed November 2013

NOV 13 '13 AM 11:23

1. Name of Facility, Agency, or Institution

Methodist Healthcare–Memphis Hospitals
Name

1265 Union Avenue — Shelby County

Memphis — City | TN — State | 38104 — Zip Code

2. Contact Person Available for Responses to Questions

Carol Weidenhoffer — Name
Corporate Director of Planning, Research and Business Development — Title

Methodist Le Bonheur Healthcare — Company Name
Carol.Weidenhoffer@mlh.org — E-mail address

1407 Union Avenue, Suite 300 — Street or Route
Memphis — City
TN — State
38104 — Zip Code

Employee — Association with Owner
901-516-0679 — Phone Number
901-516-0621 — Fax Number

3. Owner of the Facility, Agency or Institution See Attachment A:3

Methodist Healthcare–Memphis Hospitals — Name
901-516-0546 — Phone Number

1211 Union Avenue, Suite 700 — Street or Route
Shelby — County

Memphis — City | TN — State | 38104 — Zip Code

4. Type of Ownership of Control (Check One) See Attachment A:4

A.	Sole Proprietorship		F.	Governmental (State of TN or Political Subdivision)	
B.	Partnership		G.	Joint Venture	
C.	Limited Partnership		H.	Limited Liability Company	
D.	Corporation (For Profit)		I.	Other (Specify)	
E.	Corporation (Not-for-Profit)	X			

PUT ALL ATTACHMENTS AT THE BACK OF THE APPLICATION IN ORDER AND REFERENCE THE APPLICABLE ITEM NUMBER ON ALL ATTACHMENTS.

5. Name of Management/Operating Entity (If Applicable)

Not Applicable
Name

Street or Route

County

City

State

Zip Code

PUT ALL ATTACHMENTS AT THE END OF THE APPLICATION IN ORDER AND REFERENCE THE APPLICABLE ITEM NUMBER ON ALL ATTACHMENTS.

6. Legal Interest in the Site of the Institution (Check One) See Attachment A:6

A.	Ownership	X	D.	Option to Lease	
B.	Option to Purchase		E.	Other (Specify)	
C.	Lease of ____ Years				

PUT ALL ATTACHMENTS AT THE BACK OF THE APPLICATION IN ORDER AND REFERENCE THE APPLICABLE ITEM NUMBER ON ALL ATTACHMENTS.

7. Type of Institution (Check as appropriate—more than one response may apply)

A.	Hospital Hospital Outpatient Department	X	I.	Nursing Home	
B.	Ambulatory Surgical Treatment Center (ASTC), Multi-Specialty		J.	Outpatient Diagnostic Center	
C.	ASTC, Single Specialty		K.	Recuperation Center	
D.	Home Health Agency		L.	Rehabilitation Facility	
E.	Hospice		M.	Residential Hospice	
F.	Mental Health Hospital		N.	Non-Residential Methadone Facility	
G.	Mental Health Residential Treatment Facility		O.	Birthing Center	
H.	Mental Retardation Institutional Habilitation Facility (ICF/MR)		P.	Other Outpatient Facility (Specify)	
			Q.	Other Specify	

8. Purpose of Review (Check) as appropriate—more than one response may apply)

A.	New Institution		G.	Change in Bed Complement [Please note the type of change by underlining the appropriate response: Increase, Decrease, Designation, Distribution, Conversion, Relocation]	
B.	Replacement/Existing Facility				
C.	Modification/Existing Facility	X			
D.	Initiation of Health Care Service as defined in TCA § 68-11-1607(4) (Specify)		H.	Change of Location	X
E.	Discontinuance of OB Services		I.	Other (Specify)	
F.	Acquisition of Equipment MRI, LINAC.	X			

9. Bed Complement Data

Please indicate current and proposed distribution and certification of facility beds.

		Current Licensed	Beds *CON	Staffed Beds	Beds Proposed	TOTAL Beds at Completion
A.	Medical	1,015		763		1,015
B.	Surgical					
C.	Long-Term Care Hospital					
D.	Obstetrical	69		69		69
E.	ICU/CCU	204		204		204
F.	Neonatal	90		90		90
G.	Pediatric	171		171		171
H.	Adult Psychiatric	34		34		34
I.	Geriatric Psychiatric					
J.	Child/Adolescent Psychiatric					
K.	Rehabilitation					
L.	Nursing Facility (non-Medicaid Certified)					
M.	Nursing Facility Level 1 (Medicaid only)					
N.	Nursing Facility Level 2 (Medicare only)					
O.	Nursing Facility Level 2 (dually certified Medicaid/Medicare)					
P.	ICF/MR					
Q.	Adult Chemical Dependency					
R.	Child and Adolescent Chemical Dependency					
S.	Swing Beds					
T.	Mental Health Residential Treatment					
U.	Residential Hospice					
	TOTAL	**1,583**		**1,331**		**1,583**

*CON-Beds approved but not yet in service

10. Medicare Provider Number 44-0049

Certification Type Acute Care Facility

11. Medicaid Provider Number 44-0049

Certification Type Acute Care Facility

12. If this is a new facility, will certification be sought for Medicare and/or Medicaid?

The applicant, Methodist Healthcare–Memphis Hospitals, is a healthcare provider that operates five Shelby County hospitals under a single license. The system is certified for both Medicare and TennCare/Medicaid; and the system's acute care provider numbers cover all five hospitals.

13. Identify all TennCare Managed Care Organizations/Behavioral Health Organizations (MCO's/BHO's) operating in the proposed service area. Will this project involve the treatment of TennCare participants? If the response to this item is yes, please identify all MCO's/BHO's with which the applicant has contracted or plans to contract. Discuss any out-of-network relationships in place with MCO's/BHO's in the area.

The Tennessee MCO's/BHO's operating in the project service area are United Healthcare offering Americhoice and Dual Complete (a Special Needs Plan) and Blue Cross Blue Shield offering Blue Care and TennCare Select. The project service area also includes DeSoto and Marshall counties in Mississippi and Crittenden County in Arkansas, where Medicaid is available.

All of Methodist Healthcare's hospitals treat TennCare participants under the system's TennCare contracts. Methodist Healthcare–Memphis Hospitals contracts with United Healthcare, Blue Cross Blue Shield and Medicaid providers in adjoining States.

NOTE: **Section B** is intended to give the applicant an opportunity to describe the project and to discuss the need that the applicant sees for the project. **Section C** addresses how the project relates to the Certificate of Need criteria of Need, Economic Feasibility, and the Contribution to the Orderly Development of Health Care. **Discussions on how the application relates to the criteria should not take place in this section unless otherwise specified.**

SECTION B: PROJECT DESCRIPTION

Please answer all questions on 8 1/2" x 11" white paper, clearly typed and spaced, identified correctly and in the correct sequence. In answering, please type the question and the response. All exhibits and tables must be attached to the end of the application in correct sequence identifying the questions(s) to which they refer. If a particular question does not apply to your project, indicate "Not Applicable (NA)" after that question.

I. Provide a brief executive summary of the project not to exceed two pages. Topics to be included in the executive summary are a brief description of proposed services and equipment, ownership structure, service area, need, existing resources, project cost, funding, financial feasibility and staffing.

Proposed Services and Equipment

- This project is for the establishment of an integrated comprehensive cancer center – The West Cancer Center. The mission is to enhance the care for cancer patients in the Mid-South by decreasing disparities, enhancing access and improving outcomes in a meaningful way.
- The proposed project will integrate and consolidate multiple sites of cancer care owned and operated by Methodist Healthcare-Memphis Hospitals (Methodist) and the West Clinic. The sites affected by this project are two Methodist ambulatory sites for cancer services – the Methodist Breast Center and the Radiation Oncology Center, the West Clinic's flagship cancer center on Humphreys which contains Methodist hospital-based services and the Comprehensive Breast Center operated by the West Clinic which will integrate with Methodist's hospital-based services.
- The center will house both hospital-based services operated by Methodist, as well as and physician, clinical research and administrative offices owned by the West Clinic and the University of Tennessee Health Science Center (UTHSC). Methodist, the West Clinic and the UTHSC entered into an affiliation agreement in 2011 to transform cancer care in the Mid-South. Together, the three organizations are advancing efforts to provide leading-edge treatment, extensive clinical trials and cutting-edge research in the fight against cancer.
- This project includes the relocation of existing hospital-based major moveable equipment operated by Methodist including two CT units, an MRI and a PET/CT from the West Clinic on Humphreys and a linear accelerator (LINAC) and CT simulator from the Methodist Radiation Oncology Center on Germantown Parkway. This is not additional equipment for the service area and is all located within a 4-mile radius of the project site – the equipment will continue to serve the same community. The project proposes to add a second LINAC based on need as outlined in the application.

Ownership Structure

- The applicant, Methodist Healthcare–Memphis Hospitals (Methodist), is a not-for-profit corporation that operates five Shelby County hospitals under a single license. The applicant is a wholly-owned subsidiary of a broader parent organization, Methodist Healthcare, which is a not-for-profit corporation with ownership and operating interests in health care facilities in West Tennessee, North Mississippi and East Arkansas.

Service Area

- The designated service area for the project is Shelby, Fayette and Tipton counties in Tennessee, DeSoto and Marshall counties in Mississippi and Crittenden County in Arkansas.

Need

- The most notable demographic changes in the service area over the last ten years have been the rapid population growth of suburban and exurban areas and the aging of the population. It is significant that the area population aged 65 years and older - the group that most needs health and cancer care - accounts for 85% of the total population growth. The number of people 65 and older will increase in the next ten years by more than 67,500 persons, or 45%.
- The aging of the population is significant for this project because cancer incidence and mortality rates increase exponentially with advancing age. Cancer incidence rates nationally for people over 65 are nine

times higher than rates for younger people; and cancer mortality rates are eighteen times higher. Communities within the service area already exceed state and national cancer incidence and mortality rates. Methodist must prepare an efficient and cohesive cancer care system for the increase in cancer cases.

- Additionally, there are significant racial disparities in cancer rates for Shelby County and the surrounding communities. Research shows that the black population tends to have higher occurrences of cancer as compared to whites, and blacks in the community die disproportionately from all cancers when compared to other races. In further analyses, it was determined that death rates from breast cancer and lung/bronchus cancer were the highest cancer mortality rates for Shelby County - again with prevalent racial disparity. Furthermore, in a recent study, Memphis was identified as the city with the largest disparity in breast cancer mortality rates between black and white women. There is a need for outreach, screening and education in the black communities to eliminate the disparities and reduce the number of deaths.

- Methodist demonstrates a growing need for an additional LINAC based on current and projected utilization. The hospital-based unit in Germantown performs more than 11,000 procedures annually as compared to 8,736 which is the State Health Plan's definition of full capacity – this is 130% of full capacity. Projected growth in cancer incidence alone will overburden Methodist's LINAC services. Planned regional outreach efforts could increase the average number of procedures well beyond manageable capacity. Methodist must add LINAC capacity to continue its mission.

- Cost controls are increasingly part of the quality conversation in health care. The systematic identification and elimination of waste while maintaining or improving quality is imperative for future success. The truly integrated care delivery model is the foundation for innovative reimbursement and value-based models such as episodes of care, bundled payments and even an oncology medical home. It is important to have the right cancer related services, including the additional LINAC, with the appropriate capacity to succeed in managing costs and creating risk-based models for the rising cancer incidence and mortality rates.

Existing Resources

- Local health care systems have made significant efforts to build partnerships and pursue collaborative systems of care in the past, yet a significant portion of cancer care delivery in the market is still fragmented. Chemotherapeutic infusion, radiation oncology, cancer specific surgery, interventional radiology and medical oncology services are still delivered in different locations with weak coordination and collaboration. Cancer providers must decrease the fractionization with integrated multidisciplinary clinics.

- The combined average utilization of the existing nine LINAC units in the service area is 6,596 in 2012 (excluding St. Jude Children's Hospital) which is well above the 6,000 threshold.

Project Cost, Funding, Feasibility

- The project cost of $60,554,193 will be funded in cash by the applicant's parent, Methodist Healthcare. Methodist Healthcare is, and will remain, financially viable.

Staffing

- Staffing will not be increased with this project. Efficiencies gained from the new delivery models will support the redeployment of personnel in positions that are no longer needed into other aspects of the cancer delivery system.

Provide a detailed narrative of the project by addressing the following items as they relate to the proposal.

A. Describe the construction, modification and/or renovation of the facility (exclusive of major medical equipment covered by T.C.A. § 68-11-1601 et seq.) including square footage, major operational areas, room configuration, etc.

1. Overview of the Project

This project is for the establishment of an integrated comprehensive cancer center. The key attribute of such a center is the ability to cohesively coordinate and integrate all aspects of state-of-the-art cancer care. These aspects include clinical research, collaborative patient care, education, prevention dissemination and community outreach programs.

The new location is an existing, freestanding three-story building located on Wolf River Boulevard near the Germantown Parkway intersection in Germantown, Tennessee. The building currently houses the Methodist Germantown Breast Center. The building will be owned by Methodist Healthcare-Memphis Hospitals. The proposed project is an integrated comprehensive cancer center that will consolidate multiple freestanding ambulatory sites – all of which are located within a 4-mile radius of the project site. The center will be named the West Cancer Center and will house both hospital-based services operated by Methodist, as well as physician, clinical research and administrative offices owned by the West Clinic and the UTHSC.

Just to clarify the entities that will be housed in this building - Methodist, the West Clinic and the UTHSC entered into an affiliation agreement in 2011 to transform cancer care in the Mid-South. The West Clinic is the region's premier cancer practice and is a nationally-recognized leader in cancer research. The West Clinic currently has over 30 physicians in multidisciplinary specialties and multiple locations in Tennessee, Mississippi and Arkansas providing services to include medical oncology/hematology, gynecologic oncology, blood cell transplants, diagnostic and interventional radiology, metabolic bone disease/endocrinology, clinical psychology, pain and palliative care, radiation oncology, comprehensive breast center, nutritional counseling, ACORN research and the WINGS Cancer Foundation. As part of the affiliation, the UTHSC moved its Oncology Fellowship Program to the West Clinic and was provided funding to enhance cancer research, care programs and innovation. Together, the three organizations are advancing efforts to provide leading-edge treatment, extensive clinical trials and cutting-edge research in the fight against cancer.

This project covers the renovation and expansion of the entire building. The expansion will provide an increase of approximately 8,000 square feet for the addition of the radiation oncology center. The diagnostic and treatment services which require a Certificate of Need (CON) are all hospital-based. The other physician, clinical research and administrative offices do not require CON approval. Full renovation and expansion costs are included since costs were not easily segregated due to the shared common space - the open atrium and waiting areas are located throughout the core of the building. The co-mingling of physician offices and hospital-based services was intentional to ensure efficient and effective collaboration and seamless patient flow (See Attachment B:IV. for the floor plans).

Renovations and redesign will provide adequate space, improve patient work flows and improve collaboration with oncologists, radiologists, surgeons and patients. The project will not add any new services to Methodist's service lines. The objective is to maintain the applicant's current scope of services without disrupting continuity of care while meeting patient care needs more completely and efficiently. If granted CON approval, the services will be consolidated, integrated and scheduled to open at the new site in August 2015. The projections in this application use calendar years 2016 and 2017 as the project's first two full years of operation

2. Detailed Description of the Project

Methodist will renovate 101,235 SF of the existing space and construct 8,050 SF of new space. The newly constructed space is on the southeast corner of the building and will house portions of the radiology and radiation therapy departments. As noted on the plot plan (See Attachment B:III (A) for the Plot Plan), a

few existing parking spaces will be eliminated by this new construction. Yet, plans are under design for a parking deck to meet the needs of the building. The parking deck is not part of this project.

The building is designed with an open atrium and spacious waiting areas running through the core of the building. This space will remain intact on each floor with minor refurbishment and updates.

The first floor will house administrative offices for Associates from the West Clinic. Additionally, the breast center, radiology, radiation therapy and phlebotomy hospital-based services (hospital-based services are outlined by the dotted line on the Floor Plans) will utilize the remainder of this floor. The Methodist Germantown Breast Center is located in this space now. It will be renovated and expanded in place. The other half of the first floor is where the phlebotomy, radiology and radiation therapy departments will be located. The linear accelerator vaults and MRI and CT rooms/equipment will be located mostly in the new space added to this side of the building. Due to risks of exposure to radiation and radioactive materials, modifications in this area will exceed those of normal renovations. Lead shielding will be installed around the perimeter of the rooms for control purposes.

The second floor will house the surgery clinics, sterile processing and physician clinics. The only hospital-based space on the second floor is the surgery center with the in-house central sterile processing unit. There will be two operating rooms which will function as a department of the hospital. Another area accessible from this floor is the contemplation garden on the roof of the first floor addition. This is a unique area currently included on West Clinic's Humphreys' campus – it includes a large bell and labyrinth walking path. The garden is a respite for patients during their battle with cancer. It is also a site for celebration. The West Clinic will relocate their bell and place it in the garden atop the roof. It is a long-standing tradition that holds special meaning for patients and families; patients ring the bell after finishing their treatment plans and overcoming cancer. It is a place for healing.

The third floor will house the remainder of the administrative and clinical research space operated by the West Clinic and the UTHSC as well as pharmacy space operated by the clinics. The hospital-spaced located on this floor includes the lab, additional phlebotomy space and the infusion - or chemotherapy infusion - chairs and beds.

Since this is an existing building with existing services, the coordination and modifications are more complex than normal construction. Methodist plans to minimize disruption to patients and existing services during the renovation. The breast center will continue operations during renovations with easy access from the main door. The majority of the renovations will be on east side of the first floor and on the second and third floors. Partitions will be temporarily installed allowing the renovation area to be sealed off to minimize the noise and debris and ensure the facility is always secure. To maintain continuity of care, the relocation of equipment will be staged in a compact time frame and coordinated with the scheduling staff. The LINAC services at Methodist University Hospital, the CT services at the Germantown Diagnostic Center and MRI services at the West Clinic and Methodist Germantown Hospital will be open and prepared to accommodate any patients that need to be re-directed during the brief and planned downtime. Construction and equipment estimates account for all of these construction, installation and relocation costs as well as safety precautions. See Attachments B:III (A) and B:IV for the Plot Plan and Floor Plans.

3. Project Costs

The total cost of the project for CON purposes is $60,554,193 with construction costs of $16,152,175 or $148 per square foot plus contingency of $1,615,218 (10%) for a total of $163 per square foot.

4. Project Funding Sources

The project costs will be funded by cash contributions from Methodist Healthcare, the parent company of the applicant.

Applicants with hospital projects (construction cost in excess of $5 million) and other facility projects (construction cost in excess of $2 million) should complete the Square Footage and Cost per Square Footage Chart. Utilizing the attached Chart, applicants with hospital projects should complete Parts A.-E. by identifying as applicable nursing units, ancillary areas, and support areas affected by this

project. Provide the location of the unit/service within the existing facility along with current square footage, where, if any, the unit/service will relocate temporarily during construction and renovation, and then the location of the unit/service with proposed square footage. The total cost per square foot should provide a breakout between new construction and renovation cost per square foot. Other facility projects need only complete Parts B.-E. Please also discuss and justify the cost per square foot for this project.

Please also discuss and justify the cost per square foot for this project.

The costs of the project are reasonable and comparable to similar CON projects approved throughout the service area over the last few years. This project has an estimated cost per square foot of approximately $148 per square foot ($16,152,175 / 109,285 sf) or $163 ($17,767,393 / 109,285 sf) with construction contingency. See the cost per square foot comparison in Table 1 below.

TABLE 1

COST PER SQUARE FOOT COMPARISON WITH APPROVED PROJECTS

CON Name	Date Filed	Cost per Square Foot
Methodist University PET Renovation & Relocation	Nov-11	$ 244
Campbell Clinic Surgery Center Construction & Renovation	Aug-12	$ 244
The Regional Medical Center – The Med Hospital Construction & Renovation	Aug-12	$ 225
Baptist Memorial Women's Hospital ED Construction & Renovation	Dec-12	$ 238
Baptist Memorial Tipton Hospital Establish Cancer Center (Relocation)	Dec-12	$ 250

If the project involves none of the above, describe the development of the proposal.
Not applicable.

B. Identify the number and type of beds increased, decreased, converted, relocated, designated, and/or redistributed by this application. Describe the reasons for change in bed allocations and describe the impact the bed change will have on the existing services.
Not applicable.

SQUARE FOOTAGE AND COST PER SQUARE FOOTAGE CHART

A. Unit / Department	Existing Location	Existing SF	Temporary Location	Proposed Final Location	Proposed Final Square Footage			Proposed Final Cost/ SF		
					Renovated	New	Total	Renovated	New	Total
HOSPITAL-BASED										
FIRST FLOOR										
Diagnostic Phlebotomy	Off-site	275		1st Floor	340		340	$75		$25,500
Imaging	Off-site	7,065		1st Floor	6,365	3,320	9,685	$250	$410	$2,952,450
Radiation Therapy	Off-site	5,416		1st Floor	3,640	4,530	8,170	$250	$410	$2,767,300
Radiation Therapy Vaults	Off-site	910		1st Floor		2,200	2,200		$800	$1,760,000
Consolidated Women's Diagnostic and Breast Center	On & Off-site	20,700		1st Floor	13,675		13,675	$90		$1,230,750
SECOND FLOOR										
Ambulatory Surgery Center	N/A	N/A		2nd Floor	8,600		8,600	$210		$1,806,000
Wings Library/Other Administrative Area	N/A	N/A		2nd Floor	1,595		1,595	$65		$103,675
THIRD FLOOR										
Phlebotomy/Laboratory	Off-site	1,501		3rd Floor	2,900		2,900	$85		$246,500
Outpatient Infusion	Off-site	6,736		3rd Floor	14,100		14,100	$75		$1,057,500
OTHER										
Sitework	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	$483,000
HVAC for Surgery	N/A	N/A		Roof	N/A	N/A	N/A	N/A	N/A	$250,000
Emergency Power System	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	$90,000
Medical Gas System	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	$98,000
NON-HOSPITAL BASED										
FIRST FLOOR										
Lobby/Atrium Refurbishment	N/A	N/A		1st Floor	6,800		6,800			$306,000
Facilities/Administrative Area	Off-site	N/A		1st Floor	3,000	200	3,200			$240,000
SECOND FLOOR										
Lobby/Toilet Refurbishment	N/A	7,580		2nd Floor	5,250		5,250			$288,750
Clinics	Off-site	7,580		2nd Floor	17,220		17,220			$1,291,500
THIRD FLOOR										
Atrium/Public Toilet Refurbishment	N/A	N/A		3rd Floor	5,250		5,250			$288,750
Pharmacy	N/A	1,475		3rd Floor	1,800		1,800			$171,000
Administration/Finance/MD Offices/Research	N/A	N/A		3rd Floor	10,700		10,700			$695,500

A. Unit / Department	Existing Location	Existing SF	Temporary Location	Proposed Final Location	Proposed Final Square Footage			Proposed Final Cost/ SF		
					Renovated	New	Total	Renovated	New	Total
B. Total GSF		59,238			101,235	8,050	109,285			$16,152,175
Total Construction cost / SF										$148
Construction cost escalation (10% contingency)										$1,615,218
Total Construction costs with escalation		59,238			101,235	8,050	109,285			$17,767,393
Total Construction cost with escalation / SF										$163

C. As the applicant, describe your need to provide the following health care services (if applicable to this application):

1. **Adult Psychiatric Services**
2. **Alcohol and Drug Treatment for Adolescents (exceeding 28 days)**
3. **Birthing Center**
4. **Burn Units**
5. **Cardiac Catheterization Services**
6. **Child and Adolescent Psychiatric Services**
7. **Extracorporeal Lithotripsy**
8. **Home Health Services**
9. **Hospice Services**
10. **Residential Hospice**
11. **ICF/MR Services**
12. **Long-term Care Services**
13. **Magnetic Resonance Imaging (MRI)**
14. **Mental Health Residential Treatment**
15. **Neonatal Intensive Care Unit**
16. **Non-Residential Methadone Treatment Centers**
17. **Open Heart**
18. **Positron Emission Tomography**
19. **Radiation Therapy/Linear Accelerator**
20. **Rehabilitation Services**
21. **Swing Beds**

This project includes the addition of one linear accelerator (and the relocation of one existing linear accelerator). CON approval has previously been granted for all other major moveable equipment at sites owned and operated by Methodist which are located within a four-mile radius of the proposed project site. The approved equipment will continue to serve the same community and meet the demand for services as demonstrated by current utilization. See Table 2 for a summary of other major moveable equipment for this project.

TABLE 2
SUMMARY OF METHODIST HOSPITAL-BASED
MAJOR MOVEABLE EQUIPMENT

	The West Clinic on Humphreys	Methodist Radiation Oncology Center	New to Market
Linear Accelerator		Existing to be relocated	New
CT Simulator		Existing to be relocated	
CT (2 units)	Existing to be relocated		
MRI 1.5T	Existing to be replaced and relocated		
PET/CT	Existing to be relocated		

D. Describe the need to change location or replace an existing facility.

This project is for the establishment of an integrated comprehensive cancer center. The key attribute of such a center is the ability to cohesively coordinate and integrate all aspects of state-of-the-art cancer care. These aspects include clinical research, collaborative patient care, education, prevention dissemination and community outreach programs.

One of the fundamental goals of this project is to consolidate and integrate the multiple sites of care owned and operated by the Methodist and the West Clinic. The sites affected by this project are two

Methodist ambulatory sites for cancer services – the Methodist Breast Center and the Radiation Oncology Center, the West Clinic's flagship cancer center on Humphreys which contains Methodist hospital-based services and the Comprehensive Breast Center operated by the West Clinic which will integrate with Methodist's hospital-based services. These four sites for ambulatory cancer care are all located in East Shelby County within a four-mile radius of each other – three are less than a mile apart near the intersection of Germantown Parkway and Wolf River Boulevard. See Figure 1 for a map of these sites. This project proposes to consolidate all services by renovating the existing building that houses the Methodist Breast Center on Wolf River Boulevard.

1) The Methodist Breast Center on Wolf River Boulevard (the site for this project) provides comprehensive breast care with digital screening and diagnostic mammography, stereotactic suites for biopsies and bone density testing.
2) The Methodist Radiation Oncology Center (less than a mile away from the project site on Germantown Parkway) houses a linear accelerator and CT simulator and provides a full array of radiation therapy services.
3) The West Clinic on Humphreys Boulevard houses physician clinics, chemotherapy, IV infusion therapy, radiology (including MRI, CT, PET/CT, ultrasound and x-ray), interventional radiology, pharmacy, lab services, pain and palliative care and genetic, nutritional and psychological counseling services.
4) The West Clinic's Comprehensive Breast Center (across the street from the project site on Wolf River Boulevard) houses three breast surgeons and provides complete breast care with digital screening and diagnostic mammography, sonography, percutaneous biopsy, genetic counseling, surgical therapy, chemotherapy and clinical research.

FIGURE 1
MAP OF METHODIST AMBULATORY CANCER SITES

Note: The smaller medical icons are the sites to be consolidated and the larger is the project site.

Consolidation of care sites is the key logistical step that leads to the principal project goal – the establishment of a truly integrated multidisciplinary cancer care model that brings value to patients and families, payer partners and physician partners. The fragmentization of cancer care in the market today can lead to patient dissatisfaction and anxiety, unnecessary costs, duplication of services and breaks in communication between caregivers on treatment plans.

While the current sites of care are close in proximity, navigation of the multiple sites is not optimal for patients and their families. As of today, a cancer patient must travel to one location for physician and infusion services, in many cases another location for advanced imaging, another location for surgery, another location for radiation therapy and another location for oral pharmacy medications. Many times patients need to have specialized physician or provider services such as palliative care, rehabilitation services, genetic counseling, nutritional counseling and social services, our integrated

comprehensive cancer care program will have all of these service integrated into single site in the east market. Research has shown that some disparities in care are caused by the lack of access to advanced care after initial diagnosis. The transportation and navigation challenges of multiple appointments in multiple locations lead to patients lost in the system or no-shows/missed appointments. Building a comprehensive community cancer center at a single existing site known for screening and diagnostic services will significantly decrease navigation challenges and help to address disparities in care.

Additionally, the approval and implementation of Methodist's integrated cancer care delivery system will create efficiencies and operational innovation that cannot be achieved by the current delivery configuration.

- Integration will eliminate multiple admitting/discharge access points as well as the duplication of resources within these access points such as medical records systems, policies and procedures and office equipment.
- The integrated model will also support a unified back office that provides easier coordination of payment plans and simplified patient telephone access.
- Innovation such as patient reported outcomes, rapid provider learning cycles and the ability to respond to patients' symptoms in a collaborative and timely manner will improve efficiency and patient satisfaction.

Finally, advancing therapies and treatments are bringing a new level of complexity to cancer care. Treatment plans vary by cancer type, stage of the cancer and even individual patient preference. The multi-disciplinary model brings three disciplines - medical oncology, surgical oncology and radiation oncology – together for seamless coordination of care and unified treatment plan. The new care model will not only improve collaboration, but it will instill in patients a new level of confidence in caregivers and improve patient satisfaction. Upon diagnosis, cancer patients are faced with a frightening new reality. Not only have they just learned they have cancer, but they are in most cases consulting with numerous new physicians with whom they have no previous relationship. Patients' anxiety levels are heightened as they wait for various results, status reports, prognosis and treatments from the current fragmented delivery model. With the new integrated comprehensive model, patients will witness first-hand the collaboration in a single site of care. Patient appointments will be scheduled so that multi-disciplinary teams can consult with a patient during a single visit; allowing providers to share more information, obtain a more thorough view of the patients' status and provide answers more timely.

The successful implementation of a truly integrated comprehensive cancer center that consolidates multiple sites to one, eliminates fragmented care and improves patient satisfaction and outcomes is essential for the future of cancer care in the Methodist market.

E. Describe the acquisition of any item of major medical equipment (as defined by the Agency Rules and the Statute) which exceeds a cost of $1.5 million; and/or is a magnetic resonance imaging (MRI) scanner, positron emission tomography (PET) scanner, extracorporeal lithotripter and/or linear accelerator by responding to the following:

1. **For fixed-site major medical equipment (not replacing existing equipment):**
   The second linear accelerator is the only new major medical equipment proposed in this project. The MRI is a relocation and replacement of existing equipment.

   a. **Describe the new equipment, including:**
      1. **Total cost ;(As defined by Agency Rule).** Equipment cost $1,916,102 plus maintenance $1,040,000 for total of $2,956,102
      2. **Expected useful life of a** Linear Accelerator is 7 years.
      3. **List of clinical applications to be provided;**

         "A linear accelerator (LINAC) is latest in radiation technology used for external beam radiation treatments for patients with cancer. The linear accelerator is used to treat all

parts/organs of the body. It delivers high-energy x-rays to the region of the patient's tumor. These x-ray treatments can be designed in such a way that they destroy the cancer cells while sparing the surrounding normal tissue. The LINAC is used to treat all body sites, using conventional techniques, Intensity-Modulated Radiation Therapy (IMRT), Image Guided Radiation Therapy (IGRT) Stereotactic Radiosurgery (SRS) and Stereotactic Body Radio Therapy (SBRT)." *(source:* http://www.radiologyinfo.org/en/info.cfm?pg=linac*)*.

The equipment is optimized for both radiotherapy and radiosurgery and can treat cancers almost anywhere in the body, including lung, breast, abdomen and head and neck cancers.

4. **Documentation of FDA approval.** See Attachment B: II (E) for FDA certification.

b. **Provide current and proposed schedules of operations.**
Center hours will be 7:00 am - 8:00 pm Monday – Friday with additional Saturday hours. LINAC services will be available between 7:00 am - 7.00 pm Monday – Friday.

2. **For mobile major medical equipment:** Not Applicable
   a. **List all sites that will be served;**
   b. **Provide current and/or proposed schedule of operations;**
   c. **Provide the lease or contract cost.**
   d. **Provide the fair market value of the equipment; and**
   e. **List the owner for the equipment.**

3. **Indicate applicant's legal interest in equipment (*i.e.*, purchase, lease, etc.) In the case of equipment purchase include a quote and/or proposal from an equipment vendor, or in the case of an equipment lease provide a draft lease or contract that at least includes the term of the lease and the anticipated lease payments.**

The linear accelerator is the only new major moveable equipment proposed; the MRI is a replacement of existing equipment. Please see Attachments B:II (E) (3) for the quote on purchase of the equipment.

III. (A) Attach a copy of the plot plan of the site on an 8 1/2" x 11" sheet of white paper which must include:

See Attachment B:III (A) for the plot plan.

1. **Size of site (*in acres*);**
2. **Location of structure on the site; and**
3. **Location of the proposed construction.**
4. **Names of streets, roads or highway that cross or border the site.**

Please note that the drawings do not need to be drawn to scale. Plot plans are required for all projects.

(B) Describe the relationship of the site to public transportation routes, if any, and to any highway or major road developments in the area. Describe the accessibility of the proposed site to patients/clients.

The West Cancer Center will be located near the corner of Wolf River Boulevard and Germantown Road, which makes it easily accessible for area patients via automobile and ambulance. Germantown Road runs north-south from I-40 to Highway 385 (the new suburban loop in Shelby County that encircles the eastern region of the county). Wolf River Boulevard is less than 1.5 miles south of the

Walnut Grove Road and Germantown Road intersection. Both Walnut Grove Road and Germantown Road have their own exits from nearby expressways: Walnut Grove from I-240 and Germantown Road from Highway 385.

The Memphis Area Transit Authority (MATA) services this area with route 82. Appropriate bus schedules and road maps are included as Attachment B:III (B).

IV. Attach a floor plan drawing for the facility which includes legible labeling of patient care rooms (noting private or semi-private), ancillary areas, equipment areas, etc. on an 8 1/2" x 11" sheet of white paper.

NOTE: *DO NOT SUBMIT BLUEPRINTS*. Simple line drawings should be submitted and need not be drawn to scale.

See Attachment B:IV. for the floor plans.

V. For a Home Health Agency or Hospice, identify:
Not applicable; the application is not for a home care organization.

1. **Existing service area by County;**
2. **Proposed service area by County;**
3. **A parent or primary service provider;**
4. **Existing branches; and**
5. **Proposed branches.**

SECTION C: GENERAL CRITERIA FOR CERTIFICATE OF NEED

In accordance with Tennessee Code Annotated § 68-11-1609(b), "no Certificate of Need shall be granted unless the action proposed in the application for such Certificate is necessary to provide needed health care in the area to be served, can be economically accomplished and maintained, and will contribute to the orderly development of health care." The three (3) criteria are further defined in Agency Rule 0720-4-.01. Further standards for guidance are provided in the state health plan (Guidelines for Growth), developed pursuant to Tennessee Code Annotated §68-11-1625.

The following questions are listed according to the three (3) criteria: (I) Need, (II) Economic Feasibility, and (III) Contribution to the Orderly Development of Health Care. Please respond to each question and provide underlying assumptions, data sources, and methodologies when appropriate. *Please type each question and its response on an 8 1/2" x 11" white paper*. All exhibits and tables must be attached to the end of the application in correct sequence identifying the question(s) to which they refer. If a question does not apply to your project, indicate "Not Applicable (NA)."

QUESTIONS

1. **Describe the relationship of this proposal toward the implementation of the State Health Plan and Tennessee's Health: Guidelines for Growth.**

   a. **Please provide a response to each criterion and standard in Certificate of Need Categories that are applicable to the proposed project. Do not provide responses to General Criteria and Standards (pages 6-9) here.**

   Please see the following responses to the Criteria for Construction, Renovation, Expansion and Replacement of Health Care Institutions as well as the Criteria for Megavoltage Radiation Therapy Services. These are the only two categories that apply.

   b. **Applications that include a Change of Site for a health care institution, provide a response to General Criterion and Standards (4)(a-c)**

   Project-Specific Review Criteria: Construction, Renovation, Expansion, and Replacement of Health Care Institutions

   1. **Any project that includes the addition of beds, services, or medical equipment will be reviewed under the standards for those specific activities.**

      Not applicable for beds. On the following pages, please find the response to the Standards and Criteria for Linear Accelerator services. Methodist already has approval for MRI and PET services which are being consolidated at this site from multiple facilities located within one to four miles from the project site.

   2. **For relocation or replacement of an existing licensed healthcare institution:**

      a. **The applicant should provide plans, which include costs for both renovation and relocation, demonstrating the strengths and weaknesses of each alternative.**
      b. **The applicant should demonstrate that there is acceptable existing of projected future demand for the proposed project.**

      The spaces currently occupied by the ambulatory cancer centers are scattered throughout the area. With the need to consolidate services into an integrated comprehensive center as well as expand hospital-based diagnostic and therapeutic

services, renovation of current locations is not feasible – there is insufficient space at exiting sites. It is not possible to demonstrate costs for this option. This would be an expensive and inappropriate exercise for the applicant's design team.

Detailed justification for this project can be found in Section C (3) below. Both a. and b. above are responded to in the narrative beginning below.

3. For renovation or expansions of an existing licensed healthcare institution:

a. The applicant should demonstrate that there is an acceptable existing demand for the proposed project.

The applicant's mission embodies the spirit of the Guidelines for Growth and the Five Principles to Achieve Better Health as outlined in the State Health Plan. Methodist Healthcare's mission is to partner with its medical staffs and collaborate with its patients and families to be the leader in high quality, cost effective health care in all sectors of its service area. Its geographical distribution makes Methodist the area provider with the largest number of entry points, and the most socio-economically diverse patient population. This project complies with the mission and the tenants of the State Health Plan and Guidelines for Growth.

DEMAND FOR THE PROJECT

The Mid-South is a community of approximately 3.5 million people within the 125 mile radius of downtown Memphis. As a tri-state provider, Methodist must continuously monitor changing trends in health status as well as demographic, epidemiologic, behavioral and economic characteristics of the population served to remain an informed and reliable community contributor. Methodist is committed to meeting the health care needs of the varied communities it serves by maintaining/ expanding/ transforming existing services, developing new programs and aligning with other regional and national partners in health.

The most notable demographic changes in the service area over the last ten years have been the rapid population growth of suburban and exurban areas, such as DeSoto County, and the aging of the population. Planning studies by Methodist indicate that these trends will continue. It is particularly significant that during this period, the area population aged 65 years and older - the group that most needs health and cancer care - accounts for 85% of the total population growth. The number of people 65 and older will increase in the next ten years by more than 67,500 persons, or 45%, which is almost double the entire population of Fayette County. See Table 3 for population estimates by county.

TABLE 3
POPULATION ESTIMATES BY COUNTY 2013- 2023
METHODIST SERVICE AREA

County	Age Cohort	Projected 2013	Projected 2018	Projected 2023	2013-2023 Change	% Change
Shelby, TN	**Total**	943,588	971,931	1,005,212	61,624	7%
	65 & over	106,233	129,053	156,775	50,542	48%
Tipton, TN	**Total**	61,519	62,561	63,891	2,372	4%
	65 & over	7,495	8,898	10,564	3,069	41%
Fayette, TN	**Total**	38,617	39,169	39,958	1,341	3%
	65 & over	6,298	7,417	8,735	2,437	39%
DeSoto, MS	**Total**	167,335	175,657	184,969	17,634	11%
	65 & over	18,606	22,475	27,149	8,543	46%
Marshall, MS	**Total**	36,340	35,335	34,503	-1,837	-5%
	65 & over	5,039	5,674	6,389	1,350	27%
Crittenden, AR	**Total**	50,052	49,201	48,499	-1,553	-3%
	65 & over	5,839	6,573	7,399	1,560	27%
Total Service Area	**Total**	1,297,451	1,333,854	1,377,033	79,582	6%
	65 & over	149,510	180,090	217,010	67,500	45%

Source: Projected 2013 & 2018 per Truven Healthcare Analytics- Market Expert; Projected 2023 calculated with CAGR 2013-18

The aging of the population is significant for this project because cancer incidence and mortality rates increase exponentially with advancing age – age becomes a high risk factor for cancer. Cancer incidence rates nationally for people over 65 are nine times higher than rates for younger people; and cancer mortality rates are eighteen times higher. Additionally, the elderly are burdened with the prevalence of many diseases and conditions which in combination make health care services for the elderly more complex.

TABLE 4
NATIONAL AGE-ADJUSTED CANCER RATES, 2006-2010

Age at Diagnosis or Death	Age-Adjusted Incidence Rates			Age-Adjusted Death Rates		
	All Races	**Whites**	**Blacks**	**All Races**	**Whites**	**Blacks**
All ages	463.0	471.9	483.6	176.4	175.8	210.3
Under 65	224.2	228.1	244.2	56.1	54.8	76.0
65 and over	2,113.7	2,157.0	2,138.6	1,008.4	1,012.0	1,138.9

Source: National Cancer Institute - Surveillance, Epidemiology and End Results Program (SEER)

With the aging of the Mid-South population, the demand for cancer services is expected to increase over the next ten years. Yet, communities within the service area already exceed state and national cancer incidence and mortality rates. For instance, Shelby, Fayette and Tipton counties in Tennessee have

incidence rates higher than national averages for all cancers. See Table 5 for the incidence rates by county, state and race compared to national trends.

However, just as—if not even more—significant are the racial disparities in cancer rates for Shelby County and the surrounding communities. Research shows that the black population tends to have higher occurrences of cancer as compared to whites. Given the high incidence of cancer in Shelby County, the differences between mortality rates by race were analyze. The blacks in the community die disproportionately from all cancers when compared to other races.

TABLE 5
CANCER INCIDENCE AND DEATH RATES, 2006-2010
METHODIST TENNESSEE SERVICE AREA

	Annual Incidence Rates			Death Rates		
Region	**All Races**	**White (including Hispanic)**	**Black (including Hispanic)**	**All Races**	**White (including Hispanic)**	**Black (including Hispanic)**
Shelby County, TN	461.9	448.4	472.3	210.3	176.9	259.3
Fayette County, TN	472.2	465.5	495.2	189.0	168.6	256.9
Tipton County, TN	494.4	492.6	473.3	223.9	221.7	232.3
Tennessee	469.9	468.8	472.6	199.1	194.3	244.1
United States	453.7	452.8	468.5	176.4	175.8	210.3

Source: National Cancer Institute – State Cancer Profiles 2006-2010

In further analyses, it was determined that death rates from breast cancer and lung/bronchus cancer were the highest cancer mortality rates for Shelby County (see tables 6 and 7). Again racial disparity is prevalent and significant for cancer mortality rates. Black women die from breast cancer and black men die from lung cancer at much higher rates than whites in Shelby County for the period measured. Furthermore, in a recent study conducted by Sinai Urban Health Institute, the Metropolitan Chicago Breast Cancer Task Force and Avon Foundation Cancer Crusade, Memphis was identified as the city with the largest disparity in breast cancer mortality rates between black and white women. There is a need for outreach, screening and education in the black communities to eliminate the disparities and reduce the number of deaths.

TABLE 6
ANNUAL BREAST CANCER DEATH RATES BY RACE, 2006-2010
METHODIST TENNESSEE SERVICE AREA

	Breast Cancer (Females)		
Region	**Annual Death Rate per 100,000 All Races**	**Annual Death Rate per 100,000 White**	**Annual Death Rate per 100,000 Black**
Shelby County, TN	30.0	21.0	41.7
Fayette County, TN	30.5	29.1	n/a
Tipton County, TN	22.4	19.3	n/a
Tennessee	23.3	21.6	35.4
United States	22.6	22.1	30.8

Source: National Cancer Institute - State Cancer Profiles, 2006-2010; Death Rates based on Bias-Adjusted Modeled Estimates

TABLE 7
ANNUAL LUNG/BRONCHUS DEATH RATES BY RACE, 2006-2010
METHODIST TENNESSEE SERVICE AREA

	Lung/Bronchus (Females)			Lung/Bronchus (Males)		
Region	**Annual Death Rate per 100,000 All Races**	**Annual Death Rate per 100,000 White**	**Annual Death Rate per 100,000 Black**	**Annual Death Rate per 100,000 All Races**	**Annual Death Rate per 100,000 White**	**Annual Death Rate per 100,000 Black**
Shelby County, TN	42.4	42.3	42.3	80.0	67.0	100.8
Fayette County, TN	41.8	49.7	n/a	75.9	67.4	115.5
Tipton County, TN	54.1	52.9	n/a	97.0	100.4	n/a
Tennessee	46.6	47.3	44.0	89.5	88.7	100.8
United States	39.2	40.4	37.2	63.5	63.2	78.5

Source: National Cancer Institute - State Cancer Profiles, 2006-2010; Annual Death Rates based on Bias-Adjusted Modeled Estimates

Over the last decade, the cancer care landscape has changed dramatically, with new advances and treatments, changes in reimbursement and the continued threat of regulatory driven health care reform. These threats are occurring while the same provider community is facing a significant projected increase in the number of cancer patients due to an ever-aging population. This anticipated increase in cancer patients could cripple the current cancer delivery system. Local health care systems have made significant efforts to build partnerships and pursue orderly development of collaborative systems of care in the past, yet a significant portion of cancer care delivery in the market is still fragmented. Chemotherapeutic infusion, radiation oncology, cancer specific surgery, interventional radiology and medical oncology services are still delivered in different locations with weak coordination of efforts and collaboration. Methodist must prepare an efficient and cohesive cancer care system in order to face the coming challenges.

There is only one dominant strategy for cancer care providers to consider. It is the development of a collaborative, integrated multidisciplinary cancer program. Cancer providers that clearly and efficiently develop and operationalize this approach will create higher standards of care, complex treatment options, better research opportunities and access to multi-phase clinical trials. This type of care program will increase patient's knowledge and care expectations by experiencing a system designed to reduce or eliminate disparate experiences of care. Many studies show that fragmented care delivery, i.e. patients treated by multiple providers at multiple locations, will not be able to provide an enhanced quality of care with the expected changes in reimbursement and the expected increase in patient volume.

In an article from *Managed Care Oncology*, Dr. John S. Macdonald, chief medical officer of Aptium Oncology, an oncology consulting and management company with cancer centers across the nation, states, "It makes intuitive sense to move more and more to cancer programs without walls. It makes sense to bring together all the experts in the diagnosis and treatment of cancer for all types of patients and to centralize everyone who impacts patient care in a single location. That's why, in the broadest sense, we expect to see continued strong growth in the multidisciplinary approach to cancer care."

From a planning perspective, a multidisciplinary cancer program is a complex and difficult challenge that calls for a strategic and collaborative approach. The Advisory Board Oncology Roundtable's 2007 Patient Experience Survey discovered that patients point to a multidisciplinary approach to cancer care as "the most valued service." Methodist's response to the challenge was in collaboration with The West Clinic

and the UTHSC. In 2011, the West Clinic combined forces with Methodist and the UTHSC to transform cancer care in the Mid-South. The strengths and cultures of all three organizations are leveraged in the development of a fully integrated cancer program which will expand collaborative efforts in cancer research and education with a vision toward personalized precision cancer care.

Oncologists have always played the key role in cancer care, and no matter what, the success of a multidisciplinary program depends on the skills and competencies of the supporting care team. The West Clinic is the region's premier provider of cancer care and is a nationally-recognized leader in cancer research. Over the past 33 years West Clinic has built an expert team dedicated to excellence and compassionate care. The West Clinic currently has over 30 physicians in multidisciplinary specialties and multiple locations in Tennessee, Mississippi and Arkansas providing services to include medical oncology/hematology, gynecologic oncology, blood cell transplants, breast surgery, diagnostic and interventional radiology, metabolic bone disease/endocrinology, clinical psychology, pain and palliative care, radiation oncology, comprehensive breast center, nutritional counseling, ACORN research and the WINGS Cancer Foundation. The multi-disciplinary team includes pharmacists, nurses, clinical technicians, social workers and patient care coordinators/navigators. The full care team is committed to working collaboratively to ensure a seamless treatment program.

The specific mission of the applicant with regard to cancer is to develop the Mid-South's first truly integrated cancer program. The development of integrated comprehensive cancer care program will reduce the disparity between national cancer mortality rates and those of Shelby County. Such a program will allow for Methodist to prepare for the anticipated increase in cancer as the population ages. There are double digit growth rates for the Methodist service area in the next decade.

TABLE 8
CANCER INCIDENCE PERCENTAGE INCREASE FROM 2013 RATES, 2018 and 2023
BY CANCER TYPE BY COUNTY

	Shelby		Fayette		DeSoto	
Cancer Type	**2018**	**2023**	**2018**	**2023**	**2018**	**2023**
Brain and Nervous System	9%	18%	6%	11%	12%	25%
Breast	9%	17%	6%	10%	14%	27%
GI	12%	24%	9%	16%	17%	34%
Gynecologic	9%	17%	6%	10%	14%	27%
Head and Neck	11%	22%	7%	12%	16%	32%
Hematological	11%	23%	9%	16%	15%	32%
Lung	15%	30%	11%	20%	19%	40%
Melanoma	9%	19%	7%	12%	14%	28%
Urological	15%	28%	10%	16%	19%	38%

Source: Advisory Board – Cancer Incidence Forecaster

The only course of action is to simultaneously prepare for the increase in incidence and work to decrease incidence rates, mortality rates and racial disparities in cancer care by developing, managing and investing in an integrated comprehensive cancer care program.

FIVE PRINCIPALS TO ACHIEVE BETTER HEALTH

Healthy Lives:

The purpose of the State Health Plan is to improve the health of Tennesseans.

Every person's health is the result of the interaction of individual behaviors, society, the environment, economic factors, and our genetic endowment. The State Health Plan serves to facilitate the collaboration of organizations and their ideas to help address health at these many levels.

As a faith-based, mission-driven health care organization and the largest provider of TennCare in the state, Methodist believes the organization is charged with improving and changing the well-being of the community. Despite providing these services to the community for over 88 years, vast disparities in health, income and access remain constant in Memphis. These disparities lead to poor health outcomes as well as higher health care costs. We are developing strategies to not only provide access to better health care, but more importantly, to identify those areas for which urgent intervention is required.

This project has two major components targeting community health and demonstrating Methodist's commitment to the principal of Healthy Lives - community outreach and prevention programs and a sustainable research program - both of which will rely on the cancer care services at the new comprehensive center.

Community Outreach:

The new comprehensive cancer center will, among other programs, provide staff, equipment and resources for a community lung cancer screening program. The Methodist mission ensures access to all community members including the uninsured and underinsured. The program will provide outreach to community organizations such as the American Cancer Society, Church Health Center, Healthy Shelby and local employers to tackle the higher than average rate of lung cancer in the community. The ability to evaluate through physician services, diagnose through advanced imaging and treat through infusion and radiation all in one site, regardless of ability to pay is a must in for the Mid-South.

A similar plan is also currently in operation for breast cancer patients, yet the biggest challenge to that outreach program is transportation to so many different sites for care. The development of the integrated comprehensive cancer program will eliminate that challenge. Current breast cancer efforts are focused on the significant racial disparities identified in a recent study conducted by Sinai Urban Health Institute, the Metropolitan Chicago Breast Cancer Task Force and Avon Foundation Cancer Crusade. Memphis was identified as the city with the largest disparity in breast cancer mortality rates between non-Hispanic Black and non-Hispanic White women. With non-Hispanic Black women comprising the majority of our female population over the age of 25, Memphis is uniquely positioned to study and address the significant racial disparity in the breast cancer mortality rates. Collaboration between Methodist, the West Clinic and the Methodist Congregational Health Network (a covenantal relationship among Methodist, over 500 Mid-South congregations and community health organizations) provide additional structures and a broader framework with which to evaluate these disparities. Grant dollars have been procured to establish patient navigators and examine the potential impact of the differences in screening and care pathways on mortality rates of these populations.

Research:

The West Cancer Center is already providing access to over 35 clinical pharmacological trials. The completion of the integrated comprehensive cancer care delivery system will feature vigorous interactions across research areas and facilitate collaboration between laboratory, behavioral, epidemiologic and clinical scientists and the scientific programs of which they are a part. These collaborations will facilitate rapid transfer of clinical observations to laboratory experiments and promising discoveries in the laboratory to innovative behavioral and medical applications in prevention, detection, diagnosis, treatment and survivorship. This one of a kind program for the Mid-South

community is due to the participation from the Memphis-based UTHSC. The UTHSC is one of the pillars of support to promote basic discovery and transdisciplinary interactions between scientists engaged in laboratory research and, where possible, to stimulate collaborations among investigators in basic laboratory and other research areas.

Integrated cancer centers not only generate new knowledge through research but also interact within their communities to assure that new knowledge benefits systems, providers and people. Through this integrated cancer center, the West Cancer Center will be an active participant in state and community comprehensive cancer control planning and implementation. Medical advances developed within the center will be made available to people outside the center as rapidly as possible via professional and public education, as well as partnerships with public health or clinical service delivery systems. The center will support the translation of intervention programs into public health or clinical practice. The proposed project will provide the relationships and organizational infrastructure required for conducting research that improves dissemination, education, communication and ultimately enhances population health.

Access to Care:

Every citizen should have reasonable access to health care.

Many elements impact one's access to health care, including existing health status, employment, income, geography, and culture. The State Health Plan can provide standards for reasonable access, offer policy direction to improve access, and serve a coordinating role to expand health care access.

The MLH mission is to provide high quality, cost-effective patient- and family-centered health care to all sectors of the greater Memphis service area. As part of its mission, Methodist has strategically placed and maintained hospitals and ambulatory facilities in Fayette County, DeSoto County and all quadrants of Shelby County. Its geographical distribution makes Methodist the area provider with the largest number of entry points and the most socio-economically diverse patient population.

Already providing unparalleled health care access to the community, the development of the integrated comprehensive cancer care delivery system will further enhance access to all community members. Since the initial launch of the cancer integration plan, the percentage of uninsured and underinsured at the ambulatory cancer sites has increased from 2% to almost 9% (over 1,700 people in total) in just 18 months. These are patients who are without funds and/or insurance and face barriers to access health care; they have potentially not had access to community ambulatory cancer care before. Extending the Methodist mission throughout the West Cancer Center furthered the reach of high quality cancer care into the service area. With the approval this project, this unmatched access to cancer care will continue and expand.

As noted previously, the integrated multi-disciplinary center will significantly decrease the challenge of patients lost to a complex system by reducing the sites of care to one, establishing care support navigators to ensure seamless transitions in care and reducing disparities of care by removing barriers to advanced care and treatments. One of the fundamentals of an integrated comprehensive cancer care delivery system is the role of the care support navigator. One of the unique and most powerful aspects of this project is the implementation of full cancer navigation. Many systems have breast cancer navigators, yet no other system in the Mid-South has implemented a full continuum navigation program. These navigators introduce themselves directly to patients at their first appointments and provide support and navigation across all care sites throughout all stages of therapy and treatment. The system navigators are a mix of nurses, social workers and care support coordinators whose jobs are to enhance patients' experience and ensure patients are not lost to a complex system.

Economic Efficiencies:

The state's health care resources should be developed to address the needs of Tennesseans while encouraging competitive markets, economic efficiencies and the continued development of the state's health care system.

The State Health Plan should work to identify opportunities to improve the efficiency of the state's health care system and to encourage innovation and competition.

The approval and implementation of Methodist's integrated cancer care delivery system will create efficiencies and operational innovation that cannot be achieved by the current delivery system. As noted previously, integration and consolidation of sites of care will eliminate duplication of services, eliminate redundant systems, create a unified back office and reduce overhead expenses for operations of multiple sites. Innovation such as patient reported outcomes, rapid provider learning cycles and the ability to respond to patients' symptoms in a collaborative and timely manner will improve efficiency and patient satisfaction.

Additionally, the collaboration with payers will be enhanced. Cost controls are increasingly part of the quality conversation in health care, and the systematic identification and elimination of waste while maintaining or improving quality is imperative for future success. The truly integrated care delivery model is the foundation for innovative reimbursement and value-based models such as episodes of care, bundled payments and even an oncology medical home. These systems will also be available to both governmental payers as innovative collaborative delivery models focus on outcomes and quality instead of fee for service health care.

Quality of Care:

Every citizen should have confidence that the quality of health care is continually monitored and standards are adhered to by health care providers.

Health care providers are held to certain professional standards by the state's licensure system. Many health care stakeholders are working to improve their quality of care through adoption of best practices and data-driven evaluation.

Patient safety and quality are central areas of focus for Methodist and its affiliates. The framework for Methodist's approach to systematic quality improvement includes the following dimensions: safe, timely, effective, efficient, equitable, patient-centered, accessible and sustainable flows. Yet, the cancer care delivery in the service area is still fragmented even with significant efforts of local health systems challenging status quo and working towards more seamless care paths. As already mentioned, patients and families have to travel to different access points for cancer care. Chemotherapeutic infusion, radiation oncology, cancer specific surgery, interventional radiology and medical oncology services are still delivered in different locations with weak coordination of efforts and collaboration. This uncoordinated fractionization continues to challenge our community to fundamentally change the cancer delivery system.

Over the last decade, the cancer care landscape has changed dramatically, with new advances and treatments, changes in reimbursement, and the continued threat of regulatory driven health care reform. These threats are occurring while the same provider community is facing an anticipated huge increase in the number of cancer patients due to an ever aging population. This anticipated increase in cancer patients could cripple the current cancer delivery system. In order to be innovative, collaborative and effect change we must implement a strategy that consists of the development and implementation of a collaborative integrated multidisciplinary cancer program. Such a disciplined program will lead to higher standards of care, complex treatment options, better research opportunities, and access to multi phase clinical trials.

The new integrated cancer delivery model will provide a first of its kind, in our community, cancer urgent care center. This center is designed to significantly decrease the number of patients forced to visit emergency rooms due to reactions from treatment during their care. The re-direction of patients to

a cancer urgent care center will eliminate the need for additional diagnostic testing or lab procedures in emergency room setting. Patients accessing the cancer urgent care center would have medical records immediately available, and specialty trained cancer providers present to address the urgent needs of cancer patients.

Health Care Workforce:

The state should support the development, recruitment, and retention of a sufficient and quality health care workforce.

The state should consider developing a comprehensive approach to ensure the existence of a sufficient, qualified health care workforce, taking into account issues regarding the number of providers at all levels and in all specialty and focus areas, the number of professionals in teaching positions, the capacity of medical, nursing, allied health and other educational institutions, state and federal laws and regulations impacting capacity programs, and funding.

To ensure the success of the new integrated cancer delivery system, Methodist and its collaborative partners have committed to investing in the integrated cancer programs with a particular focus on recruiting selected specialists and researchers into the West Tennessee community. To date the collaboration has successfully added to the oncology bench strength as follows:

1. Two fellowship-trained specialty surgical oncologist
2. A fellowship-trained thoracic specialty oncology surgeon
3. A specialty-trained benign hematologist specializing in hemophilia
4. A committed phase one researcher from the University of Arizona who sole function is to provide our community with access to phase one trials without leaving home
5. Formally funded the continuation of a medical oncology fellowship program for eleven medical oncologists trained in our community
6. Five soon to be seven person navigation team
7. Three genetic counselors – two from outside the community
8. Four data analysts devoted to developing of innovative health reimbursement models, outcome studies and quality metrics

The continued focus and commitment to truly altering the cancer delivery model in the community is unprecedented. Efficiencies gained from the new delivery models will support the redeployment of personnel in positions that are no longer needed into other aspects of the cancer delivery system. This could include information technology, data analytics, customer navigation and other ancillary clinical care functions. There are not any significant reductions anticipated in current work force, simply more efficiency and better alignment with patient and families needs.

Project-Specific Review Criteria: Megavoltage Radiation Therapy Services

1. **Utilization Standards for MRT Units.**
   a. **Linear Accelerators not dedicated to performing SRT and/or SBRT procedures.**
      i. **Full capacity of a Linear Accelerator MRT unit is 8,736 procedures, developed from the following formula: 3.5 treatments per hour, times 48 hours (6 days of operation, 8 hours per day, or 5 days of operation, 9.6 hours per day), times 52 weeks.**
      ii. **Linear Accelerator Minimum Capacity: 6,000 procedures per Linear Accelerator MRT Unit annually, except as otherwise noted herein.**
      iii. **Linear Accelerator Optimal Capacity: 7,688 procedures per Linear Accelerator MRT Unit annually, based on 12% average downtime per MRT units during normal business hours annually.**

iv. **An applicant proposing a new Linear Accelerator should project a minimum of at least 6000 MRT procedures in the first year of service, building to a minimum of 7,688 procedures per year by the third year of service and for every year thereafter.**

Methodist bases projections on national cancer incidence rates and applies the rates against local population projections which factor in the aging population and overall growth. The projections assume Methodist captures current share of market growth plus nominal growth from regional outreach efforts. Projections meet the minimum requirements. See Tables 9 and 10 for the factors and calculations followed for a summary of the methodology.

TABLE 9
PROJECTED LINAC UTILIZATION

	Year 1	**Year 2**
Procedures	14,221	15,430
Procedures per Unit	7,111	7,715

TABLE 10
FACTORS AND CALCULATIONS FOR LINAC PROJECTIONS

		Year 1	Year 2	
Projection of Local Cancer Incidence	**2013**	**2016**	**2017**	**2018**
Projected Market Procedures				
Under 65	1,147,941	1,151,431	1,152,597	1,153,764
65 and Over	149,510	167,171	173,510	180,090
Total	1,297,451	1,318,603	1,326,108	1,333,854
National Cancer Incidence Rates per 100,000				
Under 65	224.2	224.2	224.2	224.2
65 and Over	2,113.7	2,113.7	2,113.7	2,113.7
Projected Service Area Cancer Incidence				
Under 65	2,574	2,582	2,584	2,587
65 and Over	3,160	3,534	3,667	3,807
Total	5,734	6,115	6,252	6,393
% Growth over 2013 Incidence Rates		107%	109%	112%
Projected LINAC Procedures in Market Based on Population Aging/Growth				
Cumulative Incremental Procedures in Market	-	3,946	5,360	6,827

Projection of Methodist Procedures	**2013**	**2016**	**2017**	**2018**
Methodist Projected Procedures				
Cumulative Growth from Population (40%)	-	1,578	2,144	2,731
Cumulative Projected Regional Growth	-	1,488	2,265	3,059
Methodist Current Volumes	23,756	23,756	23,756	23,756
Total Projected Procedures	23,756	26,822	28,165	29,546
Projected Procedures by Site of Service				
West Cancer Center	11,462	14,221	15,430	16,673
Methodist University Hospital	12,294	12,601	12,735	12,873
Total	23,756	26,822	28,165	29,546
Average Procedures per Unit				
West Cancer Center	11,462	7,111	7,715	8,336
Methodist University Hospital	6,147	6,301	6,368	6,437
Total	7,919	6,706	7,041	7,387

METHODOLOGY:

PROJECTIONS OF LOCAL CANCER INCIDENCE:

- As noted previously, the incidence of cancer increases significantly for the elderly. Projections split the population into two age groups – under 65 years of age and over – to account for this trend.
- To keep it simple the national overall cancer incidence rate per 100,000 for all races was used. This approach is conservative since demographics show the Methodist service area has a higher percentage of blacks living in the community than national trends (Table 15 shown in response to Section C (4)(A)), and show that local cancer incidence rates for blacks are higher than whites (Table 5 shown in response to Section C (3)(a)).
- Calculations show that between 2013 and 2018 the local incidence of cancer grows by approximately 12% based on population trends. Assuming a similar growth (12% over 5 years) in LINAC procedures, incremental procedures were projected for the market using 2012 State Equipment Registry utilization of LINACs in the service area of 59,365 (excluding St. Jude Children's Hospital).

PROJECTION OF METHODIST LINAC PROCEDURES:

- Calculations assume Methodist will maintain current market share attracting 40% of the market growth.
- Calculations also assume Methodist continues to be successful with regional outreach opportunities extending high quality cancer services outside the primary service area. Projections include minimal 2% growth annually for 2014-2016 and 3% beginning in year 2 (2017) once the West Cancer Center is established. This again is conservative since procedures grew by 12% in from 2011 to 2012 when the affiliation with the West Clinic and the UTHSC was fully established and regional outreach began.
- Calculations assume no growth in 2013 - again to be conservative - and use 2012 utilization as the base year.
- Final projections show 26,822 LINAC procedures performed by Methodist in year 1 (2016) and 28,165 in year 2 (2017).
- The majority of the projected growth at Methodist will be at the newly established West Cancer Center – versus the equipment housed at Methodist University Hospital - and the new LINAC will lessen the load on the old equipment in Germantown balancing utilization between the two for an average number of procedures per unit for 7,111 in year 1 and 7,715 in year 2 which is above the minimum thresholds.

b. For Linear Accelerators dedicated to performing only SRT procedures, full capacity is 500 annual procedures.
Not Applicable

c. For Linear Accelerators dedicated to performing only SRT procedures, full capacity is 850 annual procedures.
Not Applicable

d. An exception to the standard number of procedures may occur as new or improved technology and equipment or new diagnostic applications for Linear Accelerators develop. An applicant must demonstrate that the proposed Linear Accelerator offers

a unique and necessary technology for the provision of health care services in the proposed Service Area.
Not Applicable

e. **Proton Beam MRT Units. As of the date of the approval and adoption of these Standards and Criteria, insufficient data are available to enable detailed utilization standard to be developed for Proton Beam MRT Units.**
Not Applicable

2. **Need Standards for MRT Units.**
   a. **For Linear Accelerators not dedicated solely to performing SRT and/SBRT procedures, need for a new Linear Accelerator in a proposed Service Area shall be demonstrated if the average annual number of Linear Accelerator procedures performed by existing Linear Accelerators in the proposed Service Area exceeds 6,000.**

The combined average utilization of existing LINAC units in the service area is 5,527 in 2012 for all providers based on the State Equipment Registry data. Yet, St. Jude Children's Research Hospital is an internationally recognized pediatric hospital dedicated to research and treatment for children with cancer and other catastrophic diseases. St. Jude is caring for a unique population of patients. Excluding St. Jude's volumes and equipment from the market calculation, the average for LINAC volumes per unit is 6,596 in 2012 which is well above the 6,000 threshold. See Table 11 for LINAC market utilization.

TABLE 11
METHODIST SERVICE AREA
LINEAR ACCELERATOR EQUIPMENT AND UTILIZATION, 2010-2012

Facility Type	Facility	2010		2011		2012	
		Procs	# of Units	Procs	# of Units	Procs	# of Units
HOSP	Methodist Healthcare	21,287	3	21,049	3	23,756	3
HOSP	Baptist Memorial Hospital-Memphis	10,989	3	11,343	3	11,052	2
ASTC	Baptist Memorial Hospital-Tipton/Germantown	7,365	1	5,270	1	7,610	1
HOSP	Regional Medical Center at Memphis (The Med) [1]	87	1	-	-	-	-
HOSP	St. Francis Hospital – Park	7,508	2	7,576	2	6,795	2
HOSP	St. Jude Children's Research Hospital	5,789	2	4,800	2	1,437	2
HOSP	Baptist Memorial Hospital – DeSoto	7,152	1	7,187	1	10,152	1
	Total Procedures	60,177	13	57,225	12	80,802	11
	Average Procedures per Unit	4,629		4,769		5,527	
	Total Procedures without St. Jude	53,388	11	52,425	10	59,365	9
	Average Procedures per Unit without St. Jude	4,944		5,243		6,596	

Source: 2008-10 TN HSDA - State Equipment Registry; and 2009-2012 MS DOH - State Health Plan
[1] The Regional Medical Center at Memphis closed Linear Accelerator Services in 2010

Additionally, Methodist demonstrates a growing need for an additional LINAC based on current and projected utilization. Methodist currently operates three LINACs - two at the Methodist University Hospital in downtown Memphis and one at the Methodist Radiation Oncology Center in Germantown less than a mile from the project site. Yet, the patient population seeking services from Methodist equally prefers the convenience of the freestanding ambulatory setting in the east market and the academic setting in the downtown Medical Center. Methodist utilization is almost evenly split between the two sites, thus taxing the Germantown equipment while keeping the downtown equipment at solid volumes above the minimum threshold. The single unit in Germantown performs more than 11,000 annually as compared to 8,736 which is the State Health Plan's definition of full capacity – this is 130% of full capacity. A Methodist planning study validated this finding by comparing average treatments per unit to national averages - the Germantown unit operates significantly above the national 75th percentile. Methodist must add LINAC in the east market to accommodate the demand for services.

Based on the projections shown in Table 10, projected growth in cancer incidence alone will overburden the three units and Methodist will be over full capacity operating at approximately 8,800 procedures per unit. Methodist would not have the capacity to continue outreach efforts to underserved communities and continue to extend high quality cancer services into the secondary markets. Projected regional outreach volumes could add more than 3,000 procedures for Methodist for a projected average number of procedures per unit of more than 9,800 per LINAC which is well above full capacity. Methodist must add capacity to continue its mission.

Finally, Methodist must control the resources required to participate in innovative reimbursement models which will put the system at risk for the full continuum of patient care. Methodist determined a need for an additional LINAC in the east market during the planning for this project. It is important to have the right cancer related services with the appropriate capacity to succeed in managing costs and to develop risk-based models. The truly integrated care delivery model is the foundation for innovative reimbursement and value-based models such as episodes of care, bundled payments and even an oncology medical home. Collaboration with payers is a key as cost controls are increasingly part of the quality conversation in health care. These reimbursement models will be available to private insurers as well as governmental payers, including the State of Tennessee and Medicare, as innovative collaborative delivery models focus on outcomes and quality instead of fee for service health care.

b. **For Linear Accelerators dedicated to performing only SRT, need in a proposed Service Area shall be demonstrated if the average annual number of MRT Procedures performed by existing Linear Accelerators dedicated to performing only SRT procedures in a proposed Service Area exceeds 300, based on a full capacity of 500 procedures.**
Not Applicable

c. **For Linear Accelerators dedicated to performing only SRT/SBRT, need in a proposed Service Area shall be demonstrated if the average annual number of MRT Procedures performed by existing Linear Accelerators dedicated to performing only SRT/SBRT procedures in a proposed Service Area exceeds 510, based on a full capacity of 850 procedures.**
Not Applicable

d. **Need for a new Proton Beam MRT Unit: Due to the high cost and extensive service areas that are anticipated to be required for these MRT Units, an applicant proposing a new Proton Beam MRT Unit shall provide information regarding the utilization and service areas of existing or planned Proton Beam MRT Units' utilization and services areas (including those that have received a CON), if they provide MRT services in the proposed Service Area and if that data are available, and the impact its application if granted, would have on those other Proton Beam MRT Units.**
Not Applicable

3. **Access to MRT Units.**
   a. **An MRT unit should be located at a site that allows reasonable access for residents of the proposed Service Area.**

The proposed LINAC will supplement the Methodist unit already operating in this eastern part of the service area. The demand for services at the Methodist Radiation Oncology Center exceeds the centers current capacity. As previously noted, the single piece of equipment at this Germantown center operates significantly above the state and national definitions of full capacity – it operates at 150% of full capacity.

More than 90% of the patients currently seeking Methodist LINAC services (including two units at the Methodist University Hospital and one at the Methodist Radiation Oncology Center) originate from the designated service area. The designated service area includes Shelby, Fayette and Tipton counties in Tennessee, DeSoto and Marshall counties in Mississippi and Crittenden County in Arkansas. The unit will be located in a site that is accessible and convenient for patients. See Table 12 below for detailed volumes.

TABLE 12
2012 METHODIST LINAC PROCEDURES BY COUNTY

Service Area	Procedures	% of Total
Shelby, TN	18,549	78%
Desoto, MS	1,352	6%
Tipton, TN	841	4%
Marshall, MS	429	2%
Fayette, TN	371	2%
Crittenden, AR	356	1%
Subtotal	21,898	92%
Out-of-area	1,858	8%
Total	23,756	100%
Source: 2012 TN HSDA - State Equipment Registry		

   b. **An applicant for any proposed new Linear Accelerator should document that the proposed location of the Linear Accelerator is within a 45 minute drive time of the majority of the proposed Service Area's population.**

Methodist West Cancer Center will be located near the corner of Wolf River Boulevard and Germantown Road, which makes it easily accessible for area patients via automobile and ambulance. Germantown Road runs north-south from I-40 to Highway 385 (the new suburban loop in Shelby County that encircles the eastern region of the county). Wolf River Boulevard is less than 1.5 miles south of the Walnut Grove Road and Germantown Road intersection. Both Walnut Grove Road and Germantown Road have their own exits

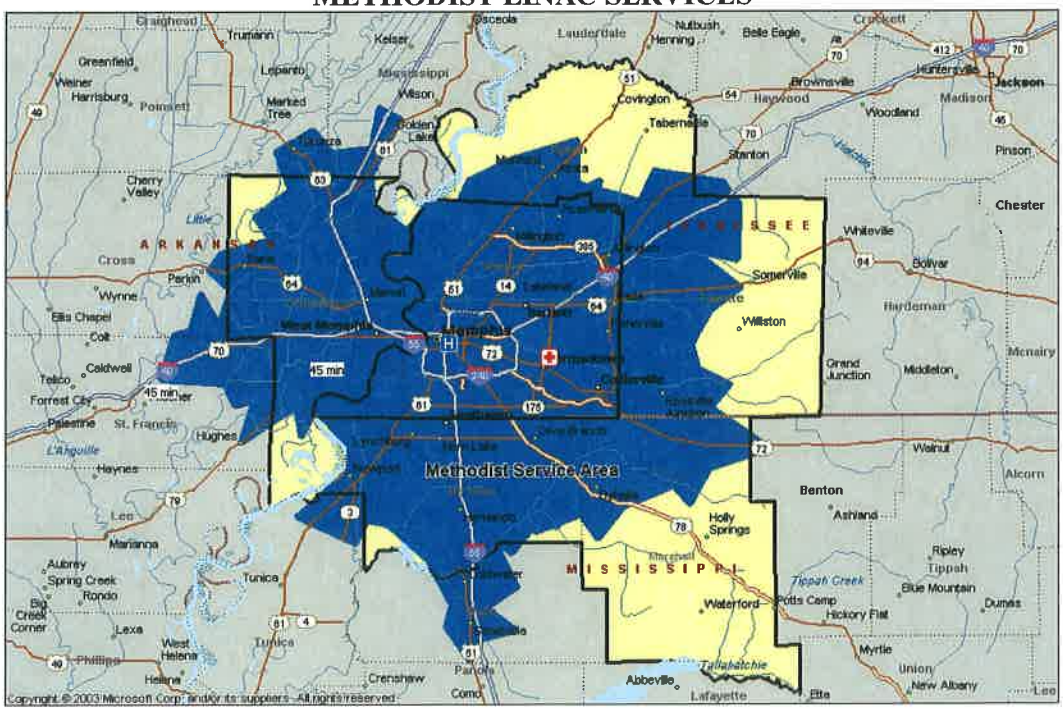
from nearby expressways: Walnut Grove from I-240 and Germantown Road from Highway 385.

The majority (73%) of the population in the Methodist service area is in Shelby County. See Table 13 below for the 2013 population analysis by county. Also, please see the drive time map in Figure 2. The 45-minute drive time radius for the Methodist LINAC services at Methodist University Hospital and the West Cancer Center covers all of Shelby County and the majority of the remaining service area.

TABLE 13
POPULATION BY COUNTY, 2013
METHODIST SERVICE AREA

Service Area	Population	% of Total
Shelby, TN	943,588	73%
DeSoto, MS	167,335	13%
Tipton, TN	61,519	5%
Crittenden, AR	50,052	4%
Fayette, TN	38,617	3%
Marshall, MS	36,340	3%
Total	1,297,451	100%
Source: Truven Healthcare Analytics- Market Expert		

FIGURE 2
DRIVE TIME MAP, 45-MILE RADIUS
METHODIST LINAC SERVICES



c. **Applications that include non-Tennessee counties in their proposed Service Areas should provide evidence of the number of existing MRT units that service the non-Tennessee counties and the impact on MRT unit utilization in the non-Tennessee**

counties, including the specific location of those units located in the non-Tennessee counties, their utilization rates, and their capacity (if that data are available).

The only existing MRT unit in the designated service area that is located outside of Tennessee is in DeSoto County, Mississippi. The LINAC unit is performing well above (almost 170%) the minimum threshold of 6,000 procedures per unit. The unit is located at the Baptist Memorial Hospital-DeSoto. See Table 14 for historical volumes.

TABLE 14
NON-TENNESSEE METHODIST SERVICE AREA
LINEAR ACCELERATOR EQUIPMENT AND UTILIZATION, 2010-2012

Facility Type	Facility	2010		2011		2012	
		Procs	# of Units	Procs	# of Units	Procs	# of Units
HOSP	Baptist Memorial Hospital – DeSoto	7,152	1	7,187	1	10,152	1
Source: 2009-2012 MS DOH - State Health Plan							

4. **Economic Efficiencies. All applicants for any proposed new MRT Unit should document that lower costs technology application have been investigated and found less advantageous in terms of accessibility, availability, continuity, cost, and quality of care.**

Alternate services and technologies were investigated. However, there was no lower cost alternative that delivers the accuracy and reliability of the selected LINAC. The machine pinpoints the cancerous cells with real-time imaging and allows providers to precisely target tumors while minimizing the amount of healthy cells exposed to radiation. The speed and localization of the real-time imaging offers more patient comfort and less chance the patient will move during the treatments. The equipment is optimized for both radiotherapy and radiosurgery and can treat cancers almost anywhere in the body, including lung, breast, abdomen and head and neck cancers.

5. **Separate Inventories for Linear Accelerators and for other MRT Units. A separate inventory shall be maintained by the HSDA for Linear Accelerators, for Proton Beam Therapy MRT Units, and if data are available, for Linear Accelerators dedicated to SRT and/or SBRT procedures and other types of MRT Units.**

Methodist assures the HSDA that all data requested to maintain the Equipment Registry will be submitted within the expected time frame.

6. **Patient Safety and Quality of Care. The applicant shall provide evidence that any proposed MRT Unit is safe and effective for its proposed use.**

   a. **The United States Food and Drug Administration (FDA) must certify the proposed MRT Unit for clinical use.**

   See Attachment B: II (E) for FDA certification

   b. **The applicant should demonstrate that the proposed MRT Units shall be housed in a physical environment that conforms to applicable federal standards, manufacturer's specifications, and licensing agencies' requirements.**

   The architect consulted on this project confirms that the physical environment will conform to all applicable federal standards, manufacturer's specifications and licensing agencies' requirements. See Attachment C: Economic Feasibility (1)(d) for the architect letter.

c. **The applicant should demonstrate how emergencies within the MRT Unit facility will be managed in conformity with accepted medical practice.**

There are clinical technicians on the premises trained in basic life support when the patient is being treated. In the event of cardiac or respiratory arrest, trained clinical personnel will initiate basic life support while the patient is being emergently removed from the treatment room. The patient will be assessed and personnel will call 9-1-1 for an ambulance to transport the patient to nearest hospital, Methodist Germantown Hospital. The hospital is approximately 2 miles from the proposed outpatient center.

d. **The applicant should establish protocols that assure that all MRT Procedures performed are medically necessary and will not unnecessarily duplicate other services.**

There are established standard protocols in place for Methodist to ensure all LINAC procedures are medically necessary and will not unnecessarily duplicate other services. All LINAC procedures are required to have a physician's written order that defines the medical necessity. All orders will be reviewed to ensure that there is no unnecessary duplication of services. Methodist has a dedicated team of nurses that precertify all LINAC procedures through the various third party payers. The rigorous precert process ensures medical necessity and assures that the patient does not receive duplicative procedures. See Attachment C: LINAC Services (6)(d) for the System Policy outlining the guidelines for a physician order for all diagnostic services.

e. **An applicant proposing to acquire any MRT Unit shall demonstrate that it meets the staffing and quality assurance requirements of the American Society of Therapeutic Radiation and Oncology (ASTRO) , the American College of Radiology (ACR). The American College of Radiation Oncology (ACRO) or a similar accrediting authority such as the National Cancer Institute (CNI). Additionally, all applicants shall commit to obtain accreditation from ASTRO, ACR or a comparable accreditation authority for MRT Services within two years following instigation of the operation of the proposed MRT Unit.**

Methodist meets the staffing and quality assurance requirements. Methodist will obtain accreditation by the American College of Radiology (ACR) for this site of care within the first two years of operation.

f. **All applicants should seek and document emergency transfer agreements with local area hospitals, as appropriate. An applicant's arrangements with its physician medical director must specify that said physician be an active member of the subject transfer agreement hospital medical staff.**

Emergencies will be transferred to Methodist Germantown Hospital. Both the comprehensive cancer center and the hospital will be operated under the same license and provider number, thus there is no need for a formal transfer agreement.

The physician medical director is an active member of the medical staff. See Attachment Section MRI Services 6(f) for current medical director's CV.

g. **All applicants should provide evidence of any onsite simulation and treatment planning services to support the volumes they project and any impact such services may have on volumes and treatment times.**

The CT simulator from the Methodist Radiation Oncology Center will be relocated to this proposed center to support both LINACs. The CT simulator will support projected volumes.

This is the same model that is employed at the Methodist University Hospital – there are two LINACs and a CT simulator. The CT simulator has sufficient capacity to support the volumes and cause no delay in treatment times.

7. **The applicant should provide assurances that it will submit data in a timely fashion as requested by the HSDA to maintain the HSDA Equipment Registry.**

Methodist assures the HSDA that all data requested to maintain the Equipment Registry will be submitted within the expected time frame.

8. **In light of Rule 0720-11.01, which lists the factors concerning need on which an application may be evaluated, and Principle No. 2 in the State Health Plan, "Every citizen should have reasonable access to health care," the HSDA may decide to give special consideration to an applicant:**

   a. **Who is offering the service in a medically underserved area as designated by the United States Health Resources and Services Administration;**
   Not applicable

   b. **Who is a "safety net hospital" or a "children's hospital" as defined by the Bureau of TennCare Essential Access Hospital payment program; or**
   Not applicable

   c. **Who provides a written commitment of intention to contract with at least one TennCare MCO and, if providing adult services, to participate in the Medicare program.**

Methodist is certified for both Medicare and TennCare/Medicaid and participates in both programs. Methodist contracts with all of the TennCare plans offered in the service area and with Medicaid in adjoining States. All hospitals including the hospital-based ambulatory centers treat TennCare participants under the system's TennCare contracts.

In comparison to other large counties across the State, Shelby County is the home to a disparate number of low-income children seeking coverage from the state's Medicaid program. Methodist is one of the largest health care providers of TennCare and is committed to these patients as reflected in the projections for this proposal.

b. **The applicant should demonstrate that the existing physical plant's condition warrants major renovation or expansion.**

The square footage needed to consolidate the Methodist affiliated cancer care services into a single site of care is slightly larger than available space. Approximately 8,000 square feet will be added to the building for the radiology and radiation therapy departments. Please refer Section B II for more details on renovation and construction.

2. **Describe the relationship of this project to the applicant facility's long-range development plans, if any.**

This project is consistent with the long-range plan of Methodist Healthcare. The Methodist vision is to be a faith-based health care system that, in partnership with its physicians, will be nationally recognized for delivering outstanding care to each patient, achieved through collaboration with patients and their families. This project is entirely aligned with the system's vision. The objective of this project is to enhance the care for cancer patients in the Mid-South by decreasing disparities, enhancing access and improving outcomes in a meaningful way.

The resulting action plan will reach this vision through collaboration with the West Clinic physicians, the UTHSC and patients and families to:

- Decrease the fractionization of care to cancer patients;
- Provide access to Multidisciplinary clinics for all cancer care patients;
- Provide cutting edge access to clinical trials and research programs to the community;
- Provide specialized medical, surgical, diagnostic and radiation programs that allow patients to fight on at home in their own community.
- Provide a comprehensive, coordinated and cost effective cancer journey in order to partner with insurance and governmental payers using innovative arrangements that move care from a fee for service methodology to a patient centered quality outcome partnership.

3. Identify the proposed service area and justify the reasonableness of that proposed area. Submit a county level map including the State of Tennessee clearly marked to reflect the service area. Please submit the map on 8 1/2" x 11" sheet of white paper marked only with ink detectable by a standard photocopier (i.e., no highlighters, pencils, etc.).

The project service area includes Shelby, Fayette and Tipton counties in Tennessee, DeSoto and Marshall counties in Mississippi and Crittenden County in Arkansas. See Attachment Section C: Need (3) for a county level service area map. This service area is deemed reasonable for the West Cancer Center's regional oncology services.

4. **A. Describe the demographics of the population to be served by this proposal.**

TABLE 15
DEMOGRAPHICS SUMMARY, 2013- 2023
METHODIST 6-COUNTY SERVICE AREA

	Selected Area	USA
2010 Total Population	1,275,587	308,745,538
2013 Total Population	1,296,691	314,861,807
2018 Total Population	1,333,192	325,322,277
% Change 2013 - 2018	2.8%	3.3%
Average Household Income	$63,414	$69,637

	2013	2018	% Change
Total Male Population	623,428	642,660	3.1%
Total Female Population	673,263	690,532	2.6%
Females, Child Bearing Age	271,907	269,075	-1.0%

POPULATION DISTRIBUTION

	Age Distribution				
Age Group	2013	% of Total	2018	% of Total	USA 2013 % of Total
0-14	278,109	21.4%	280,999	21.1%	19.6%
15-17	59,583	4.6%	57,373	4.3%	4.1%
18-24	128,967	9.9%	130,918	9.8%	10.0%
25-34	173,085	13.3%	174,648	13.1%	13.1%
35-54	352,375	27.2%	342,140	25.7%	26.9%
55-64	155,239	12.0%	167,244	12.5%	12.4%
65+	149,333	11.5%	179,870	13.5%	13.9%
Total	1,296,691	100.0%	1,333,192	100.0%	100.0%

HOUSEHOLD INCOME DISTRIBUTION

	Income Distribution		
2013 Household Income	HH Count	% of Total	USA % of Total
<$15K	76,564	15.8%	13.8%
$15-25K	57,304	11.8%	11.6%
$25-50K	130,020	26.8%	25.3%
$50-75K	87,287	18.0%	18.1%
$75-100K	53,969	11.1%	11.7%
Over $100K	79,984	16.5%	19.5%
Total	485,128	100.0%	100.0%

EDUCATION LEVEL

	Education Level Distribution		
2013 Adult Education Level	Pop Age 25+	% of Total	USA % of Total
Less than High School	40,360	4.9%	6.2%
Some High School	80,340	9.7%	8.4%
High School Degree	245,783	29.6%	28.4%
Some College/Assoc. Degree	255,727	30.8%	28.9%
Bachelor's Degree or Greater	207,822	25.0%	28.1%
Total	830,032	100.0%	100.0%

RACE/ETHNICITY

	Race/Ethnicity Distribution		
Race/Ethnicity	2013 Pop	% of Total	USA % of Total
White Non-Hispanic	573,514	44.2%	62.3%
Black Non-Hispanic	601,959	46.4%	12.3%
Hispanic	74,431	5.7%	17.3%
Asian & Pacific Is. Non-Hispanic	26,853	2.1%	5.1%
All Others	19,934	1.5%	2.9%
Total	1,296,691	100.0%	100.0%

B. Describe the special needs of the service area population, including health disparities, the accessibility to consumers, particularly the elderly, women, racial and ethnic minorities, and low-income groups. Document how the business plans of the facility will take into consideration the special needs of the service area population.

The special needs of the service area population significantly contribute to the projected volumes and planning for the project. The business plan takes into consideration the aging of the population, the large number/disparate mix of TennCare enrollees, the disparities in care based on race, the predominance of poor lifestyle choices and disregard of preventive screenings throughout the service area population.

One of the most notable demographic changes in the service area over the last ten years has been the aging of the population and it is projected these trends will continue. Over the next ten years it is particularly significant that the area population aged 65 years and older - the group that most needs health and cancer care - accounts for 85% of the total population growth. The number of people 65 and older will increase by more than 67,500 persons, or 45%, which is almost double the entire population

of Fayette County. The older age cohorts already account for 60% of the health care expenditures. People in age cohorts 65 and older account for two-thirds of all cancer diagnoses and 70% of cancer deaths. The plans to develop a more comprehensive and seamless continuum of cancer care is required to plan for the health care needs and chronic illnesses of the older population.

Shelby County claims the largest population of all 95 Tennessee counties with over 900,000 residents; with that Shelby County also has the largest TennCare population. In comparison to other large counties across the state, Shelby County is the home to a disparate number of low-income or disabled Tennesseans seeking coverage from the state's Medicaid program. Methodist is one of the largest health care providers of TennCare and is committed to these patients as reflected in the projections for this proposal.

Additionally, the projected racial mix of the population is 44% white, 46% black and 10% other races. Addressing racial disparities in cancer care is paramount in Shelby County and the surrounding communities. Disparities in cancer care result from gaps along the entire continuum of care; however, due to multiple organizations and disparate data sources evaluating the entire continuum for a large population is rarely achieved. In January 2013, Methodist Healthcare Foundation was awarded a planning grant from Avon Foundation to establish a clinical data warehouse to enable the evaluation of women with breast cancer from pre-screening through treatment. The next phase of the research includes elucidating the differences in care pathways between races and evaluating the effectiveness of patient navigation in order to reduce/eliminate disparities in care of breast cancer in our community. The integration of the disparate sites of cancer is a crucial step in Methodist's research efforts.

Cancer is an important public health concern, and incidence rates are dramatically rising nationally and locally. Poor lifestyle choices and disregard of preventive screenings are contributing factors to the increase of cancer rates. The population identified by the project's service area is plagued by a predominance of health risk factors.

- Tobacco use is the number one preventable cause of death in the United States, and Tennessee has one of the highest incidence rates of lung cancer cases with rates of residents currently smoking higher than National norms.
- Tennessee is one of the most overweight/obese states in the country. A recent report entitled "F as in Fat: How Obesity Threatens America's Future 2010" rates Tennessee as the 2nd highest state in the country in obesity. The trend will continue with the growing numbers of people who do not get regular physical activity.
- Screening rates for breast and colorectal cancers also fall below national averages for this service area; Mississippi and Arkansas have fewer women seeking preventive mammograms, and Tennessee, Mississippi, and Arkansas have fewer seeking sigmoidoscopies and colonoscopies than the rest of nation.

There is only one dominant strategy for cancer care providers to consider. It is the development of a collaborative integrated multidisciplinary cancer program. Cancer providers that clearly and efficiently develop and operationalize this approach will create higher standards of care, complex treatment options, better research opportunities and access to multi-phase clinical trials. This type of care program will increase patient's knowledge and care expectations by experiencing a system designed to reduce or eliminate disparate experiences of care.

5. **Describe the existing or certified services, including approved but unimplemented CONs, of similar institutions in the service area. Include utilization and/or occupancy trends for each of the most recent three years of data available for this type of project. Be certain to list each institution and its utilization and/or occupancy individually. Inpatient bed projects must include the following data:**

admissions or discharges, patient days, and occupancy. Other projects should use the most appropriate measures, e.g., cases, procedures, visits, admissions, etc.

The LINAC utilization for existing services is reported under the LINAC criteria, yet it is repeated on the following pages for convenience.

COPY OF TABLE 11
METHODIST SERVICE AREA
LINEAR ACCELERATOR EQUIPMENT AND UTILIZATION, 2010-2012

Facility Type	Facility	2010		2011		2012	
		Procs	# of Units	Procs	# of Units	Procs	# of Units
HOSP	Methodist Healthcare	21,287	3	21,049	3	23,756	3
HOSP	Baptist Memorial Hospital-Memphis	10,989	3	11,343	3	11,052	2
ASTC	Baptist Memorial Hospital-Tipton/Germantown	7,365	1	5,270	1	7,610	1
HOSP	Regional Medical Center at Memphis (The Med) [1]	87	1	-	-	-	-
HOSP	St. Francis Hospital – Park	7,508	2	7,576	2	6,795	2
HOSP	St. Jude Children's Research Hospital	5,789	2	4,800	2	1,437	2
HOSP	Baptist Memorial Hospital – DeSoto	7,152	1	7,187	1	10,152	1
Total Procedures		60,177	13	57,225	12	80,802	11
Average Procedures per Unit		4,629		4,769		5,527	
Total Procedures without St. Jude		53,388	11	52,425	10	59,365	9
Average Procedures per Unit without St. Jude		4,944		5,243		6,596	

Source: 2008-10 TN HSDA - State Equipment Registry; and 2009-2012 MS DOH - State Health Plan
[1] The Regional Medical Center at Memphis closed Linear Accelerator Services in 2010

There are approved, yet unimplemented CONs of similar institutions in the service area. Baptist Memorial – Tipton Hospital filed CONs (CN1211-057 and CN1105-018) to create a cancer center close to the Memphis hospital campus. These applications support Methodist's findings that consolidation of cancer services will lead to efficiencies and improvements across the full continuum of care.

6. **Provide applicable utilization and/or occupancy statistics for your institution for each of the past three (3) years and the projected annual utilization for each of the two (2) years following completion of the project. Additionally, provide the details regarding the methodology used to project utilization. The methodology <u>must include</u> detailed calculations or documentation from referral sources, and identification of all assumptions.**

As previously described, the growth rate for cancer incidence in the Methodist service area is calculated based on national cancer incidence rates and is applied against local population projections which factor in the aging population and overall growth. Cancer cases in the Methodist service area will grow by approximately 2.5% annually between 2013 and 2018 (or 12% over five year). See Table 16 for the

calculation of local cancer incidence repeated below for convenience showing a five-year projected growth rate of 12%. See Table 17 for historical and projected utilization.

TABLE 16
PROJECTION OF LOCAL CANCER INCIDENCE, 2013 BASE YEAR AND 2016-2018
METHODIST HEALTHCARE SERVICE AREA

		Year 1	Year 2	
Projection of Local Cancer Incidence	**2013**	**2016**	**2017**	**2018**
Projected Market Procedures				
Under 65	1,147,941	1,151,431	1,152,597	1,153,764
65 and Over	149,510	167,171	173,510	180,090
Total	1,297,451	1,318,603	1,326,108	1,333,854
National Cancer Incidence Rates per 100,000				
Under 65	224.2	224.2	224.2	224.2
65 and Over	2,113.7	2,113.7	2,113.7	2,113.7
Projected Service Area Cancer Incidence				
Under 65	2,574	2,582	2,584	2,587
65 and Over	3,160	3,534	3,667	3,807
Total	5,734	6,115	6,252	6,393
% Growth over 2013 Incidence Rates		107%	109%	112%
Projected LINAC Procedures in Market Based on Population Aging/Growth				
Cumulative Incremental Procedures in Market	-	3,946	5,360	6,827

TABLE 17
HISTORICAL AND PROJECTED UTILIZATION
METHODIST HEALTHCARE-MEMPHIS HOSPITAL

	2010	2011	2012	Year 1	Year 2
Procedures	21,287	21,049	23,756	26,822	28,165

ECONOMIC FEASIBILITY

1. **Provide the cost of the project by completing the Project Costs Chart on the following page. Justify the cost of the project.**

   - **All projects should have a project cost of at least $3,000 on Line F. (Minimum CON Filing Fee). CON filing fee should be calculated from Line D. (See Application Instructions for Filing Fee)**

     The CON filing fee calculated from Line D of the Project Costs Chart was $45,000; therefore a check for this amount accompanies the application.

   - **The cost of any lease (building, land, and/or equipment) should be based on fair market value or the total amount of the lease payments over the initial term of the lease, whichever is greater. Note: This applies to all equipment leases including by procedure or "per click" arrangements. The methodology used to determine the total lease cost for a "per click" arrangement must include, at a minimum, the project procedures, the "per click" rate and the term of the lease.**

     The first five years of lease payments plus maintenance and relocation expenses for the hospital-based CTs and PET located at the West Clinic were compared to fair market values. Project costs included the greater of the two.

   - **The cost for fixed and moveable equipment includes, but is not necessarily limited to, maintenance agreements covering the expected useful life of the equipment; federal, state, and local taxes and other government assessments; and installation charges, excluding capital expenditures for physical plant renovation or in-wall shielding, which should be included under construction costs or incorporated in a facility lease.**

     See Attachment C: Economic Feasibility (1)(c) for the list of moveable equipment over $50,000.

   - **For projects that include new construction, modification, and/or renovation; <u>documentation must be</u> provided from a contractor and/or architect that support the estimated construction costs**

     A letter from the architect follows as Attachment C: Economic Feasibility (1)(d).

PROJECT COSTS CHART

A. Construction and equipment acquired by purchase:

1.	Architectural and Engineering Fees	$1,465,054
2.	Legal, Administrative (Excluding CON Filing Fee), Consultant Fees	10,000
3.	Acquisition of Site	
4.	Preparation of Site	
5.	Construction Costs	16,152,175
6.	Contingency Fund	1,615,218
7.	Fixed Equipment (Not included in Construction Contract)	
8.	Moveable Equipment (List all equipment over $50,000)	13,515,708
9.	Other (Specify)	710,000

B. Acquisition by gift, donation, or lease:

1.	Facility (inclusive of building and land)		
2.	Building only		22,500,000
3.	Land only		
4.	Equipment (Specify)	See equipment list	4,541,038
5.	Other (Specify)		

C. Financing Costs and Fees:

1.	Interim Financing	
2.	Underwriting Costs	
3.	Reserve for One Year's Debt Service	
4.	Other (Specify)	

D.	Estimated Project Cost (A+B+C)	60,509,193
E.	CON Filing Fee	45,000
F.	Total Estimated Project Cost (D+E) **TOTAL**	60,554,193

2. **Identify the funding sources for this project.**

Please check the applicable item(s) below and briefly summarize how the project will be financed. ***(Documentation for the type of funding MUST be inserted at the end of the application, in the correct alpha/numeric order and identified as Attachment C, Economic Feasibility-2.)***

	A.	**Commercial loan—Letter from lending institution or guarantor stating favorable initial contact, proposed loan amount, expected interest rates, anticipated term of the loan, and any restrictions or conditions;**
	B.	**Tax-exempt bonds—Copy of preliminary resolution or a letter from the issuing authority stating favorable initial contact and a conditional agreement from an underwriter or investment banker to proceed with the issuance;**
	C.	**General obligation bonds—Copy of resolution from issuing authority or minutes from the appropriate meeting.**
	D.	**Grants--Notification of intent form for grant application or notice of grant award; or**
X	E.	**Cash Reserves--Appropriate documentation from Chief Financial Officer.**
	F.	**Other—Identify and document funding from all other sources.**
		Methodist Healthcare is prepared to fund the project cost with cash reserves. See the attached letter from the Chief Financial Officer. Attachment C: Economic Feasibility (2)

3. **Discuss and document the reasonableness of the proposed project costs. If applicable, compare the cost per square foot of construction to similar projects recently approved by the Health Services and Development Agency.**

The costs of the project are reasonable and comparable to similar CON projects approved throughout the service area over the last few years. This project has an estimated cost per square foot of approximately $148 per square foot ($16,152,175 / 109,285 sf) or $163 ($17,767,393 / 109,285 sf) with construction contingency. See the cost per square foot comparison in Table 1 below

COPY TABLE 1

COST PER SQUARE FOOT COMPARISON WITH APPROVED PROJECTS

CON Name	Date Filed	Cost per Square Foot
Methodist University PET Renovation & Relocation	Nov-11	$ 244
Campbell Clinic Surgery Center Construction & Renovation	Aug-12	$ 244
The Regional Medical Center – The Med Hospital Construction & Renovation	Aug-12	$ 225
Baptist Memorial Women's Hospital ED Construction & Renovation	Dec-12	$ 238
Baptist Memorial Tipton Hospital Establish Cancer Center (Relocation)	Dec-12	$ 250

4. **Complete Historical and Projected Data Charts on the following two pages–*Do not modify the Charts provided or submit Chart substitutions!* Historical Data Chart represents revenue and expense information for the last *three (3)* years for which complete data is available for the institution. Projected Data Chart requests information for the two (2) years following the completion of this proposal. Projected Data Chart should reflect revenue and expense projections for the *Proposal Only* (*i.e.*, if the application is for additional beds, include anticipated revenue from the proposed beds only, not from all beds in the facility).**

Following this page are the Historic Data Chart for Methodist Healthcare-Memphis Hospitals, and a Projected Data Chart for Methodist Healthcare-Memphis Hospitals. See Attachment C: Economic Feasibility (4) for items included in the Other Expense and Revenue amounts.

5. **Please identify the project's average gross charge, average deduction from operating revenue, and average net charge.**

The average gross charge and deduction amounts below are calculated using adjusted discharges.

Average Gross Charge	$	48,733
Average Deduction		37,348
Average Net Charge	$	12,385

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HISTORICAL DATA CHART

Methodist Healthcare-Memphis Hospitals

Give information for the last *three (3)* years for which complete data are available for the facility or agency. The fiscal year begins in January (Month).

	Year 2010	Year 2011	Year 2012
A. Utilization Data (Patient Days)	343,664	354,115	350,565
B. Revenue from Services to Patients		(in thousands)	
1. Inpatient Services	$ 2,356,295	$ 2,473,036	$ 2,547,551
2. Outpatient Services	1,268,029	1,409,960	2,028,543
3. Emergency Services	206,355	242,879	285,982
4. Other Operating Revenue (Specify) *see attached*	16,542	16,716	29,498
Gross Operating Revenue	**$ 3,847,221**	**$ 4,142,591**	**$ 4,891,574**
C. Deductions from Gross Operating Revenue			
1. Contractual Adjustments	$ 2,354,936	$ 2,531,442	$ 3,052,543
2. Provision for Charity Care	291,148	319,941	338,430
3. Provisions for Bad Debt	94,541	112,949	142,763
Total Deductions	**$ 2,740,625**	**$ 2,964,332**	**$ 3,533,736**
NET OPERATING REVENUE	**$ 1,106,596**	**$ 1,178,259**	**$ 1,357,838**
D. Operating Expenses			
1. Salaries and Wages	$ 387,179	$ 406,073	$ 433,147
2. Physician's Salaries and Wages	6,016	3,224	4,073
3. Supplies	225,698	233,548	301,936
4. Taxes	1,116	1,392	1,762
5. Depreciation	53,892	70,172	72,894
6. Rent	2,271	2,462	7,098
7. Interest, other than Capital	-		
8. Management Fees: a) Fees to Affiliates	1,482	1,072	4,268
b) Fees to Non-Affiliates	3,068	2,768	2,584
9. Other Expenses *see attached*	362,941	381,551	451,042
Total Operating Expenses	**$ 1,043,663**	**$ 1,102,262**	**$ 1,278,804**
E. Other Revenue (Expenses) – Net *see attached*	$ 46,696	$ 33,080	$ 33,243
NET OPERATING INCOME (LOSS)	$ 109,629	$ 109,077	$ 112,277
F. Capital Expenditures			
1. Retirement of Principal	$ -	$	$
2. Interest	12,792	24,440	24,053
Total Capital Expenditures	$ 12,792	$ 24,440	$ 24,053
NET OPERATING INCOME (LOSS) LESS CAPITAL EXPENDITURES	**$ 96,837**	**$ 84,637**	**$ 88,224**

PROJECTED DATA CHART

Methodist Healthcare–Memphis Hospitals

Give information for the two (2) years following the completion of this proposal. The fiscal year begins in January (Month).

			Year 2016	Year 2017
A.	Utilization Data (Patient days)		316,060	314,206
B.	Revenue from Services to Patients		(in thousands)	
	1. Inpatient Services		$ 2,922,755	$ 3,064,409
	2. Outpatient Services		2,817,482	2,965,668
	3. Emergency Services			
	4. Other Operating Revenue	*see attached*	51,382	52,129
		Gross Operating Revenue	**$ 5,791,619**	**$ 6,082,206**
C.	Deductions from Gross Operating Revenue			
	1. Contractual Adjustments		$ 3,948,421	$ 4,207,669
	2. Provision for Charity Care		225,886	220,249
	3. Provisions for Bad Debt		175,040	179,488
		Total Deductions	**$ 4,349,347**	**$ 4,607,406**
NET OPERATING REVENUE			**$ 1,442,272**	**$ 1,474,800**
D.	Operating Expenses			
	1. Salaries and Wages		$ 458,842	$ 469,072
	2. Physician's Salaries and Wages		4,167	4,260
	3. Supplies		313,044	322,364
	4. Taxes		1,981	2,025
	5. Depreciation		87,268	88,862
	6. Rent		6,278	6,370
	7. Interest, other than Capital		-	
	8. Management Fees:	a) Fees to Affiliates	2,140	2,164
		b) Fees to Non-Affiliates	4,994	5,051
	8. Other Expenses	*see attached*	521,977	534,506
		Total Operating Expenses	**$ 1,400,692**	**$ 1,434,674**
E.	Other Revenue (Expenses) -- Net (Specify)		$ 42,994	$ 46,563
NET OPERATING INCOME (LOSS)			**$ 84,574**	**$ 86,689**
F.	Capital Expenditures			
	1. Retirement of Principal			
	2. Interest		25,238	24,488
		Total Capital Expenditures	**$ 25,238**	**$ 24,488**
NET OPERATING INCOME (LOSS) LESS CAPITAL EXPENDITURES			**$ 59,336**	**$ 62,201**

6. **A. Please provide the current and proposed charge schedules for the proposal. Discuss any adjustment to current charges that will result from the implementation of the proposal. Additionally, describe the anticipated revenue from the proposed project and the impact on existing patient charges.**

There will be no change to the existing charge structure as a result of this project, yet there will be normal unrelated rate increases over the next several years. See the current MRI, CT, PET and LINAC charges below.

TABLE 18
METHODIST CURRENT CHARGE SCHEDULES

Procedure	CPT	Current Rate
MRI		
MRA HEAD WO CONT	70544	$ 3,358
MRA NECK WO CONT	70547	$ 3,358
MRI ABD W/WO CONT	74183	$ 4,572
MRI ABD WO CONT	74181	$ 3,358
MRI BRAIN & STEM W CONT	70552	$ 3,816
MRI BRAIN & STEM W/WO CONT	70553	$ 4,572
MRI BRAIN & STEM WO CONT	70551	$ 3,358
MRI PELVIS W/WO CONT	72197	$ 4,572
MRI SPINE CERV W/WO CONT	72156	$ 4,572
MRI SPINE CERV WO CONT	72141	$ 3,358
MRI SPINE LUMBAR W/WO CONT	72158	$ 4,572
MRI SPINE LUMBAR WO CONT	72148	$ 3,358
MRI SPINE THORACIC W/WO CONT	72157	$ 4,572
MRI SPINE THORACIC WO CONT	72146	$ 3,358
CT		
CT ABD AND PEL W/WO CONTRAST	74178	$ 5,581
CT ABD AND PEL WITH CONTRAST	74177	$ 4,796
CT ABD AND PEL WO CONTRAST	74176	$ 3,464
CT ABD TRIPLE PHASE	74170	$ 2,791
CT ABD W CONT	74160	$ 2,398
CT ANGIO HEAD W/WO CONT W IMAGE POST PRO	70496	$ 2,791
CT ANGIO NECK W/WO CONT W IMAGE POST PRO	70498	$ 2,791
CT BRAIN/HEAD W/WO CONT	70470	$ 2,791
CT BRAIN/HEAD WO CONT	70450	$ 1,733
CT GUIDE ABSCESS DRNG PERCUT W CATH PLAC	75989	$ 1,571
CT GUIDE NDL BX	77012	$ 2,398
CT MAXILLOFACIAL AREA WO CONT	70486	$ 1,733
CT SOFT TISSUE NECK W CONT	70491	$ 2,398
CT SPINE CERV WO CONT	72125	$ 1,733
CT SPINE LUMBAR WO CONT	72131	$ 1,733
CT THORAX W CONT	71260	$ 2,398
CT THORAX WO CONT	71250	$ 1,733
CTA ABD/PELVIS W/WO CONTRAST	74174	$ 3,049

Procedure	CPT	Current Rate
PET		
BRAIN IMAGE PET METABOLIC EVALUATION	78608	$ 7,912
MYOCARDIAL IMAGING PET METABOLOC EVAL	78459	$ 8,008
TUMOR IMAGING PET W/CT SKULL TO MIDTHIGH	78815	$ 8,601
TUMOR IMAGING PET W/CT WHOLE BODY	78816	$ 8,601
UNLISTED NUC MED PROCEDURE PET	78999	$ 1,496
LINAC		
CONTINUING MEDICAL PHYSICS CONSULT W TRM	77336	$ 521
CT GUIDE RADIATION THER FIELD PLACE	77014	$ 845
HDR BASIC DOSIMETRY CALC	77300	$ 521
HDR BRACHYTHERAPY 2-12 CHANNELS	77786	$ 11,400
HDR ISODOSE CALC 12+SOURCES COMPLEX	77328	$ 1,195
MEDICAL RADIATION PHYSICS CONSULT SPEC	77370	$ 1,195
RADIATION DOSIMETRY CALC BASIC	77300	$ 521
RADIATION THERAPY DELIVERY, IMRT	77418	$ 2,507
RADIATION THERAPY DELIVERY,VMAT	77418	$ 2,507
RADIATION TRMT 3+AREAS 11-19MEV	77414	$ 663
RADIATION TRMT 3+AREAS 6-10MEV	77413	$ 663
SPEC TRMT PROC	77470	$ 1,611
STEROSCOPIC XRAY GUIDANCE DELIVERY	77421	$ 469
TELETHER ISODOSE PLAN COMPLEX	77315	$ 1,195
THER RAD PORT FILM/FILMS	77417	$ 373
THER RAD SIMULATION AIDED FIELD 3D	77295	$ 4,654
THER RAD SIMULATION AIDED FIELD COMPLEX	77290	$ 1,195
THER RAD SIMULATION AIDED FIELD SIMP	77280	$ 521
TRMT DEVICE DESIGN & CONSTRUCT COMPLEX	77334	$ 961

B. Compare the proposed charges to those of similar facilities in the service area/adjoining service areas, or to proposed charges of projected recently approved by the Health Services and Development Agency. If applicable, compare the proposed charges of the project to the current Medicare allowable fee schedule by common procedure terminology (CPT) code(s).

Based upon the review, the proposed charges are reasonable and comparable for MRI, CT, PET and LINAC services in the service area. There will be no impact to the charge structure due to this project. Tables 19 through 22 below show the comparisons of charges based on data from the 2012 State Equipment Registry. With normal rate increases, projected revenue is reasonable and comparable.

TABLE 19
METHODIST SERVICE AREA
ADULT HOSPITAL-BASED MRI CHARGE COMPARISON, 2012

Facility Type	Facility	Charge per Procedure
HOSP	Baptist Memorial Hospital-Collierville	$ 2,386
HOSP	Baptist Memorial Hospital-Memphis	$ 2,438
HOSP	Baptist Memorial Hospital-Tipton	$ 2,347
HOSP	Regional Medical Center at Memphis	$ 3,101
HOSP	St. Francis Hospital	$ 4,096
HOSP	St. Francis Hospital – Bartlett	$ 2,743
HOSP	Methodist Healthcare – University Hospital	$ 3,545

TABLE 20
METHODIST SERVICE AREA
HOSPITAL-BASED CT CHARGE COMPARISON, 2012

Facility Type	Facility	Charge per Procedure
HOSP	Baptist Memorial Hospital-Collierville	$ 2,482
HOSP	Baptist Memorial Hospital-Memphis	$ 2,276
HOSP	Baptist Memorial Hospital for Women	$ 2,832
HOSP	Baptist Memorial Hospital-Tipton	$ 2,558
HOSP	Regional Medical Center at Memphis	$ 2,493
HOSP	St. Francis Hospital	$ 4,827
HOSP	St. Francis Hospital – Bartlett	$ 4,451
HOSP	Methodist Healthcare – University Hospital	$ 2,437

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TABLE 21
METHODIST SERVICE AREA
HOSPITAL-BASED PET CHARGE COMPARISON, 2012

Facility Type	Facility	Charge per Procedure
HOSP	Baptist Memorial Hospital-Memphis	$ 6,869
H-IMGING	Baptist Memorial Hospital-Tipton	$ 7,268
PED-HOSP	St. Jude Children's Research Hospital	$ 6,603
HOSP	Methodist Healthcare – University Hospital	$ 8,186

TABLE 22
METHODIST SERVICE AREA
HOSPITAL-BASED LINAC CHARGE COMPARISON, 2012

Facility Type	Facility	Charge per Procedure
HOSP	Baptist Memorial Hospital-Memphis	$ 5,526
HOSP	Baptist Memorial Hospital-Tipton	$ 7,610
HOSP	Regional Medical Center at Memphis	$
HOSP	St. Francis Hospital	$ 3,398
HOSP	Methodist Healthcare – University Hospital	$ 7,919

7. **Discuss how projected utilization rates will be sufficient to maintain cost-effectiveness.**

The projections in this application demonstrate that Methodist will remain financially viable. The comparisons of average charges at facilities of similar approved scope, as documented in the previous section, demonstrate that the applicant will remain relatively cost-effective.

8. **Discuss how financial viability will be ensured within two years; and demonstrate the availability of sufficient cash flow until financial viability is achieved.**

As reflected in this application's historic and projected data charts, Methodist Healthcare and Methodist Healthcare-Memphis Hospitals are viable today, and will remain financially viable during its first two years of operation and subsequently.

9. **Discuss the project's participation in state and federal revenue programs including a description of the extent to which Medicare, TennCare/Medicaid, and medically indigent patients will be served by the project. In addition, report the estimated dollar amount of revenue and percentage of total project revenue anticipated from each of TennCare, Medicare, or other state and federal sources for the proposal's first year of operation.**

Methodist currently serves the Medicare, TennCare, and medically indigent populations. The estimated payor mix for 2016, the first full year of operation, is shown below.

TABLE 23
PROJECTED PAYOR MIX, 2016

Payor	Revenue	% of Total Revenue
Medicare	$ 1,967,651,659	34%
TennCare/Medicaid	$ 1,345,522,814	23%
Self Pay	$ 323,427,151	6%
Commercial/Other	$ 2.103.635,553	37%
Total	$ 5,740,237,148	100%

10. Provide copies of the balance sheet and income statement from the most recent reporting period of the institution and the most recent audited financial statements with accompanying notes, if applicable. For new projects, provide financial information for the corporation, partnership, or principal parties involved with the project. Copies must be inserted at the end of the application, in the correct alpha-numeric order and labeled as Attachment C, Economic Feasibility-10.

Audited financials and cash are held at the corporate level, therefore, please see the attached most recent audited financials for Methodist Healthcare. Also, a balance sheet for the period ending September 2013 for Methodist Healthcare is included along with an income statement for Methodist Healthcare – Memphis Hospitals. See Attachment C: Economic Feasibility (10).

11. Describe all alternatives to this project which were considered and discuss the advantages and disadvantages of each alternative including but not limited to:

a. A discussion regarding the availability of less costly, more effective, and/or more efficient alternative methods of providing the benefits intended by the proposal. If development of such alternatives is not practicable, the applicant should justify why not; including reasons as to why they were rejected.

b. The applicant should document that consideration has been given to alternatives to new construction, e.g., modernization or sharing arrangements. It should be documented that superior alternatives have been implemented to the maximum extent practicable.

Response to a. and b. above:

Methodist considered other options prior to proposing this consolidation, expansion and renovation project. Alternatives to the proposed project included: do nothing and continue to operate at extremely high occupancy levels with fragmented care or build a new center from the ground up.

Do Nothing

This option was rejected because the cited fragmentization and capacity issues will not disappear without action. They are the source of significant patient and physician satisfaction concerns. The fragmented cancer care in the market today can lead to patient dissatisfaction and anxiety, unnecessary costs, duplication of services and breaks in communication between caregivers on treatment plans. There is only one dominant strategy for cancer care providers to consider. It is the development of a collaborative, integrated multidisciplinary cancer program. Cancer providers that clearly and efficiently develop and operationalize this approach will create higher standards of care, complex treatment options, better research opportunities and access to multi-phase clinical trials. This

type of care program will increase patient's knowledge and care expectations by experiencing a system designed to reduce or eliminate disparate experiences of care.

Build a New Facility

This option was cost prohibitive. Methodist, as good stewards of its resources, reviewed available space in the planning stages of the project, looked for the most cost effective options and developed plans to redeploy assets versus building any new buildings. The proposed building is currently utilized by Methodist, Methodist affiliates and other non-affiliated health care providers. Renovations are required to ensure the hospital-based space meets hospital construction codes and to make improvements required for treating cancer patients in a patient and family centered environment.

The proposed project is by far the most rational long-range investment. The consolidation, expansion and renovation will meet the community's health care needs for years to come. This alternative is the only option that can address capacity and efficiency needs; accommodate new technologies and innovation; and a coordinated system of care that meets patients and families needs.

CONTRIBUTION TO THE ORDERLY DEVELOPMENT OF HEALTH CARE

1. **List all existing health care providers (e.g., hospitals, nursing homes, home care organizations, etc.), managed care organizations, alliances, and/or networks with which the applicant currently has or plans to have contractual and/or working relationships, e.g., transfer agreements, contractual agreements for health services.**

Methodist Healthcare has working relationships with the following physician groups:

- The West Clinic
- UT Medical Group, Inc.
- UT Le Bonheur Pediatric Specialists
- Campbell Clinic Orthopaedics
- Duckworth Pathology Group
- Pediatric Anesthesiologists PA
- Pediatric Emergency Specialists PC
- Semmes-Murphey Neurologic and Spine Institute
- Methodist Primary and Specialty Care Groups (See Attachment A:4 for Organizational Chart)

The Methodist Healthcare-Memphis Hospitals' license includes five hospitals:

- Methodist Healthcare-University Hospital
- Methodist Healthcare-South Hospital
- Methodist Healthcare-North Hospital
- Methodist Healthcare-Le Bonheur Germantown Hospital
- Le Bonheur Children's Hospital

Additionally, Methodist Healthcare owns and operates Methodist Alliance Services, a comprehensive home care company, and a wide array of other ambulatory services such as minor medical and urgent care centers, outpatient diagnostic centers and ambulatory surgery centers.

Methodist Healthcare is part of the University Medical Center Alliance which also includes the University of Tennessee and the Memphis Regional Medical Center (The Med). The goal of this council is to support the quality of care, patient safety and efficiency across all three institutions.

There are also agreements with the Mid-South Tissue Bank, the Mid-South Transplant Foundation, Duckworth Pathology and PhyAmerica. In addition, there is an agreement with Premier Purchasing Partners.

A list of managed care contracts is attached in Attachment C: Orderly Development (1).

2. **Describe the positive and/or negative effects of the proposal on the health care system. Please be sure to discuss any instances of duplication or competition arising from your proposal including a description of the effect the proposal will have on the utilization rates of existing providers in the service area of the project.**

The proposed project will have a positive impact on the Shelby County health care community. The project does not propose to increase the applicant's market share and, there are no new services offered in this application.

This project is for the establishment of an integrated comprehensive cancer center. The key attribute of such a center is the ability to cohesively coordinate and integrate <u>all</u> aspects of state-of-the-art cancer care. These aspects include clinical research, collaborative patient care, education, prevention dissemination and community outreach programs. The consolidation of sites and health care resources will elevate the

collaboration of the oncologist, radiologist, surgeon, patient and family at each outpatient encounter; bringing a seamless continuum of care and comprehensive approach to the healing and treatment processes.

3. **Provide the current and/or anticipated staffing pattern for all employees providing patient care for the project. This can be reported using FTEs for these positions. Additionally, please compare the clinical staff salaries in the proposal to prevailing wage patterns in the service area as published by the Tennessee Department of Labor & Workforce Development and/or other documented sources.**

Staffing will not be increased with this project. Efficiencies gained from the new delivery models will support the redeployment of personnel in positions that are no longer needed into other aspects of the cancer delivery system.

All positions at Methodist are reviewed at least annually for market competitiveness. Tools for analysis for this review are comprised of several local and regional surveys, as well as several national surveys. Methodist strives to be competitive in pay and pay reported in the aforementioned surveys.

4. **Discuss the availability of and accessibility to human resources required by the proposal, including adequate professional staff, as per the Department of Health, the Department of Mental Health and Developmental Disabilities, and/or the Division of Mental Retardation Services licensing requirements.**

Staffing will not be increased with this project. Efficiencies gained from the new delivery models will support the redeployment of personnel in positions that are no longer needed into other aspects of the cancer delivery system. The redeployment of staff will take place incrementally over the three years. Methodist fortunately has the resources to successfully support these efforts.

5. **Verify that the applicant has reviewed and understands all licensing certification as required by the State of Tennessee for medical/clinical staff. These include, without limitation, regulations concerning physician supervision, credentialing, admission privileges, quality assurance policies and programs, utilization review *policies and programs, record keeping, and staff education.***

The applicant so verifies. Methodist reviewed and meets all the State requirements for physician supervision, credentialing, admission privileges, and quality assurance policies and programs, utilization review policies and programs, record keeping, and staff education.

6. **Discuss your health care institution's participation in the training of students in the areas of medicine, nursing, social work, etc. (*e.g.*, internships, residencies, etc.).**

Methodist Healthcare has clinical affiliation agreements with multiple colleges including 23 for nursing, 30 for rehabilitation service professionals (physical therapy, speech therapy, and audiology), 3 for pharmacy, and 19 for other allied health professionals including paramedics, laboratory, respiratory therapy, radiation therapy technicians. There are approximately 1400 students annually participating in these programs.

Methodist participates very heavily in the training of students from various medical disciplines. Since relationships exist with most of the schools in Memphis, most of the students have also been trained academically in this region. The three primary disciplines that participate in the training of students at Methodist are medicine, nursing and psychosocial services.

In the area of medicine, there are many different specialties represented in the interns and residents who train at Methodist – there are 21 different specialties. Likewise, since there are several nursing schools in the area, Methodist is very active in the training of future nurses. These nurses come from several types of programs, which include Bachelor's Degrees, Associate Degrees, Licensed Practical Nurse programs and Diploma programs. Methodist participates in training of students from the following schools:

Methodist Healthcare
University of Memphis
Baptist Health System
Southwest Tennessee Community College
University of Tennessee
Northwest Mississippi Jr. College
Regional Medical Center
Tennessee Centers of Technology

7. (a) **Please verify, as applicable, that the applicant has reviewed and understands the licensure requirements of the Department of Health, the Department of Mental Health and Developmental Disabilities, the Division of Mental Retardation Services, and/or any applicable Medicare requirements.**

Methodist reviewed and meets all applicable requirements of the Department of Health. Other departments are not involved with this facility.

(b) **Provide the name of the entity from which the applicant has received or will receive licensure, certification, and/or accreditation.**

Licensure:

The general hospital license held by Methodist is from the Tennessee Department of Health, Board for Licensing Health Care Facilities.

Accreditation:

The accreditation agency for Methodist is the Joint Commission on Accreditation of Healthcare Organizations, from whom the hospital has a full three-year accreditation.

(c) **If an existing institution, please describe the current standing with any licensing, certifying, or accrediting agency. Provide a copy of the current license of the facility.**

Methodist is in good standing with the Department of Health, the Healthcare Facility Licensing Board, and JCAHO. The hospital license and accreditation report is attached. (See Attachment C: Orderly Development (7)(c))

(d) **For existing licensed providers, document that all deficiencies (if any) cited in the last licensure certification and inspection have been addressed through an approved plan of correction. Please include a copy of the most recent licensure/certification inspection with an approved plan of correction.**

Documentation regarding deficiencies and approved plan of correction in our licensure is attached. See Attachment C: Orderly Development (7)(d)(1) and C: Orderly Development (7)(d)(2).

8. **Document and explain any final orders or judgments entered in any state or country by a licensing agency or court against professional licenses held by the applicant or any entities or persons with more than a 5% ownership interest in the applicant. Such information is to be provided for licenses regardless of whether such license is currently held.**

None

9. **Identify and explain any final civil or criminal judgments for fraud or theft against any person or entity with more than a 5% ownership interest in the project.**

None

10. If the proposal is approved, please discuss whether the applicant will provide the Tennessee Health Services and Development Agency and/or the reviewing agency information concerning the number of patients treated, the number and type of procedures performed, and other data as required.

Should this application be approved, Methodist will provide the Tennessee Health Services and Development Agency and/or the reviewing agency information concerning the number of patients treated, the number and type of procedures performed, and other data as required.

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PROOF OF PUBLICATION

Attach the full page of the newspaper in which the notice of intent appeared with the mast and dateline intact or submit a publication affidavit from the newspaper as proof of the publication of the letter of intent.

The full page of the Commercial Appeal newspaper in which the Notice of Intent appeared is attached as Attachment C: Proof of Publication.

DEVELOPMENT SCHEDULE

Tennessee Code Annotated § 68-11-1609(c) provides that a Certificate of Need is valid for a period not to exceed three (3) years (for hospital projects) or two (2) years (for all other projects) from the date of its issuance and after such time shall expire; provided, that the Agency may, in granting the Certificate of Need, allow longer periods of validity for Certificates of Need for good cause shown. Subsequent to granting the Certificate of Need, the Agency may extend a Certificate of Need for a period upon application and good cause shown, accompanied by a non-refundable reasonable filing fee, as prescribed by rule. A Certificate of Need which has been extended shall expire at the end of the extended time period. The decision whether to grant such an extension is within the sole discretion of the Agency, and is not subject to review, reconsideration, or appeal.

1. **Please complete the Project Completion Forecast Chart on the next page. If the project will be completed in multiple phases, please identify the anticipated completion date for each phase.**

   See the Project Completion Forecast Chart.

2. **If the response to the preceding question *indicates that the applicant does not anticipate completing the project within the period of validity as defined in the preceding paragraph,* please state below any request for an extended schedule and document the "good cause" for such an extension.**

   Not applicable. The project is a hospital project and is forecasted to be complete within three years from the date of issuance.

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PROJECT COMPLETION FORECAST CHART

Enter the Agency projected Initial Decision date, as published in T.C.A. § 68 –11-1609(c): February 26, 2014

Assuming the CON approval becomes the final agency action on that date; indicate the number of days **from the above agency decision date** to each phase of the completion forecast.

Phase	**DAYS REQUIRED**	**Anticipated Date (MONTH/YEAR)**
1. Architectural and engineering contract signed	30	Mar / 2014
2. Construction documents approved by the Tennessee Department of Health	90	May / 2014
3. Construction contract signed	30	Mar / 2014
4. Building permit secured	90	May / 2014
5. Site preparation completed	210	Sept / 2014
6. Building construction commenced	120	June / 2014
7. Construction 40% complete	300	Dec / 2014
8. Construction 80% complete	420	Apr / 2015
9. Construction 100% complete (approved for occupancy)	510	July / 2015
10. *Issuance of license	540	August / 2015
11. *Initiation of service	540	August / 2015
12. Final Architectural Certification of Payment	630	Nov / 2015
13. Final Project Report Form (HF0055)	660	Dec / 2015

* **For projects that do NOT involve construction or renovation: Please complete items 10 and 11 only.**

Note: If litigation occurs, the completion forecast will be adjusted at the time of the final

ATTACHMENTS

INDEX OF ATTACHMENTS

A:3	Corporate Charter and Certificate of Existence
A:4	Ownership-Legal Entity and Organization Chart
A:6	Site Control
B:II(E)(1)	FDA Certificate
B:II(E)(3)	Equipment Vendor Quotes
B:III (A)	Plot Plan
B:III (B)	Road Maps and Public Transportation Routes
B:IV	Floor Plans
C: LINAC Services (6)(d)	Outpatient Diagnostic Services System Policy
C: LINAC Services (6)(f)	Medical Director CV
C: Need (3)	Service Area Map
C: Economic Feasibility (1)(c)	Moveable Equipment Listing > $50,000
C: Economic Feasibility (1)(d)	Documentation of Construction Cost Estimate
C: Economic Feasibility (2)	Documentation of Availability of Funding
C: Economic Feasibility (4)	Detail of Other Revenue and Expense
C: Economic Feasibility (10)	Financial Statements
C: Orderly Development (1)	List of Managed Care Contracts
C: Orderly Development (6)	List of Clinical Affiliations
C: Orderly Development (7)(c)	License from Board of Licensing Health Care Facilities
C: Orderly Development (7)(d)(1)	TDH Licensure Survey and Plan of Correction
C: Orderly Development (7)(d)(2)	Joint Commission Accreditation and Survey Summary
C: Proof of Publication	
Support Letters	

A:3 Corporate Charter and Certificate of Existence

ARTICLES OF AMENDMENT TO THE CHARTER

OF

METHODIST HOSPITALS OF MEMPHIS

Pursuant to the provisions of Section 48-60-101 et. seq. of the Tennessee Nonprofit Corporation Act, the undersigned corporation adopts the following Articles of Amendment to its Charter:

1. The name of the corporation is:

   Methodist Hospitals of Memphis

2. The amendment adopted is:

   The name of the corporation is hereby changed from Methodist Hospitals of Memphis to Methodist Healthcare - Memphis Hospitals.

3. The Amendment was duly adopted on January 15, 1998 by the Board of Directors of Methodist Health Systems, Inc., a Tennessee nonprofit corporation, acting as the Members of Methodist Hospitals of Memphis.

4. This amendment shall be effective February 1, 1998.

5. Additional approval for this charter amendment was not required.

DATED this 27th day of January 1998 at Memphis, Tennessee.

SIGNED BY:

W. Steven West
General Counsel/Assistant Secretary

F:\LDA\CORPORATE\CHARTER.MEM

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AMENDED AND RESTATED CHARTER

OF

METHODIST HOSPITALS OF MEMPHIS

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Pursuant to the provisions of § 48-1-304 of the Tennessee General Corporation Act, Methodist Hospitals of Memphis adopts the following restated charter:

PART I

1. The name of the Corporation is:

METHODIST HOSPITALS OF MEMPHIS

2. The duration of the Corporation is perpetual.

3. The address of the principal office of the Corporation in the State of Tennessee shall be 1265 Union Avenue, Memphis, Shelby County, Tennessee.

4. The Corporation is not for profit.

5. The purposes for which the Corporation is organized are:

a. To respond to the love of God by continuing the ministry of healing in the spirit of Jesus Christ.

b. This Corporation is organized and shall be operated exclusively for charitable, scientific, literary, religious and educational purposes; no part of the net earnings of the Corporation shall inure to the benefit of any individual; no substantial part of the activities shall be the carrying on of propaganda, or otherwise attempting to influence legislation; and the Corporation shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of any candidate for public office.

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b. To establish, purchase, own, operate, support, lease, manage, conduct or maintain one or more hospitals, institutions, nursing homes, convalescent centers, ambulance services or other facilities and services for the care and treatment of the injured, sick, diseased, disabled, afflicted, aged and infirm; and to support the business, activities and programs of and to aid, assist and confer benefits upon Methodist Health Systems, Inc., a Tennessee not for profit corporation which is an exempt organization described in Sections 501(c)(3) and 170(c)(2) of the Internal Revenue Code of 1954, as amended, or any of its affiliated organizations, all within or outside the State of Tennessee.

d. To provide, operate, support, conduct or promote any educational, scientific or research activities related to health care.

e. To establish, join, cooperate or engage in joint ventures, associations, groups or cooperatives with other hospitals, health care providers, individuals, corporations, or any other entity, including, but not limited to, Methodist Health Systems, Inc. or any of its affiliated organizations, to advance or promote the general health of communities within or outside the State of Tennessee or to advance or promote the efficient delivery of health care within or outside the State of Tennessee.

f. To make loans, grants, awards, prizes and scholarships; to share its services, equipment and property with others; to assist and cooperate with other hospitals and others; and to engage in any other activities designed to advance or promote the efficient delivery of health care, or to advance or promote the general health of communities within or outside the State of Tennessee.

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g. To manufacture, fabricate, assemble, distribute, warehouse, sell and deal in any products, goods, equipment or other property for use by this corporation or others in the rendering of health care or to promote or advance the general health of communities within or outside the State of Tennessee.

h. To engage in any activities which are appropriate to carry out and fulfill any or all of the foregoing purposes, including, without limitation, for such purposes, the making of payments, loans, distributions and guaranties, the pooling of credit, assumption of joint and several obligations and the sharing of funds, assets and proceeds of financing with Methodist Health Systems, Inc., a Tennessee not for profit corporation, or any of its affiliated organizations.

i. To have and exercise all the powers as are permitted by the Tennessee General Corporation Act.

j. Notwithstanding any other provision of these articles, this Corporation shall not carry on any activity not permitted to be carried on by (a) a corporation exempt from Federal Income Tax under Section 501(c)(3) of the Internal Revenue Code of 1954 or the corresponding provisions of any future United States Internal Revenue Law or (b) a corporation, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code of 1954 or or the corresponding provision of any future United States Internal Revenue Law.

6. This Corporation shall have as its members those persons who are from time to time the members of the Board of Directors of Methodist Health Systems, Inc., a Tennessee not for profit corporation, or any successor thereto, which is an

exempt organization described in Sections 501(c)(3) and 509(a)(3) of the Internal Revenue Code of 1954, as amended.

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7. The governing body of this Corporation shall be a Board of Directors who shall manage its business and affairs. The directors shall be of legal age and need not be residents of the State of Tennessee. The number of directors and their terms of office shall be fixed and determined by the by-laws; except that, there shall not be less than three directors. The directors shall be elected by the members and may be removed by the members at any time, with or without cause.

8. A majority of the directors then in office shall constitute a quorum at any meeting of the directors.

9. The charter and by-laws of this Corporation may be altered, amended or repealed by the members subject to prior written approval of Methodist Health Systems, Inc. and such approval may be executed by any president or vice president thereof.

10. This Corporation may be merged, consolidated or dissolved only by action of the members.

11. Any action required or permitted to be taken at a meeting of the Board of Directors or any Board Committee may be taken without a meeting if consent in writing, setting forth the action so taken, is signed by all of the members of the Board of Directors or Board Committee as the case may be.

12. In the event of dissolution, the residual assets of this Corporation shall be turned over to Methodist Health Systems, Inc., a Tennessee not for profit corporation, or any other organization or organizations which are "restricted affiliates" (as hereinafter defined); provided, however, no part of the residual assets of the Corporation shall be turned

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owed to any such organization unless such organization is itself an exempt organization described in Sections 501(c)(3) and 170(c)(2) of the Internal Revenue Code of 1954, as amended (or corresponding sections of any prior or future Internal Revenue Code). If neither Methodist Health Systems, Inc. nor any such restricted affiliate is such an exempt organization, then the residual assets of the Corporation shall be turned over to one or more other organizations which at that time are organizations described in Section 501(c)(3) and 170(c)(2) and in exempt from federal income taxes under Section 501(a) and is not a "private foundation" within the meaning of Section 509(a) of the Internal Revenue Code of 1954, as amended (or corresponding sections of any prior or future Internal Revenue Code), or to any federal, state or local government for exclusively public purposes. As used herein, "restricted affiliate" shall have the meaning of such term as utilized in any master trust indenture or other similar financing agreement to which the Corporation or Methodist Health Systems, Inc. is a party and which is in effect at the time of dissolution.

PART II

1. The date the original Charter was filed by the Secretary of State was August 1, 1922.

2. The Amended and Restated Charter restates the text of the Charter, as previously amended, and further amends the charter as specified below, and was duly adopted at a meeting of the member on June 12, 1985:

(a) Paragraphs 5(b), 5(c), 5(e), 5(h), 6, 7, 8, 9, 10 and 11 of the Charter, as previously amended, have been deleted in their entirety, with the foregoing paragraphs 5(b), 5(c), 5(e), 5(h), 6, 7, 8, 9, 10 and 11, respectively, being substituted therefor.

(b) The foregoing paragraph 12 has been added to the Charter.

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The foregoing restated charter was adopted at a meeting of the members on June 12, 1985.

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The foregoing restated charter is to be effective when these articles of amendment are filed by the Secretary of State of Tennessee.

DATED this 17th day of June, 1985.

METHODIST HOSPITALS OF MEMPHIS

By: Judge L. Calton
President

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ARTICLES OF AMENDMENT

TO THE CHARTER

OF

METHODIST HOSPITALS OF MEMPHIS

Pursuant to the provisions of Section 48-303 of the Tennessee General Corporation Act, the undersigned Corporation adopts the following Articles of Amendment to its Charter:

1. The name of the Corporation is:

METHODIST HOSPITALS OF MEMPHIS

2. The Amendment adopted is: paragraphs (6), (8), (9), (10) and (11) of the Articles of Amendment to the Charter filed with the Secretary of State, State of Tennessee on October 7, 1981, are deleted and the following are substituted therefor:

(6) This Corporation shall have as its sole member Methodist Health Systems, Inc., a Tennessee not-for-profit corporation.

(8) The governing body of this Corporation shall be a Board of Directors who shall manage its business and affairs. The Directors shall be of legal age and need not be residents of the State of Tennessee. The number of Directors and the term of their office shall be fixed and determined by the By-laws; except that, there shall not be less than three (2) Directors. The Directors shall be elected by the member.

(9) By-laws of this Corporation shall be adopted, amended or repealed by the member.

(10) This Corporation may be dissolved or its Charter amended only by action of the member.

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(ii) A majority of the Directors then in office shall constitute a quorum at any meeting of the Directors.

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3. This Amendment was duly adopted at a meeting of the members on June 23, 1982.

4. The foregoing Amendment is to be effective when these Articles of Amendment are filed by the Secretary of State, State of Tennessee.

DATED June 23, 1982.

METHODIST HOSPITALS OF MEMPHIS

By: Judge D. Calton
President

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ARTICLES OF AMENDMENT TO THE CHARTER
OF
METHODIST HOSPITAL

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Under the authority of Section 48-303 of the Tennessee General Corporation Act, Methodist Hospital amends its charter as follows:

All of the provisions of the Charter are hereby deleted and the following substituted therefor:

(1) The name of the corporation is Methodist Hospitals of Memphis.

(2) The duration of the corporation is perpetual.

(3) The address of the principal office of the corporation in the State of Tennessee shall be 1265 Union Avenue, Memphis, Shelby County, Tennessee.

(4) The corporation is not for profit.

(5) The purposes for which the corporation is organized are:

a. To respond to the love of God by continuing the ministry of healing in the spirit of Jesus Christ.

b. This corporation is organized and shall be operated exclusively for charitable, scientific, literary, religious and educational purposes; no part of the earnings shall inure to the benefit of any individual; no substantial part of the activities shall carry on propaganda, or otherwise attempt to influence legislation, and the corporation shall not participate in, or intervene in (including the

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publishing or distributing of statements), any political campaign. 00240 00567

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c. To establish, own, operate, support, lease, manage, conduct and/or maintain one or more hospitals, institutions, homes, and/or other facilities within and/or outside the State of Tennessee for the care and treatment of the injured, sick, diseased, disabled, afflicted, aged and infirm.

d. To provide, operate, support, conduct and/or promote any educational, scientific and/or research activities related to health care.

e. To establish, join, cooperate and/or engage in joint ventures, associations, groups and/or cooperatives with other hospitals, health care providers, individuals, corporations, or any other entity to advance or promote the general health of communities within and outside the State of Tennessee, or to advance or promote the efficient delivery of health care.

f. To make loans, grants, awards, prizes and scholarships; to share its services, equipment and property with others; to assist and cooperate with other hospitals and others; and to engage in any other activities designed to advance or promote the efficient delivery of health care, or to advance or promote the general health of communities within and outside the State of Tennessee.

g. To manufacture, fabricate, assemble, distribute, warehouse, sell and deal in any products, goods, equipment or other property for use by this corporation and/or others in the rendering of

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health care or to promote or advance the general health of communities within and outside the State of Tennessee.

h. To engage in any activities which are appropriate to carry out and fulfill any or all of the foregoing purposes.

i. To have and exercise all of the powers as are permitted by the Tennessee General Corporation Act.

j. Notwithstanding any other provision of these articles, this corporation shall not carry on any activity not permitted to be carried on by (a) a corporation exempt from Federal Income Tax under Section 501(c)(3) of the Internal Revenue Code of 1954 or the corresponding provision of any future United States Internal Revenue Law or (b) a corporation, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code of 1954 or any other corresponding provision of any future United States Internal Revenue Law.

(6) This corporation is to have members who shall be called Trustees. The Memphis, North Mississippi, and North Arkansas Annual Conferences of the United Methodist Church each shall elect six Trustees, four of whom shall be lay persons and two of whom shall be ordained United Methodist ministers. The by-laws of Methodist Hospitals of Memphis shall provide for the length of the term of Trustees and for the filling of any vacancies. A Trustee may be removed from office for any reason by the Annual Conference that elected the Trustee.

(7) In the event of dissolution, the residual assets of the organization will be turned over to one or more organizations which themselves are exempt as organizations described in Sections 501(c)(3) and 170(c)(2) of the

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Internal Revenue Code of 1954 or corresponding sections of any [illegible] or [illegible] Internal Revenue Code, or to the Federal, State, or local government for exclusive public purposes.

(8) The governing body of this corporation shall be a Board of Directors who shall manage its business and affairs. The directors shall be of legal age and need not be residents of the State of Tennessee. The number of directors and the term of their office shall be fixed and determined by the by-laws; except that, there shall not be less than three directors. The Trustees shall elect the directors.

(9) By-laws of this corporation shall be adopted, amended or repealed by the Board of Trustees by such vote as may be therein specified.

(10) This corporation may be dissolved or its Charter amended only by action of the Trustees.

(11) A majority of the Trustees shall constitute a quorum at any meeting of the Trustees. A majority of the Directors then in office shall constitute a quorum at any meeting of the Directors.

3. The amendment was duly adopted by the unanimous written consent of the members on June 8, 1981.

4. The amendment is to be effective when these articles of amendment are filed by the Secretary of State, State of Tennessee.

Dated September 23, 1981.

METHODIST HOSPITAL

By: [signature]
President

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[illegible]

[illegible]

BE IT KNOWN, that [illegible], [illegible] Brown, [illegible], and [illegible], under the usages and regulations of the Memphis, North Mississippi and North Arkansas Conferences of the Methodist Episcopal Church, South, by which they are appointed, and holding subject to the pleasure of said Conferences of said Church, are hereby constituted a body politic and corporate by the name and style of "[illegible]", for the purpose of [illegible] constructing, equipping and operating a hospital in the City of Memphis, Tennessee, under the auspices and control of the Memphis, North Mississippi and North Arkansas Conferences of the Methodist Episcopal Church, South, said corporation to have the right to receive at its hospital for medical and surgical treatment and nursing, persons suffering from physical and mental ailments, diseases and disorders, and may [illegible] board and lodge the same, for which it shall have the right to charge reasonable compensation. It shall also have the right to establish a clinic and a department for [illegible], and in general to conduct, establish, maintain and carry on any and all branches and departments of a first class, modern hospital. Said corporation shall be managed and its affairs [illegible] by a board of trustees, the incorporators constituting the first board of trustees, [illegible] after this charter is [illegible] in the City of Memphis [illegible] of the charter and the adoption of by-laws and the election of such officers as shall be prescribed by said by-laws. The board of trustees shall consist of eighteen (18) trustees to be elected annually by the three Conferences above named, each of said Conferences to elect [illegible] six of said trustees, three of whom shall be [illegible], [illegible] of the [illegible], and [illegible] vacancies in the board of trustees shall be filled at the next [illegible] session

[illegible]

[illegible] of said board as shall be representative of said conference, after giving said trustee an opportunity to be heard in his own behalf, said conference may designate a committee to act in lieu of said board, and said committee shall have the power to fill vacancies in the board in the interim of the meeting of said conference, said board of trustees shall have the power to elect a board of managers of the said hospital and to make all by laws, rules and regulations for the proper operation of the institution as may be necessary for the proper conduct of the ministry.

The said corporation, and the hospital as aforesaid shall be subject to the discretion of the said annual conference of the Methodist Episcopal church, South.

And in witness whereof, said corporation has caused these presents to be executed for the carrying on of the business of the corporation and also title to any real estate or other property owned by the corporation, having all necessary equity for the transaction of the business of the corporation in subject, subject, and receive subscriptions in money and securities. Provided it is hereby to be used to that of investing any and all of the property of the corporation consists of real and necessary property, [illegible], and necessary for the carrying of business on the part of the corporation.

And in all transactions of the said corporation it is to be governed by the rules and regulations of the state respective Mississippi and North Alabama Conferences of the Methodist Episcopal Church, South, as far as the same are consistent with the constitution of the State and the laws of the land.

The general powers of said corporation shall be to sue and be sued, of the corporate name, to have and use a common seal, which it may alter at pleasure; if it has no common seal, then the signature of any duly authorized officer shall be legal and binding. To purchase and hold, or receive by gift, devise, or bequest in addition to the personal property owned by the corporation, real estate necessary for the transaction of the corporate business and also to purchase and accept any note secured by the pledge of real [illegible]

[illegible]

STATE OF [illegible]

[illegible] ..... Personally appeared before me, [illegible], Deputy Clerk of the County Court of [illegible] aforesaid, [illegible], subscribing witness to the within charter of incorporation who being first sworn deposes and says that he is acquainted with [illegible], [illegible], [illegible], [illegible], [illegible] the incorporation and that they acknowledged the same to his presence to be their act and deed upon the day in [illegible].

Witness my hand at office, [illegible] day of July, [illegible].

— [illegible], Deputy Clerk.

[illegible]

[illegible] ..... Filed for Registration July [illegible] [illegible] and recorded in [illegible] Book No. [illegible], page [illegible], and [illegible] July [illegible] in [illegible] Book No. [illegible] Page [illegible]

[illegible], Registrar,

By [illegible], D. R.

[illegible], Secretary of State, do hereby certify that this charter with certificates attached, the foregoing of which is a true copy was this day [illegible] and certified by me, this [illegible] day of August, [illegible].

[illegible], Secretary of State.

STATE OF TENNESSEE

CHARTER OF INCORPORATION

THE CHARTER OF INCORPORATION OF THE

METHODIST HOSPITAL

BE IT KNOWN, That L.M.STRATTON, JOHN H. SHERARD, L. E. ESTES, T. K. RIDDICK, and J. R. PEPPER, and their successors, chosen under the usages and regulations of the Memphis, North Arkansas and North Mississippi Conferences of the Methodist Episcopal Church, South, by which they are appointed, and holding offices at the pleasure of said Conferences of said Church, are hereby constituted a body politic and corporate by the name and style of "METHODIST HOSPITAL" for the purpose of organizing, constructing, equipping and operating a hospital in the city of Memphis, Tennessee, under auspices and control of the Memphis, North Arkansas and North Mississippi Conferences of the Methodist Episcopal Church, South; said corporation to have the right to receive at its hospital for medical and surgical treatment and advice, persons suffering from physical and mental ailments, diseases and disorders; and may keep, board and lodge the same, for which it shall have the right to charge reasonable compensation. It shall also have the right to establish a clinic and a department for original research, and in general to conduct, establish, organize and equip any and all branches and departments of a first class, modern hospital. Said corporation shall be managed and its affairs conducted and powers exercised by a Board of Trustees, the incorporators constituting the first Board of Trustees, who as soon as convenient after this Charter is granted, shall meet in the City of Memphis and organize by acceptance of the Charter and the adoption of by-laws and the election of such officers as shall be prescribed by said by-laws. The Board of Trustees shall consist of eighteen (18) members to be elected annually by the three conferences above named, each of said conferences to elect annually six of said trustees, three of whom shall be laymen, two ministers of the gospel, and one a woman. Vacancies in the Board of Trustees shall be filled at the next ensuing session of the Conference in whose representation such vacancy occurs, and each of said conferences shall have the power to remove for cause any member of said board so chosen as the representative of said conference, after giving said trustee an opportunity to be heard in his own defense. Said conferences may designate a committee or agency and invest it with power to fill vacancies for and on its behalf in the interim of the sessions of said conferences. Said Board of Trustees shall have the power to elect a Board of Managers of the said Hospital and to adopt all by-laws, rules and regulations for the administration of the said Hospital as may be necessary for the proper conduct of its affairs.

The said corporation, and the hospital so established, shall be subject to the visitorial powers of the said Annual Conferences of the Methodist Episcopal Church, South.

And to these ends, said corporation may purchase, own or lease land for corporate purposes, borrow money when necessary for the carrying on of the business of the corporation; sell and make title to any real estate or other property owned by the corporation; employ all necessary agents for the transaction of the business of the corporation; to solicit, collect, and receive subscriptions in money and otherwise, legacies or devises to be used

in aid of forwarding any and all of the purposes of the corporation; purchase or rent all necessary printing presses, type, and material for the far as the same are not inconsistent with the constitution of the state and the laws of the land.

The general powers of said corporation shall be to sue and be sued by the corporate name; to have and to use a common seal, which it may alter at pleasure; if it has no common seal, then the signature of any duly author ized officer shall be legal and binding. To purchase and hold or receive by gift, devise, or bequest, in addition to the personal property owned by the corporation, real estate necessary for the transaction of the corporate business, and also to purchase and accept any real estate in payment or part payment of any debt due the corporation and to sell the same; to establish by-laws and make all rules and regulations not inconsistent with the laws and constitution of the State, and of the United States of America, and not contrary to the constitution and rules and regulations of the said Memphis, North Mississippi and North Arkansas Conferences of the Methodist Episcopal Church, South, deemed expedient for the management of the corporate affairs and to appoint such subordinate officers, in addition to President and Secretary, not chosen by the governing body of said Memphis, North Mississippi and North Arkansas Conferences of the Methodist Episcopal Church, South, as the business of the corporation may require, and as we are not forbidden by the rules and regulations of said Memphis, North Mississippi and North Arkansas Conferences of the Methodist Episcopal Church, South, to designate the officers and fix the compensation of the officer.

The general welfare of society, not individual profit, is the object for which this charter is granted, and hence the members are not stockholders in the legal sense of the term, and no dividends or profits shall be divided among the members.

WE, the undersigned, apply to the State of Tennessee, by virtue of the laws of the land, for a Charter of Incorporation for the purpose and with the powers, etc., declared in the foregoing instrument.

WITNESS our hands, the 31st day of July, 1922.

(Signed) John H. Sherard
J. R. Pepper
L. M. Stratton
T. K. Biddick
L. H. Estes

STATE OF TENNESSEE
SHELBY COUNTY

Personally appeared before me, R. C. Strehl, Deputy Clerk of the County Court of said County, L. H. Estes, the within named petitioner with whom I am personally acquainted and who acknowledged that

he executed the within instrument for the purposes therein contained.
Witness my hand at office, this 31st day of July, A.D. 1922.

(Signed) R. C. Strehl, Deputy Clerk.

STATE OF TENNESSEE
SHELBY COUNTY

Personally appeared before me, R. C. Strehl, Deputy Clerk of the County Court of Shelby County aforesaid, L. H. Estes, subscribing witness to the within Charter of Incorporation, who being first sworn, deposes and says that he is acquainted with John H. Sherard, J. R. Pepper, L. E. Stratton, T. K. Riddick, the incorporators and that they acknowledged the same in his presence, to be their act and deed upon the day it bear date.
Witness my hand, at office, this 31st day of July, 1922.

(Signed) R. C. Strehl, Deputy Clerk

Secretary of State
Division of Business Services
312 Eighth Avenue North
6th Floor, William R. Snodgrass Tower
Nashville, Tennessee 37243

ISSUANCE DATE: 09/20/2004
REQUEST NUMBER: 04264516
TELEPHONE CONTACT: (615) 741-6488

CHARTER/QUALIFICATION DATE: 08/01/1922
STATUS: ACTIVE
CORPORATE EXPIRATION DATE: PERPETUAL
CONTROL NUMBER: 0054684
JURISDICTION: TENNESSEE

O:
ETHODIST HEALTHCARE
IN SHARPE
211 UNION ST
EMPHIS, TN 38104

REQUESTED BY:
METHODIST HEALTHCARE
KIM SHARPE
1211 UNION ST
MEMPHIS, TN 38104

CERTIFICATE OF EXISTENCE

, RILEY C DARNELL, SECRETARY OF STATE OF THE STATE OF TENNESSEE DO HEREBY CERTIFY THAT

"METHODIST HEALTHCARE MEMPHIS HOSPITALS"

IS A CORPORATION DULY INCORPORATED UNDER THE LAW OF THIS STATE WITH DATE OF INCORPORATION AND DURATION AS GIVEN ABOVE;
THAT ALL FEES, TAXES, AND PENALTIES OWED TO THIS STATE WHICH AFFECT THE EXISTENCE OF THE CORPORATION HAVE BEEN PAID;
THAT THE MOST RECENT CORPORATION ANNUAL REPORT REQUIRED HAS BEEN FILED WITH THIS OFFICE; AND
THAT ARTICLES OF DISSOLUTION HAVE NOT BEEN FILED; AND
THAT ARTICLES OF TERMINATION OF CORPORATE EXISTENCE HAVE NOT BEEN FILED

R: REQUEST FOR CERTIFICATE

ON DATE: 09/20/04

	FEES	
RECEIVED:	$20.00	$0.00
TOTAL PAYMENT RECEIVED:		$20.00

RECEIPT NUMBER: 000035B627B
ACCOUNT NUMBER: 00278211

ION:
ETHODIST HEALTHCARE-CORPORATE MEMPHIS
11 UNION AVENUE
ITE 600
EMPHIS, TN 38104-0000

Riley C Darnell

RILEY C. DARNELL
SECRETARY OF STATE

SS-4458

A:4 Ownership-
Legal Entity and
Organization Chart

Methodist Le Bonheur Healthcare

- Methodist Healthcare – Memphis Hospitals ("MHMH")
  Five (5) primary facilities:
  - Methodist University Hospital
  - Methodist North Hospital
  - Methodist South Hospital
  - Methodist Le Bonheur Germantown Hospital
  - Le Bonheur Children's Hospital
- UT Methodist Physicians, LLC
- Le Bonheur Patient Transportation, LLC
- Le Bonheur Pediatrics, LLC
- Methodist Inpatient Physicians, LLC
- Specialty Physician Group, LLC
  - SPG II, LLC
- Division of Clinical Neurosciencs, LLC
- Primary Care Group, LLC
  - Foundation Primary Care, LLC
  - PCG II, LLC
- Methodist Healthcare – Fayette Hospital ("MHFH")
- Methodist Healthcare – Olive Branch Hospital
- Methodist Extended Care Hospital, Inc. ("MECH")
- Methodist Healthcare Primary Care Associates ("MHPCA")
  - Methodist Specialty Physician III, LLC
  - Methodist Specialty Physician VI, LLC (1)
  - Methodist Specialty Physician VII, LLC (1)
- Methodist Healthcare Foundation ("MHF")
- Le Bonheur Children's Hospital Foundation ("LCMCF")
  - Le Bonheur Community Health and Well–Being ("LCHWB")
- Alliance Health Services, Inc. ("AHS")
- Methodist Healthcare Community Care Associates ("MHCCA")
  - Methodist Healthcare Dialysis Center, LLC
  - DeSoto Diagnostic Imaging, LLC (1)
  - Ambulatory Operations, Inc. (1)
    - Le Bonheur East Surgery Center II, L.P. (1)
    - Revenue Assurance Professionals, LLC (1)
    - Solus Management Services, Inc. (1)
    - Memphis Professional Building, Inc. (1)
  - Le Bonheur Urgent Care, LLC

(1) For-Profit Entities

A:6
Site Control

B: II (E)(1)
FDA Certificate

AUG 1 2 2005

K051932

510(k) SUMMARY

Date of preparation of summary:
4th July 2005

Submitted by:
Elekta Limited
Linac House, Fleming Way
Crawley, West Sussex
RH20 9RR
United Kingdom

Contact name, (application correspondent):
Peter Stegagno, Director, Regulatory Affairs & Quality Assurance
4775 Peachtree Industrial Boulevard, Building 300, Suite 300
Norcross, Georgia, 30092
USA

Email: peter.stegagno@elekta.com
Telephone: (770) 300 9725 x2548 Fax: (770) 448 6338

Trade Name:..... Elekta Synergy®, Elekta Synergy® S, and XVI R3.5

Common Name: Medical Linear Accelerator (with Patient Imaging)

Classification Name: Medical Linear Accelerator Accessory 90 IYE

Predicate Device: Elekta Synergy® System (K032996)

Product Description:
This Premarket Notification Special 510(k) describes modifications to the Elekta Synergy® System; a combination of the specially prepared Elekta medical linear accelerator, Elekta Synergy® Platform, with the XVI on-board kV imaging accessory. The primary reasons for the modifications to this product are to provide:

- Hardware & software support for increased patient throughput
- Easier selection of parameters & provision of clinical presets to improve efficiency
- Improved image quality and image management
- Improved tools for device set-up and image processing
- Improved connectivity with other systems through DICOM

Intended Use Statement:
This is unchanged from the predicate device and is defined as;
"The Elekta Synergy®, Elekta Synergy® S, and XVI R3.5
are intended to be used for radiation therapy treatment of malignant neoplastic diseases, as determined by a licensed medical practitioner."

Summary of Technological Characteristics:
The Elekta Synergy® and Elekta Synergy® S comprise a standard Elekta medical linear accelerator, modified to accept the fitting of a kV imaging system (XVI R3.5), with a common MV and kV isocentre and orthogonal beam paths, all as previously cleared under Control Number K032996.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
9200 Corporate Boulevard
Rockville MD 20850

AUG 1 2 2005

Elekta Limited
% Mr. Peter Stegagno
Director, Regulatory Affairs
& Quality Assurance
Elekta, Inc.
4775 Peachtree Industrial Boulevard
Building 300, Suite 300
NORCROSS GA 30092

Re: K051932
Trade/Device Name: Elekta Synergy®, Elekta Synergy® S and XVI R3.5
Regulation Number: 21 CFR 892.5050
Regulation Name: Medical charged-particle radiation therapy system
Regulatory Class: II
Product Code: IYE
Dated: July 8, 2005
Received: July 13, 2005

Dear Mr. Stegagno:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (Premarket Approval), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at one of the following numbers, based on the regulation number at the top of this letter:

21 CFR 876.xxxx	(Gastroenterology/Renal/Urology)	240-276-0115
21 CFR 884.xxxx	(Obstetrics/Gynecology)	240-276-0115
21 CFR 892.xxxx	(Radiology)	240-276-0120
Other		240-276-0100

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address http://www.fda.gov/cdrh/industry/support/index.html.

Sincerely yours,

Nancy C. Brogdon

Nancy C. Brogdon
Director, Division of Reproductive,
Abdominal, and Radiological Devices
Office of Device Evaluation
Center for Devices and Radiological Health

Enclosure

Indications for Use

510(k) Number (if known): K051932

Device Name ..... Elekta Synergy®, Elekta Synergy® S, and XVI R3.5

Indication for Use: The Elekta Synergy®, Elekta Synergy® S, and XVI R3.5 are intended to be used for radiation therapy treatment of malignant neoplastic diseases, as determined by a licensed physician.

Prescription Use - YES AND/OR Over-The-Counter Use - NO
(Per 21 CFR 801.109 Subpart D) (21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE - CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off)
Division of Reproductive, Abdominal,
and Radiological Devices
510(k) Number K051932

Elekta Limited, Fleming Way, Crawley, West Sussex, RH10 9RR UK +44 1293 544422 Fax: +44 1293 654321

K101347
page 1/3

Section 5 510(k) Summary

OCT 1 2010

This summary of 510(k) safety and effectiveness information is being submitted in accordance with the requirements of Safe Medical Device Act 1990 and 21 CFR § 807.92.

I. General Information

Establishment	Siemens Medical Solutions USA. Inc. 51 Valley Stream Parkway Mail Code G01 Malvern, PA 19355, USA
Registration Number	2240869
Manufacturer	Siemens AG Henkestrasse 127 D-91052 Erlangen, Germany
Registration Number	8010024
Contact Person	Ms. Kim Rendon Manager, Regulatory Affairs/Clinical Affairs Siemens Healthcare Siemens Medical Solutions USA, Inc. Customer Solutions Group 51 Valley Stream Parkway Mail Code G01 Malvern, PA 19355, USA Phone: (610) 448-1773 Fax: (610) 448-1787

Device Name	Trade Names:	MAGNETOM Aera MAGNETOM Skyra
	Classification Name:	Magnetic Resonance Diagnostic Device
	CFR Code:	21 CFR § 892.1000
	Classification:	Class II

Performance Standards
None established under Section 514 the Food, Drug and Cosmetic Act.

II. Safety and Effectiveness Information Supporting Substantial Equivalence

Intended Use

The MAGNETOM Aera and the MAGNETOM Skyra systems are indicated for use as a magnetic resonance diagnostic device (MRDD) that produces transverse, sagittal, coronal and oblique cross sectional images, spectro-scopic images and/or spectra, and that displays the internal structure and/or function of the head, body, or extremities.

Other physical parameters derived from the images and/or spectra may also be produced. Depending on the region of interest, contrast agents may be used. These images and/or spectra and the physical parameters derived from the images and/or spectra when interpreted by a trained physician yield information that may assist in diagnosis.

The MAGNETOM Aera and the MAGNETOM Skyra systems may also be used for imaging during interventional procedures when performed with MR compatible devices such as in-room display and MR-safe biopsy needles.

Device Description

MAGNETOM Aera (1.5 T) and MAGNETOM Skyra (3 T) are similar to the previously cleared MAGNETOM Espree and MAGNETOM Verio, utilizing a superconducting magnet design. The open bore, whole body scanners are designed for increased patient comfort. They focus on ergonomics and usability to reduce complexity of the MR workflow.

The MAGNETOM Aera and the MAGNETOM Skyra systems will be available in fixed and mobile configurations.

Substantial Equivalence

Siemens feels that the new systems are substantially equivalent to the following predicate devices:

Predicate Device Name	*FDA Clearance Number*	*FDA Clearance Date*
Siemens MAGNETOM Espree (1.5T)	K041112	July 21, 2004
Siemens MAGNETOM Verio (3T)	K072237	October 10, 2007
syngo® MR B17 Software update	K082427	November 7, 2008

General Safety and Effectiveness Concerns:

Operation of the MAGNETOM Aera (1.5T) and the MAGNETOM Skyra (3T) systems is substantially equivalent to the commercially available MAGNETOM Espree (1.5T) and MAGNETOM Verio (3T) System.

As specified in the FDA guidance document "Guidance for the Submission Of Premarket Notifications for Magnetic Resonance Devices" (released Nov. 1998) the following measurements of performance and safety data have been performed following NEMA or equivalent IEC and ISO standards:

Safety:
- Maximum Static Field
- Rate of Change of Magnetic Field
- RF Power Deposition
- Acoustic Noise Levels

Performance:
- Specification Volume
- Signal to Noise
- Image Uniformity
- Geometric Distortion
- Slice Profile. Thickness and Gap
- High Contrast Spatial Resolution

The MAGNETOM Aera and MAGNETOM Skyra will conform to the measurements of safety parameters to the international IEC, ISO and NEMA standards for safety issues with Magnetic Resonance Imaging Diagnostic Devices.

Furthermore performance measurements have been done on the predicate devices MAGNETOM Espree and MAGNETOM Verio to show that the performance of the MAGNETOM Aera and MAGNETOM Skyra is equivalent with respect to the predicate devices.

This will assure that the performance of these devices can be considered safe and effective with respect to the currently available MAGNETOM Espree and MAGNETOM Verio systems.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
10903 New Hampshire Avenue
Document Control Room – WO66-G609
Silver Spring, MD 20993-0002

Ms. Kim Rendon
Manager, Regulatory/Clinical Affaris
Siemens Medical Solutions USA, Inc.
51 Valley Stream Pkwy, Mail Code G01
MALVERN PA 19355

OCT 1 2010

Re: K101347
Trade/Device Name: Magnetom Aera and Magnetom Skyra
Regulation Number: 21 CFR 892.1000
Regulation Name: Magnetic resonance diagnostic device
Regulatory Class: II
Product Code: LNH and LNI
Dated: August 13, 2010
Received: August 16, 2010

Dear Ms. Rendon:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into class II (Special Controls), it may be subject to such additional controls. Existing major regulations affecting your device can be found in Title 21, Code of Federal Regulations (CFR), Parts 800 to 895. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Parts 801 and 809); medical device reporting (reporting of

medical device-related adverse events) (21 CFR 803); and good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820). This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Parts 801 and 809), please contact the Office of *In Vitro* Diagnostic Device Evaluation and Safety at (301) 796-5450. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/cdrh/industry/support/index.html.

Sincerely yours,

David G. Brown, Ph.D.
Acting Director
Division of Radiological Devices
Office of *In Vitro* Diagnostic Device
Evaluation and Safety
Center for Devices and Radiological Health

Enclosure

MAY 13 '13 AM 11:23

K101347

Section 4 Indications for Use Statement

510(k) Number (if known) _____

Device Names: **MAGNETOM Aera and MAGNETOM Skyra**

Indications for Use:

The MAGNETOM systems described above are indicated for use as a magnetic resonance diagnostic device (MRDD) that produces transverse, sagittal, coronal and oblique cross sectional images, spectroscopic images and/or spectra, and that displays the internal structure and/or function of the head, body, or extremities.

Other physical parameters derived from the images and/or spectra may also be produced. Depending on the region of interest, contrast agents may be used. These images and/or spectra and the physical parameters derived from the images and/or spectra when interpreted by a trained physician yield information that may assist in diagnosis.

The MAGNETOM systems described above may also be used for imaging during interventional procedures when performed with MR compatible devices such as inroom display and MR-safe biopsy needles.

(please do not write below this line- continue on another page if needed)

Concurrence of CDRH, Office of Device Evaluation

Prescription Use X OR Over-The-Counter Use____

Michael O'Hara for David Brown

(Division Sign-Off)
Division of Radiological Devices
Office of In Vitro Diagnostic Device Evaluation and Safety

510K K101347

Page 1 of 1

B : II(E)(3)
Equipment Vendor Quotes

Purchase and License Agreement

Customer *(the "Customer")*	***Site****(the "Site")*	***Supplier*** *(the "Supplier")*
Methodist Healthcare - Memphis	Same as Customer	Elekta Inc.
Attn: Tanner Goodrich		4775 Peachtree Industrial Boulevard
1265 Union Avenue		Building 300, Suite 300
Memphis, Tennessee 38104		Norcross, Georgia 30092
US		(t) 1-800-535-7355
(t) 1 901 516 7368		(f) 770-670-2323
(f) 1 901 726 7370		
Currency: USD		
Customer *(the "Customer")*	***Site****(the "Site")*	***Supplier*** *(the "Supplier")*
Methodist Healthcare - Memphis	Same as Customer	Elekta Inc.

Buying Group: Premier, Inc

Buying Group Contract Numbers: PP-IM-139 – External Beam Radiation Therapy

Elekta, Inc. ("Elekta"), a Georgia corporation, is pleased to submit the following offer to sell/license the services, hardware and/or software described in the Scope of Supply (collectively referred to as the "Deliverables") at the prices and terms stated in this Purchase and License Agreement, which consists of this Cover Page and all exhibits attached hereto.

This offer is valid until April 30, 2012 and no agreement shall exist between the Customer and Supplier (jointly referred to as the "Parties" and each a "Party") until this Agreement is signed by both Parties.

	Description	Currency	Price/License Fee
	Elekta Synergy® with VMAT		
Premier List Price		USD	$5,382,213.30
Premier Discount		USD	-$3,713,727.18
Premier Offer Price		USD	$1,668,486.12
	Additional Items	USD	$265,563.00
Discount		USD	-$92,947.05
			$172,615.95
	Accelerated Installation	USD	$75,000.00
Total List Price		USD	$5,772,776.30
Total Discount		USD	-$3,806,674.23
Contract Price		USD	$1,916,102.07

*plus applicable taxes

Service/Support Fee Description	Currency	Service Fee
Annual Hardware Maintenance and Support Service Fee	USD	$168,639.80

*The Annual Software Maintenance and Support Service Fee, set forth above does not include the annual maintenance and support service fees for any software previously licensed by Customer under separate Purchase and License Agreements with Supplier or an Affiliate of Supplier.

*These Software Maintenance and Support Service Fees exclude any products which may have been purchased but not licensed as of the date of execution.

If the Customer is an entity that reports its costs on a cost report required by the Department of Health and Human Services or a State health care program, the Customer must fully and accurately report any discount that has been provided by Supplier under this Agreement in the applicable cost report and provide information, upon request by the Secretary of Health and Human Services or a State agency. A reportable discount may be set out above or exist in the form of undertakings made by Supplier elsewhere in this Agreement.

Contract Price Payment Schedule

The Customer agrees to pay Supplier the Contract Price according to the following schedule.

a) An amount of $220,587.21 (equal to ten percent (10%) of the Contract Price plus $28,977.00 per Elekta Purchase and License Agreement 2012-9610-RB) shall be paid upon Customer's execution of this Agreement;
b) An additional thirty-five percent (35%) of the Contract Price shall be paid upon Delivery of Hardware to Site, Net 5 days;
c) An additional thirty-five percent (35%) of the Contract Price shall be paid upon completion of the Acceptance Test Protocol (Net 30 days), and;
d) The remaining twenty percent (20%) of the Contract Price shall be payable upon first clinical use (Net 30 days).

Software

The license fee for the Software embedded in the Hardware is included in the Contract Price and there shall be no additional license fee beyond the Contract Price.

Hardware Maintenance and Support Service Fee

The Customer agrees to pay to Supplier the annual Service Fee set out in the Cover Page. The Service Fee is payable in advance on the date of expiration of the Warranty Period, and on each succeeding anniversary date of the date of expiration of the Warranty Period, while this Agreement remains in force.

Hardware Requested and Contractual Delivery Date

The Requested Delivery Date is: July 31st, 2012
The Contractual Delivery Date is: July 31st, 2012

As of the Effective Date of this Purchase and License Agreement 2012-7707-JT 4, the terms and conditions applicable to any IMPAC Products previously licensed under prior Purchase and License Agreements between IMPAC Medical Systems, Inc. and the Customer shall be superseded and governed by the terms and conditions of this Agreement.

THIS AGREEMENT INCLUDES THIS COVER PAGE, THE EXHIBITS ATTACHED TO THIS COVER PAGE AND THE ADDITIONAL EXHIBITS DESIGNED IN THE TABLE SET FORTH BELOW (IF ANY), ALL OF WHICH ARE INCORPORATED INTO THIS AGREEMENT BY REFERENCE.

Applies to this Agreement	List of Exhibits	Agreement Number	Date Executed
Yes	Exhibit B: General Terms and Conditions	USJTH00000716-12	3/9/2011(Per executed P.O.)
Yes	Exhibit C: Terms and Conditions for Hardware	USJTH00000716-12	3/9/2011(Per executed P.O.)
Yes	Exhibit D: Terms and Conditions for Software	USJTH00000716-12	3/9/2011(Per executed P.O.)
Yes	Exhibit E: Terms and Conditions for Compliance with Health Insurance Portability and Accountability Act (HIPAA)	USJTH00000716-12	3/9/2011(Per executed P.O.)
Yes	Exhibit F: Terms and Conditions for Services	USJTH00000716-12	3/9/2011(Per executed P.O.)
Yes	Exhibit G: Agreement Amendment	USJTH00000716-12	3/9/2011(Per executed P.O.)

Customer:
Signature: _____
Name: _____
Title: _____
Date: _____

Supplier:
Signature: _____
Name: _____
Title: _____
Date: _____

EXHIBIT A
SCOPE OF SUPPLY

Qty	Description
1	**Elekta Synergy® Platform** Elekta Synergy® Platform is the base line System for IGRT. This system offers all the benefits of the Elekta Digital Linear Accelerator with the added benefits of being designed to offer IGRT through the Elekta X-ray Volume Imaging System (XVI) as a field upgrade. These advances are allowed by the specially designed robotic drum structure for reliability and easy adaptation. The Elekta Synergy® Platform includes the Elekta iViewGT™ MegaVoltage Portal Imaging System. Elekta Synergy® is the platform for the future of radiation therapy which offers the option for integrated image guided therapy. The Elekta Synergy® Platform design is provided ready to add the option of KV imaging for producing x-ray volume imaging (XVI) capability. This consists of a dual modality digital accelerator, providing a comprehensive unrivalled range of both x-ray and electron energies to satisfy the requirements of external beam radiotherapy.This system also can offer unique ability to allow Triple x-ray energies and 7 Electron energies for widest clinical indications application and utilization flexibility. To allow for optimum clinical usability the system offers the lowest isocenter height (at only 124cm) in the industry. The Elekta Synergy® Platform is remote system diagnostic ready and will function with Elekta's optional IntelliMax service monitoring and support system. Elekta's optional IntelliMax service monitoring and support system is enabled through software and is available during the original system warranty period or through purchase of an Elekta Advanced Service Agreement. The Precise Table provides smooth, quiet operation for positioning the patient during clinical procedures. It comprises a vertical lift mechanism, couch base and the control system. **List Price:** **$1,081,280.00** **Premier Discount (69%):** **- $746,083.20** **Offer Price:** **$335,196.80**
1	**Elekta Synergy® Standard covers Blue**
1	**Synergy® MLC Head Cover**
	Energies
1	**6 MV Low Energy Photon**
1	**10 MV Mid Energy Photon**
1	**15 MV High Energy Photon**
1	**6 MeV Electron Energy**
1	**9 MeV Electron Energy**
1	**12 MeV Electron Energy**
1	**15 MeV Electron Energy**
1	**18 MeV Electron Energy**
	List Price: **$489,994.00** **Premier Discount (69%):** **- $338,095.86** **Offer Price:** **$151,898.14**

1 **Standard Set of Aperture Plate Electron Beam Applicators**
Field sizes:
- 6 x 6 cm, SSD 95 cm
- 10 x 10 cm, SSD 95 cm
- 14 x 14 cm, SSD 95 cm
- 20 x 20 cm, SSD 95 cm

Fitted with spring loaded touch guard, coded end frames and electrical connection to linear accelerator latch mounting system enables easy and rapid attachment.

1 **Wedge Factor Match**
The option of matching the Wedged profiles and Wedge output factors of one or more new Elekta® machines to each other and to an Elekta® machine already installed on a customer site.

The match is carried out during production of the new machines and the match is made to customer data supplied from the existing Elekta® machine.

1 **Customer Data Match**
The option of matching one or more new Elekta® machines to each other and/or to an Elekta® machine already installed on a customer site.
The match is carried out during production of the new machines and the match is made to the factory data recorded in production for the existing Elekta® machine.

MLCi2

1 **MLCi2 Head**
Lower Leakage Precision Multileaf Collimator
The MLCi2 Head offers lower leakage performance over the MLCi, without compromise on the existing clinical merits of that design.

Specifically designed to reduce inter-leaf and intra-leaf leakage, it takes a significant step forward in minimizing dose to healthy tissue outside of the collimated area.

With the ever evolving clinical techniques, it is an ideal partner for new functionality such as volumetric arc therapy (VMAT), while still providing high standards of collimation for more conventional applications.

High conformance dose delivery is ensured through the physical characteristics of the head design.

Key benefits include:
- Maximum patient clearance ensuring optimal beam angle flexibility
- Full integration enabling fast and efficient IMRT delivery
- Streamlined workflow through elimination of need for shadow tray blocks
- Full compatibility with major treatment planning systems through IMPAC MOSAIQ
- Constant real-time, beams eye verification of leaf positions, ensures beam shaping accuracy
- Unwanted dose to the patient minimized by auto tracking of the back up diaphragms during static and dynamic beam delivery
- OmniWedge capability
- Motorized Autowedge for angles up to 60°
- Lower Leakage performance
- Mechanically Interdigitation ready

List Price:	**$575,000.00**
Premier Discount (69%):	**- $396,750.00**
Offer Price:	**$178,250.00**

1 **Double pointer upgrade kit**
Elekta Synergy® Platform gantry scale for customers who require a physical gantry scale as well as the digital DeskTop display of gantry position.

1 **Software license for Camera Gain Control**
Enables the image gain of the camera to be adjusted by an item part value (i.e. camera iris item part value).

1 **AutoCAL for MLC - All-time license**
MLCi calibration software, tools and all time license
AutoCAL for Multileaf Collimator (MLCi) is designed to provide improved calibration and verification of many fundamental radiation and mechanical parameters, making it easier and faster to set up and maintain the MLCi for routine IMRT clinical use.

The tool supports:
- A predefined sequence of image acquisition from iViewGT™
- Image analysis, with pass/fail tests with user defined criteria
- A range of tests useful for set-up, acceptance and quality assurance
- Print out for record keeping and archiving of images and results

Desktop Pro Mk3i

1 **Desktop Pro™ Mk3i control system**
Control System hardware for the Linear Accelerator, release 7.01

Desktop Pro™ - the Linear Accelerator control system which manages all aspects of the treatment process providing processing and logging for all pertinent Linac patient and machine data. The Desktop Pro™ provides a graphical user interface based on the Windows XP platform. Functional integration into a single workstation ensures security and integrity of the treatment delivery. Desktop Pro™ streamlines operational efficiency and improves patient throughput. The Desktop Pro™ modular software design allows a wide range of options to meet your clinical requirement and provides compatibility with IMPAC Oncology Management System and third party R and V Systems. (Please note USB ports have replaced the tape drive on this model).

List Price:	**$97,818.00**
Premier Discount (69%):	**- $67,494.42**
Offer Price:	**$30,323.58**

1 **Software License Desktop Release 7.01**
Desktop Pro™ R7.01 is the control system software for Elekta Digital Accelerators. As well as providing clinical and service user improvements, this software supports the PreciseBEAM™ Dynamic and VMAT license options.

PreciseBEAM™ VMAT

1 **PreciseBEAM™ VMAT**
PreciseBEAM™ Volumetric intensity Modulated Arc Therapy providing continuous Arc Modulation delivery.

This license enables simultaneous dynamic movement of one or more of the following parameters:

- MLC
- Diaphragms/Jaws
- Gantry speed
- Dose rate
- Collimator angle

During delivery, the speed of the gantry and dose rate can be automatically adjusted to change the intensity of the radiation beam and vary the MU delivered per degree of movement.

List Price:	**$614,040.00**
Premier Discount (69%):	**$423,687.60**
Offer Price:	**$190,352.40**

1 **Software license Linac Record to file**
Optional software to Record Linac Data to file.
The Software license Linac record to file offers the user the option to configure the Linac (In Service Mode) to send the data to network file rather than to a printer.

1 **Software License Linac Record**
The Daily Record Function allows the Treatment System radiation beam information to be recorded on a continuous basis. Every time the beam is turned on it records the incidence: patient treatments or port films. This can be used as a back up for record and verify systems or for billing purposes.

1 **Software license for MLC Monitoring**
Provides the facility for motor current feedback to Integrity™, via the MLC electronics assembly.
Leaf power supply monitoring and a temperature sensor is also provided.

XVI

1 **X-Ray Volume Imaging (XVI)**X-Ray Volume Imaging - Integrated kV Imaging System for IGRT on the Elekta Synergy®
The imaging capability of Elekta Synergy® System enables the clinician to take full advantage of conformal dose delivery without the need for implanted target surrogate markers, due to the high visualization capability of all soft tissue structures, target volume and critical structure position. Fast, automated registration of the VolumeView™ image with the reference CT planning data allows non-invasive image guided treatments.

List Price:	**$947,553.00**
Premier Discount (69%):	**- $653,811.57**
Offer Price:	**$293,741.43**

PlanarView™

1 **PlanarView™ - 2D static single imaging mode**
The PlanarView™ license enables the acquisition of static 2D kV images on the XVI system. Images are displayed and can be compared to a reference image.

PlanarView™ thus provides similar functionality to existing orthogonal MV portal images for initial patient set-up. The X-rays of PlanarView™ are produced using kV energy range which results in high quality images at very low doses.

The key visualization advantages offered by PlanarView™ imaging at the time of treatment include:
- Quick, low-dose, snapshot images showing dense features
- Lung tumors (high contrast to air)
- Bony landmarks (that don't overlie other bony features)
- Implanted markers in soft tissue targets
- Allows for a derived 3D localization through stereoscopic (orthogonal) imaging

List Price:	**$49,500.00**
Premier Discount (69%):	**- $34,155.00**
Offer Price:	**$15,345.00**

Motionview™

1 **Sequence mode imaging (MotionView™)**
MotionView™ imaging module helps locate targets that move on a high frequency basis. This becomes particularly critical with the use of small treatment fields or in PreciseBEAM® IMRT application. Like fluoroscopy, MotionView™ allows evaluation of patient motion while the patient is in the treatment position for optimum treatment delivery.
Developed to address intrafractional organ motion, MotionView™ allows the clinician to visualize patient organ motion for evaluation of field coverage for optimum treatment delivery. Even when a device such as the Elekta Active Breathing Coordinator™ is being employed, MotionView™ is useful for monitoring other motion in the thorax or upper abdomen.
The key visualization advantages offered by MotionView™ imaging at the time of treatment include:

- Real-time movement of dense features
- Lung tumors (high contrast to air)
- Bony landmarks that don't overlie other bony features
- Implanted markers in soft tissue targets

List Price:	**$77,000.00**
Premier Discount (69%):	**- $53,130.00**
Offer Price:	**$23,870.00**

Volume mode imaging (VolumeView™)

1 **Volume mode imaging (VolumeView™)**
3D Volumetric Imaging.
Using Elekta 3D volume mode (VolumeView™), clinicians can visualize soft tissue detail in any area of the body.
Elekta VolumeView™ provides volumetric 3D data sets with submillimeter isotropic resolution acquired with the patient in the treatment position.
The system can acquire a complete 3D volume in a single revolution with reconstruction taking place simultaneously with rapid registration against the CT treatment plan image. This allows for optimization of the

treatment plan and correction for target shifts due to organ motion and deformation.
The imaging dosage necessary to obtain a VolumeView™ image can be varied depending on the level of contrast required. For prostate imaging, a larger degree of contrast is required to differentiate similar soft tissues in addition to complications caused by low transmission and high scatter, while a VolumeView™ image in the head and neck region would require a lower dose.
Key visualization advantages offered by VolumeView™ imaging at the time of treatment include:
- Soft tissue size, shape and position
- Critical organs and tumors
- Bony anatomy and alignment in 3D
- Eliminates the need for surrogate markers
- Ability to minimize the imaging dose
- Patient outline

List Price:	**$137,500.00**
Premier Discount (69%):	**- $94,875.00**
Offer Price:	**$42,625.00**

Elekta XVI software

1 **Elekta XVI software**
The XVI software offers a fully integrated solution for advanced Image Guided Radiation Therapy techniques on the Elekta Synergy® and Elekta Infinity range of machines.
2D or optional 3D kV images can be acquired with the patient in the treatment position, at the point of treatment on the Elekta Digital Accelerator.

List Price:	**$116,429.00**
Premier Discount (69%):	**- $80,336.01**
Offer Price:	**$36,092.99**

1 **Control System hardware for XVI, Release 4.5**
The XVI control system is a high specification dual processor PC which supports all aspects of the IGRT process including 2D, 3D and 4D kV image acquisition, VolumeView™ reconstruction, and analysis using a suite of advanced registration functionality.

1 **Advanced XVI R4.5 Software**
The advanced XVI license enables efficient streamlined IGRT workflows, including one touch VolumeView™, and fast automated image registration.

Advanced registration functionality such as 3D Automated Seed Matching, Critical Structure Avoidance and Symmetry (4D IGRT) are optional with this software.

1 **Segmental (Breath Hold) VolumeView™**
Provides the user with the ability to interrupt and restart VolumeView™ acquisitions using the Function Key Pad.

Supports 3D acquisition during breath-holding procedures by allowing the acquisition of partial volumes for each separate breath hold, with subsequent reconstruction a single 3D image.

Symmetry™

1 **Symmetry™**
4D Acquisition, In line Reconstruction and Registration
Symmetry™ provides acquisition and in line reconstruction of 4D volumetric data, utilizing unique patented technology for sorting each projection image into a phase based bin. This sorting occurs by reviewing the moving anatomy within the projection images and calculating a respiratory trace directly from the internal anatomy. No external surrogates are required in this process.

Following reconstruction, Symmetry™ includes an optimized workflow for registration purposes. Each reconstructed phase of the respiratory cycle is matched to a 3D reference image automatically. Following registration, the user can review the results quickly and efficiently due to an optimized software view. Correction vectors are automatically calculated to position the tumor in either the average or the exhale position.

List Price:	**$150,000.00**
Premier Discount (69%):	**- $103,500.00**
Offer Price:	**$46,500.00**

1 **3D Shaped Registration Region of Interest**
The 3D Shaped Registration Region of interest can be generated from any structure imported from the Treatment Planning System, or created manually using tools in the software.

This allows generation of a 3D registration volume which conforms to anatomical structures.

1 **3D Automated Seed Match Tool**
This functionality employs an optimized 3D registration algorithm to register implanted markers, providing fast, efficient registration without compromising on 3D volumetric information.

1 **XVI TFT Monitor**
Specification for high resolution 17" Flat Panel Monitor.
The TFT monitor will fit neatly into the linac control area.
It is used to display the high resolution images acquired on XVI, from PlanarView™, MotionView™, and VolumeView™ .

1 **40kW kV generator**
The Elekta Synergy® System XVI has an integrated 40kW kV generator which provides multiple setting control via the XVI software. Acquisition parameters are configured within the Preset protocol function in the XVI software which is user configurable. The generator and X-ray tube have been optimized for the 3D VolumeView™ imaging, as well as radiographic type exposures for PlanarView™ and MotionView™.

1 **Automated DICOM CT export license**
This DICOM export license allows the user to send post reconstruction XVI images to a configurable destination automatically upon acceptance of the XVI images.

1 **Auto DICOM RT Image Export**
Automatic DICOM Export of PlanarView™ Images
Supports the automatic export of PlanarView™ images into the MOSAIQ software, using a DICOM RT Image Standard.

Within MOSAIQ 'Setup Intelligence' functionality, images can be automatically matched using curve, point manual or automatic grey value registration.

1 **Elekta XVI Basic Calibration Kit**
Geometric calibration and QA phantom
Specially designed geometric calibration phantom for kV to MV isocenter alignment and other calibration activities for the Elekta XVI system. Utilizing the phantom in conjunction with the specific associated software tools delivered with the XVI system enables fast calibration of the kV to MV X-ray isocenter, and flexmap calibration for VolumeView™ imaging.

1 **2D Image Quality Phantom**
Image quality phantom use for 2D kV image quality to determine the low contrast and spatial resolution of XVI 2D images (PlanarView™ images).
This test tool is used for the 2D image quality of the Customer Acceptance Test for XVI and can be used to monitor image quality over a period of time.

1 **Adaptor kit for QA Phantom to iBEAM®/iBEAM® evo Couchtop**
Single ball phantom table top adapter kit.

This attachment supports the single ball bearing phantom which is used to calibrate the Synergy® imaging software to the mechanical isocenter.

1 **Kit, XVI Daily QA Phantom**
Daily QA Phantom for kV and MV projection imaging and kV VolumeView™ checks
Laser and lightfield coincide additionally
Spreadsheet for recording and analyzing trend results

1 **XVI Water Calibration Kit**
Water phantom calibration kit for XVI calibration.
It provides a reduction in CBCT image ring artifacts in addition to image quality improvements.

1 **Synergy® cable reeling**

1 **XVI Cover Upgrade (Blue)**
Elekta Synergy® XVI Cover upgrade to compliment the Elekta Synergy® Platform color selection.

IViewGT

1 **Amorphous Silicon panel for IViewGT™**
Retractablearm for IViewGT™
Software license for the IViewGT™ portalimaging system PC for acquisition of amorphous silicon images

TheiViewGT™ Amorphous Silicon panel provides: - Fast verification of dose conformance for acceptance oftreatment quality.
- Excellent image quality and clear anatomical definition.
- Fast acquisition capturefor real-time modification of set up prior to treatment delivery.

iViewGT™provides:
- Rigid and fully retractable slim line detector for maximum accessibility and clearance.
-Large, square active area and wide lateral and longitudinal movement accommodating all patient anatomies.
- Automatic and manual arm movement for efficiency of use.
- Fully interlocked safetyfeatures for operator confidence and patient comfort.

IViewGT™ R3.4software provides:
- Full image acquisition capability for IViewGT™ customers.
- Enhancedimage display options offering superior structure visualization. (Enabled with the CLAHE (Contrast Limited AdaptiveHistogram Equalization) algorithm)
- Extensive networking capabilities through DICOM.
- AutomatedDICOM export of acquired images.
- Sophisticated tool set for efficient image acquisition.
- Confidenttracking of sophisticated treatments such as IMRT, with fast continuous synchronized imaging. - Enhanced printing fordisplay of images High performance PC hardware for the control of the acquisition of amorphous silicon images.
DICOM 3.0 Software Interface for ImageTransfer
The International standard Interface protocol for network transfer of medicalimages.
IView IMRTVerification Software License
This software expands existing iView functions toverify multiple segment beams for IMRT. The iView image acquisition is triggered automatically and the image takendepends on whether the user selects single, multiple or movie image.

Template Matching Software
This enables the user to compare the portal image with a nominated reference image for any set-up error. The set-up error is measured bymatching visible anatomy and the field edge on the referenced image with the portal image. The user can move thetemplates to provide an image displacement.
Image Approval Software
Thisallows the user, assigned with the "review" permission, to approve or disapprove any image within iViewGT™.

Patient Auto Select Software with ICom-VxConnection
This enables the prescription selected on the linac to automatically select orcreate that patient record on IViewGT™ using the iCom-Vx protocol. In addition images will automatically beacquired and stored in the IViewGT™ database without further operator intervention. HighPerformance PC hardware for the control of the acquisition of amorphous silicon images. Laser back pointerassembly Comprising:
- Fiber optic laser back pointer (Class 2 laser)
-Mechanical mounting kit
-Laser warning label

List Price:	**$474,260.00**
Premier Discount (69%):	**- $327,239.40**
Offer Price:	**$147,020.60**

1 **Remote Detector Retraction Upgrade Kit – 30m cable**
This kit allows Remote Retraction of the iViewGT™ detector from the Function Key Pad.

1 **Las Vegas Calibration Phantom**
The Las Vegas phantom is a device that is used to check image quality of a portal imaging device at different Megavoltage energies both at acceptance and as part of the corrective maintenance procedure.

1 **Flat panel monitor for IView**

1 **Customer Interface Terminal Board**

1 **Elekta Synergy® Function Key Pad**
The Function Key Pad provides the following features:
- MV Start, Interrupt and Terminate
- LED's to indicate radiation on / off status
- Linac Assisted Setup (ASU) - facilitating automatic gantry and diaphragm rotations
- Table ASU - facilitating automatic table translations and isocentric setup
- Imaging ASU - facilitating automatic remote retraction of the iViewGT™ detector
This Function Key Pad has been ergonomically designed to ensure comfort during prolonged ASU periods.

Remote Automatic Table Movement License

1 **Remote Automatic Table Movement License**
Remote Automatic Table Movement License with either XVI or MOSAIQ.
This license enables the user to make the translation correction movements remotely and automatically at the Precise Table. This movement can either take place following a registration as part of an on-line VolumeView™ imaging workflow or the Precise Table can be moved remotely and automatically to coordinates entered into MOSAIQ.

It should be noted that if customers have XVI, they will only be able to have this functionality when using on-line image workflows.

This feature is only available with MOSAIQ when the Linac does NOT have XVI Imaging capability.

List Price:	**$71,500.00**
Premier Discount (69%):	**- $49,335.00**
Offer Price:	**$22,165.00**

1 **Independent X/Y movement of table top**
To save time, in reaching the desired position, this kit allows the X/Y brakes to be released independently.

1 **Table ASU License**
In addition to normal linac ASU, the user is able to separately request the auto setup of the table Isocenter from inside and outside the room.

1 **Precise Table or Pedestal Pit Kit**
This kit provides the necessary fixings, floor boards and template to install a Precise Table into a custom built Pit or a modified Pedestal Pit.

1 **IntelliMax™ Intelligent Agent**
This License provides only the IntelliMax™ Intelligent Agent license. Any provision of services relating to the use of data collected by the Agent (via the IntelliMax™ Enterprise) should be negotiated as part of the Service Contract between the Customer and the BU/distributor.
IntelliMax™ Intelligent Agent requires a dedicated PC. Provision of this PC must be negotiated between the Customer and the Elekta BU/Distributor. A specification of the PC can be obtained from your Elekta representative.
IntelliMax™ Intelligent Agent also requires a direct internet connection to the Agent PC opening secure port 443 (https).

1 **Network Security Solution**
The Elekta Network Security Solution (NSS) is a multi-purpose device designed to protect Elekta's Treatment Delivery Suite (TDS) from illicit intrusion attempts and malware attack. A single NSS provides Unified Threat Management (UTM) functionality (firewall and malware protection) and temporary secure data storage for a single digital linear accelerator and its associated IT components.

1 **Set of manuals**

1 **VMAT Treatment Planning System Manual**

1 **Turbo Starter Kit for Linear Accelerators**
Ancillary equipment required for the installation and maintenance of any Precise Digital Accelerator.
Comprising:
- Rotary vacuum pump
- Turbo molecular pump attachment for rapid pump down times and higher roughing vacuum

1 **Order two sets of pre defined terminated cable kits**
Pre installation treatment room and inter bay terminated cable kits

1 **U.S.A. Electron Flatness**
Electron flatness according to U.S.A. standards, optimized at 100 cm.

1 **20" Flat panel control room monitor**

1 **Standard Rigging & Handling**
Basic rigging of Linac to first floor or ground floor location. Elekta will provide the necessary crew to offload, uncrate, rigging and machinery moving required to set system as per plan, and remove debris. Basic rigging excludes use of a crane or rigging down an elevator shaft.

Standard Rigging includes:
- Make one pre-installation site visit and delivery project management.
- Drill holes for equipment fasteners
- Supply a 12,000 lb capacity forklift during the off loading procedure.
- Stage and uncrate the linac machine, move all components into the facility, and set as directed.
- Remove and dispose of all packaging that will not be reused.
- Transport the base, gantry and beam arm into the facility/bunker on transport trolleys supplied by Elekta.
- Set the base frame in place (Elekta will level).
- Set the gantry drum onto the base frame.
- Set beam arm into the gantry.
- Install counterweight holder and stack the counterweights.
- Supply a manual gantry lifting system to perform aforementioned setting activities and all necessary tools.
- Supply a crew, including a rigging supervisor.
- Include the cost of all associated resource and expenses, including related travel time.
- Complete all rigging activities in a single day.

Standard Rigging excludes:
- Crane service.
- Elevator, or shaft deliveries.
- No clear access to the building (exterior).
- Interior obstruction en route to treatment room.
- Any shoring needed to protect the structure from the weight of the system.
- Any shoring and/or plating needed to build temporary dock or landing area for the unit.
- Extra long delivery routes, distances in excess of 150' from offload site to the treatment room.
- Overtime, weekend, premium time, unless Weekend Rigging selected.
- Additional travel expenses should the project exceed the time allotted in this scope for reasons beyond Elekta or our contractor's control.

Additional man-hours, manpower, travel expenses, or equipment required due to delays caused by incorrect site preparation, waiting time, or delays not caused by Elekta or our contractor will be itemized and billed to the customer at then current rates.

1 **Mandatory software license for the standard product**

Synergy List Price:	**$5,382,213.30**
Premier Discount:	**$3,713,727.18**
Offer Price:	**$1,668,486.12**

Additional Items:

1 **Power Distribution Unit for Elekta® Linear Accelerator - 480 Volt Input**
The PDCU incorporates a transformer, output circuit breakers, filtering for high frequency noise, distortion, and transient pulse suppression, in one cabinet. This reduces site preparation costs and complexity for the customer.

1 **Medical Gases SF6 for Installation and Service**
Includes:
- 44-liter cylinder for SF6 gas
- 115 lbs of SF6 gas
- Regulator
- Delivery

1 **Medical Gases Nitrogen for Installation and Service**
Includes:
- 16-liter cylinder for Nitrogen (N2) gas
- Nitrogen (N2) gas
- Regulator
- Delivery

1 **Close Circuit TV System-Color**

1 **Intercom System for Patient and Radiographer Communication**

1 **Electron Beam Field Shaping System**
For use with Electron applicators from Elekta and allows the user to easily provide Electron Beam field shaping. The system comprises:
- A Universal leveling template with an adjustable arm for securing styro-foam inserts- Set of five (5) rubber molds compatible with Elekta Electron applicators
- 6cm x 6cm
- 10cm x 10cm
- 14cm x 14cm
- 20cm x 20cm
- 25cm x 25cm
- Provided as part of the system is one (1) Hot Wire Cutter.

1 **Open Air Graticule**
The Open Air Graticule is intended to be used for Radiation Therapy to project a scale of defined increments on port film images which can aid in treatment setup and verification.
The Open Air Graticule does not require the use of a shadow tray holder and can be attached directly to the head of the Precise Treatment System or SL Linac. It consists of two wires delineating the X & Y axis of the treatment field. This model of graticule is ideal for MLC customers and especially those using Elekta's IView & IViewGTTM. Because the open air graticule has a minimal transmission factor, with Physic's approval, the customer does not have to re-enter the treatment room after the port film to deliver the treatment. Please see product User manual for specific treatment information.

1 **Room Lasers, Red, Remote**
Laser patient alignment system, red lines with manual adjustment.
Set of 4 Red Room lasers. Comprising 3 crosshair and 1 line sagittal laser.
Featuring extremely fine lines (< 1mm), high precision adjustment at the isocenter and easy to install, stable mounting bracket.
Inclusive of switchable (110v to 240v) Power Supply and universal main adaptor.

1 **Beam Block Tray - Star Pattern**
Beam block tray with holes in a star pattern.
Trays are designed with threaded, removable plugs for the coding of each block.
Specially designed for use with the Elekta shadow tray assembly.

1 **Electron Beam Field Shaping System**
For use with Electron applicators from Elekta and allows the user to easily provide Electron Beam field shaping. The system comprises:
- A Universal leveling template with an adjustable arm for securing styro-foam inserts- Set of five (5) rubber molds compatible with Elekta Electron applicators
- 6cm x 6cm
- 10cm x 10cm
- 14cm x 14cm
- 20cm x 20cm
- 25cm x 25cm
- Provided as part of the system is one (1) Hot Wire Cutter.

1 **Open Air Graticule**
The Open Air Graticule is intended to be used for Radiation Therapy to project a scale of defined increments on port film images which can aid in treatment setup and verification.
The Open Air Graticule does not require the use of a shadow tray holder and can be attached directly to the head of the Precise Treatment System or SL Linac. It consists of two wires delineating the X & Y axis of the treatment field. This model of graticule is ideal for MLC customers and especially those using Elekta's iView & iViewGTTM. Because the open air graticule has a minimal transmission factor, with Physic's approval, the customer does not have to re-enter the treatment room after the port film to deliver the treatment. Please see product User manual for specific treatment information.

1 **Beam Block Tray - Star Pattern**
Beam block tray with holes in a star pattern.
Trays are designed with threaded, removable plugs for the coding of each block.
Specially designed for use with the Elekta shadow tray assembly.

1 **Full Active Breathing Coordinator™ System**
The full ABC system includes:
Release 2.0 software, ABC Control Unit, Control Laptop with CD writer included, Flat Panel Patient Monitor, CYBEX Transmitter/Receiver, Transducer (turbine and pick-up assembly), Balloon Valve, Patient Control Switch, Mirror Support System, ABC Cart System and CAT 5 LAN cable.

1 **Mandatory software license for the standard product**

1 **Mouth Piece and Filter Kit**
Kit of 20 Mouthpiece & Filter assemblies to replace those discarded after use.
For use with the Active Breathing Coordinator™.

List Price:	**$265,563.00**
Discount:	**- $ 92,947.05**
Offer Price:	**$172,615.95**

1 **Accelerated Installation – 3 weeks** **$75,000.00**

PREMIER VALUE ADDED PACKAGE – Purchase of Multiple Elekta product categories at one time.

Elekta will provide an Education/Training & Associated Travel Expense Fund of $25,000.00 to be applied to Elekta Sponsored Training registration / costs and any travel expenses associated with the Elekta Training. All expenses must be paid by Buyer and invoices submitted to Elekta for reimbursement

ONCOLOGY SERVICE AGREEMENT ADVANCED FIVE (5) YEARS

Methodist Healthcare - Memphis

Site: NA

Memphis, TN

Covered Equipment List

Model	Serial Number
Elekta Synergy® Platform	-
Precise Table with iBEAM evo	-
Desktop Pro™ Mk3	-
MLCi2	-
iViewGT™ Portal Imaging	-
XVI Imaging	-
Volumetric Modulated Arc Therapy (VMAT)	-

List Hardware Maintenance & Support Service Fee:	**USD**	**1,053,998.75**
PREMIER Applicable Discount		**20.00 %**
Hardware Maintenance & Support Service Fee:	**USD**	**843,199.00**
Term(s) In Years		**5**

		Periodic Payment		Annual Amount
Annual Payment (IN ADVANCE)	**USD**	**168,639.80**	**USD**	**168,639.80**
Bi-Annual = 2%	**USD**	**86,006.30**	**USD**	**172,012.60**
Quarterly = 4%	**USD**	**43,846.35**	**USD**	**175,385.39**
Monthly = 6%	**USD**	**14,896.52**	**USD**	**178,758.19**

FIRST LINE - SECOND LINE CLASSIFICATION GUIDELINES

The Methodist Healthcare - Memphis Service offering is a unique arrangement between Elekta® and Methodist Healthcare - Memphis. The terms and conditions of this service arrangement are exclusive to Methodist Healthcare - Memphis and will not be distributed to parties outside of Methodist Healthcare - Memphis.

Classifications and ratings of Elekta field service engineers are in accordance to their experience, training, and accomplishments. We feel that this is also the most logical way to assess the Methodist Healthcare - Memphis candidates who will be supporting the Synergy™ Systems.

FIRST LINE Classification:

Month 25 of the Installed unit is reached.

- **Education Standard**: Methodist Healthcare - Memphis Service Engineer must successfully complete Elekta's EOE1 Course.
- **Experience Standard**: Six months "hands-on" experience servicing the Synergy™ System.
- **Performance Standard**: Successfully handles fifty percent (50%) of all Service Calls without extended support from Elekta service. The definition of extended support is phone support in excess of 15 minutes or having an Elekta representative on site to accomplish the repairs.
- Elekta will complete the 8-Month and Annual PMIs. In addition, Elekta will train the in-house support engineer on the 8-Month and Annual PMIs.
- The customer will be responsible for the 4-Month PMIs
- Elekta's Up-Time Guarantee is honored under this classification.
  This five (5) year service offering is based upon the purchasing of the service contract at the time of sale. If this obligation is not met, the service agreement price will not be guaranteed.

If at any time,Methodist Healthcare - Memphis does not continue to meet the First Line Classification, the agreement price will increase back to the Elekta Advanced level.

All parts must be ordered through the local Elekta Field Service Engineer. Elekta shall be the sole supplier of parts for the Synergy™ System. All defective components are the property of Elekta, Inc.

For each ordered part from Elekta, Methodist Healthcare - Memphis will supply Elekta with a like defective part of the same. A part will be considered used and /or defective if the new part package seal is broken.

FIRST LINE / SECOND LINE Classification:

- Successfully obtain all First line qualifications
- Month 37 of the installed unit is reached
- **Education Standard**: Successful completion of Elekta's EOE2 Course (Elekta Oncology Engineer Phase 2 Course).
- **Experience Standard**: Two years "Hands-On" experience servicing the Elekta Synergy™ Platform System
- **Performance Standard**: Successfully handles eighty percent (80%) of all Service Calls without extended support from Elekta.
- Elekta will complete the Annual PMIs.
- The customer will be responsible for the 4-Month and 8-Month PMIs.

"Extended Support" from Elekta is defined as any telephone support call in excess of 15 minutes.

If at any time,Methodist Healthcare - Memphis does not continue to meet the First Line/ Second Line Classification, the agreement price will increase back to First Line classification or Elekta Advanced Level and Elekta's pricing for that service level will apply.

All parts must be ordered through the local Elekta Field Service Engineer. Elekta shall be the sole supplier of parts for the Synergy™ System. All defective components are the property of Elekta, Inc.

For each ordered part from Elekta,Methodist Healthcare - Memphis will supply Elekta with a like-defective part of the same. A part will be considered used and /or defective if the new part package seal is broken.

Hardware Maintenance and Support Services - Oncology Basic Level

CUSTOMER SUPPORT

On-Site Preventative Maintenance Program

- Two Preventative Maintenance inspections performed to manufacturer's recommendations
- Performed during the principle period of maintenance ("PPM") of 8:00 a.m. - 9:00 p.m., excluding Supplier's scheduled holidays
- A preventative maintenance report will be left on-site identifying those areas that require servicing so a service call may be scheduled

Customer Call Support

- 24 hours / 7 days per week.
- Staffed by Elekta-trained local Field Support Engineers ("FSE") able to resolve first-line service issues
- A response time of 30 minutes by phone and four (4) hours for an onsite service call is the goal for the FSE
- FSEs complete up to eight (8) weeks of factory certified training courses
- Engineer competency is confirmed by written exam
- Engineers are located regionally for quicker response time
- Service reports are left on-site for hospital's records
- PPM for Basic - Level Support Agreement customers is 8:00 a.m. - 9:00 p.m.
- Please call 1-888-242-7171 to place a service call

Labor Billing Rate

- Please refer to Labor Rate Billing Policy

Spare Parts

- 15% discount (excluding glassware)
- All parts are factory certified
- Stocked in four regional distribution centers
- Supplied by FedEX® Next Day, when available

Hardware

- Mandatory releases supplied and installed free of charge

Software

- Mandatory releases supplied and installed free of charge
- 5% discount on performance software
- 5% discount on functional software

Precision Service Packages

	Basic	Full	Advanced
Customer Support			
On-Site Preventative Maintenance Program	x	x	x
Customer Call Support (24 hrs. / 7 days wk.)	x	x	x
Labor		x	x
Spare Parts	15% Disc		x
Glassware			x
Uptime Guarantee			x
Hardware			
Mandatory	x	x	x
10% Discount on Upgrades		x	x
Software			
Mandatory	x	x	x
Discount on New Functional Software	5%	10%	15%
Discount on New Performance Software	5%	10%	Free
Advanced Value Package			
Support by Technical Assistance Group (TAG)			x
Annual Application Refresher Course			x
Preferred Parts Allocation			x
Options			
Biomedical / In-house Training*		20% Disc	20% Disc
Block of Service Hours			
Extended Hours 8:00 am- 12:00am			

*Plus travel expenses (includes transportation, accommodations and meals)

Hardware Maintenance and Support Services - Oncology Advanced Level

CUSTOMER SUPPORT

On-Site Preventative Maintenance Program

- Three Preventative Maintenance Inspections performed to manufacturer's recommendations
- Performed during the principle period of maintenance ("PPM") of 8:00 a.m. - 9:00 p.m., excluding Supplier's scheduled holidays
- A preventative maintenance report will be left on-site identifying those areas that require servicing so a service call may be scheduled

Customer Call Support

- 24 hours / 7 days per week
- Staffed by Elekta-trained local Field Support Engineers ("FSE") able to resolve first-line service issues
- A response time of 30 minutes by phone and four (4) hours for an on-site service call is the goal for the FSE
- FSEs complete up to eight (8) weeks of factory certified training courses
- Engineer competency is confirmed by written exam
- Engineers are located regionally for quicker response time
- Service reports are left on-site for hospital's records
- PPM for Advanced - Level Support Agreement customers is 8:00 a.m. - 9:00 p.m.
- Please call 1-888-242-7171 to place a service call

Labor Billing Rate

- Labor included during PPM at no additional charge. For outside contract hours, please refer to Labor Rate Billing Policy

Spare Parts

- Includes all replacement parts with installation - including glassware i.e., Magnetrons Thyratrons, Electron Guns, MLC cameras, iViewGT® amorphous silicon panel, and XVI Imaging Panel
- All parts are factory certified
- Stocked in four regional distribution centers
- Supplied by FedEx® Next Day, when available

Uptime Guarantee

- Supplier guarantees that the Radiation Therapy delivery system will achieve a 98% or better uptime as described within the uptime performance guarantee.

Hardware

- Mandatory releases supplied and installed free of charge
- 10% discount on upgrades

Software

- Mandatory releases supplied and installed free of charge
- Free performance software
- 15% discount on functional software

Technical Assistance Group (TAG)

- Comprehensive service support through telephone support and the latest updates in remote monitoring
- TAG and Field Service Engineers work together to address in-depth service issues
- Customer requirements are to install and maintain a direct dial analog phone line, allow Supplier personnel access to equipment, and provide an on-site user that is familiar with service mode and machine geography

Annual Application Refresher Course

- Ensure peak patient throughput from high staff operating efficiency
- One-day refresher training session includes clinical audit
- Provided by exam certified Supplier's Application Specialist
- Scheduled through Supplier's Applications Manager
- Two (2) months advanced notice is requested

Preferred Parts Allocation

- Advanced customers take priority delivery of high usage spare parts
- Confident of lowest possible down time due to parts delivery
- Delivered FedEx® Next Day, when available

Customer Service Up-time Guarantee

Hardware Maintenance and Support Services - Oncology Advanced Level

98% Up-time Performance Guarantee

Radiotherapy Delivery Systems

Elekta guarantees that the Radiotherapy Delivery system described on the Hardware Maintenance and Support Services - Oncology Advanced Level Agreement will achieve a 98% or better up-time as described within this document. This guarantee will be in effect starting on the commencement date of the customer support agreement.

Up-time statistics will be evaluated for each successive twelve (12) month agreement period. If the Radiotherapy Delivery system listed fails to achieve the 98% up-time criteria, then the following year's Hardware Maintenance and Support Services - Oncology Advanced Level Agreement will be reduced according to the following schedule:

UP-TIME	REDUCTION
98.0 - 100%	None
95.0 - 97.9%	3%
90.0 - 94.9%	5%
80.0 - 89.9%	10%
79.9% and below	20%

Terms

1. The above-mentioned reduction in the succeeding year's Hardware Maintenance and Support Services - Oncology Advanced Level Agreement shall be the sole and exclusive remedy for any failure to meet the 98% up-time performance guarantee. Should the customer elect not to purchase a subsequent customer support agreement, then the 98% up-time guarantee will not apply.
2. Up-time will be calculated using the following formula:

$$\text{UP-TIME} = \frac{\text{BASE TIME - DOWNTIME}}{\text{BASE TIME}}$$

BASE TIME - the total of all the principal period of maintenance hours less all hours of planned maintenance that are performed during the principal period of maintenance.

DOWNTIME - the time when the Radiotherapy Delivery system is inoperable to the point where the system can not be used to treat patients. Downtime will be calculated during the principal period of maintenance and commences when the customer notifies the designated service facility that the Radiotherapy Delivery sytem is inoperable and available for service. Downtime ends once repairs have been completed and the Radiotherapy system is again available for clinical use.

NOTE: The installation of system modifications, improvements and/or updates as scheduled by mutual agreement of both parties will not be considered downtime.

1. The customer agrees to maintain a system logbook to document performance. Periodically, Elekta will review the logbook and through a dialogue with the customer reach a consensus regarding downtime period to date.
2. Repairs and adjustments required as a result of items beyond Elekta's control, including but not limited to: damage through misuse, operator error, failure of environmental systems, power failure, and acts of God, will be excluded from downtime calculations.
3. This up-time guarantee will only remain in effect as long as the Elekta Radiotherapy Delivery system is continuously supported by the Hardware Maintenance and Support Services - Oncology Advanced Level Agreement.

Glassware Parts List

Standard Magnetron	$ 41,310.68
FastTraQ Magnetron	$ 44,331.53
Thyratron	$ 16,879.28
Electron Gun	$ 15,129.67
MLC Camera	$ 17,886.52
IView Camera	$ 19,253.62
iViewGT Amorphous Silicon Panel	$122,000.00
XVI Imaging Panel	$232,130.00
X-ray Tube	$ 24,780.00
Image Intensifier	$178,000.00

Glassware replacement parts are provided for no additional charge to the Hardware Maintenance and Support Services - Oncology Advanced Level Agreement Customer.

All other customers will be subject to the above parts pricing.

Glassware parts are factory certified and warrantied for a maximum clinical uptime. They are stocked in regional distribution centers to ensure next day delivery.

*Prices subject to change without notification.

**Supplied when available by Fedex, a preferred Elekta carrier.

Elekta Oncology Labor Rate Billing Policy

Effective March 31, 2009

Please contact Elekta Customer Support Service Center at 1-888-242-7171 to place a call for Onsite Service or Remote Support. Have your Elekta site number and a purchase order available to schedule service.

Regular time: 8:00 a.m. to 5:00 p.m.; Monday - Friday, (*excluding Elekta observed holidays*)

Overtime: 5:00 p.m. to 12:00 a.m.; Monday - Friday, 8:00 a.m. to 12:00 a.m. Saturdays (*excluding Elekta observed holidays*)

Double-time: 12:00 a.m. to 8:00 a.m.; Monday - Saturday, all day Sunday and Elekta observed holidays

Labor billing includes on-site labor and related travel time with a two (2) hour minimum. Intermittent problems are not covered under repeat service calls and are billed at time and material rates. Travel time is charged portal to portal at the same rate as hourly service. When applicable, overtime rates apply. **Billing rates are not discountable.**

Products Billing Rates - Oncology Products

Hourly Billing Rates for Time and Material Customers 8:00 a.m. - 5:00 p.m.

	Regular Time	Overtime	Double-time
Oncology Products	$385.00*	$577.50*	$770.00*
Phone Support per hour (1 hr minimum)	$385.00	$577.50	$770.00

**Plus expenses*

Billing Rates for Contract Customers, if applicable

Principal Period of Maintenance is 8:00 a.m. - 9:00 p.m.

	Regular Time (if applicable)	Overtime	Double-time
Oncology Products	$300.00*	$450.00*	$600.00*
Phone Support 24x7	$300.00	$450.00	$600.00

**Plus expenses*

Time & Material Rates for Preventative Maintenance Inspections	Cost Per one PMI*
Digital Linear Accelerator PM for months 4 or 8. Includes labor, round trip travel, and expenses during business hours (8:00 a.m. - 5:00 p.m.).	$ 12,000.00
Digital Linear Accelerator Annual PM for month 12. Includes labor, round trip travel, and expenses during business hours (8:00 a.m. - 5:00 p.m.).	$ 16,000.00
Simulator	$ 8,500.00

*Parts are not included in PMI rates

The Principal Period of Maintenance is 8:00 a.m. - 5:00 p.m.

PMs are excluded

Blocks of Hours	Totals
50 hours ($370.78/hr)	$18,539.00
100 hours ($329.60/hr)	$32,960.00

*Hours (labor and travel) will be deducted according to the time period in which they were used i.e. 1 hr/straight time, 1.5 hr/overtime and 2-hr/double time. Hours unused during a 12-month period will be forfeited.

Parts

All Elekta factory certified parts and current pricing are available by calling the Customer Support Service Center at 1-888-242-7171. Parts prices and availability are subject to change without notice.

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ELEKTA, INC.
HOLIDAY SCHEDULE
2012

NEW YEAR'S DAY	**MONDAY, JANUARY 2nd**
MEMORIAL DAY	**MONDAY, MAY 28th**
INDEPENDENCE DAY	**WEDNESDAY, JULY 4th**
LABOR DAY	**MONDAY, SEPTEMBER 3rd**
THANKSGIVING DAY	**THURSDAY, NOVEMBER 22nd**
DAY AFTER THANKSGIVING	**FRIDAY, NOVEMBER 23rd**
CHRISTMAS EVE	**MONDAY, DECEMBER 24th**
CHRISTMAS DAY	**TUESDAY, DECEMBER 2**

SIEMENS
Siemens Medical Solutions USA, Inc.
51 Valley Stream Parkway, Malvern, PA 19355
Fax: (866) 306-6681

SIEMENS REPRESENTATIVE
Samuel Shuck - (901) 829-2891

PRELIMINARY PROPOSAL

Customer Number: 0000007440

Date: 9/25/2013

METHODIST HEALTHCARE
1211 UNION AVE
MEMPHIS, TN 38104

Quote Nr: **1-7855TY Rev. 0**

MAGNETOM Aera - USA

All items listed below are included for this system: *(See Detailed Technical Specifications at end of Proposal.)*

Qty	Part No.	Item Description
1	14416900	**MAGNETOM Aera - System** MAGNETOM Aera - 1.5T Tim+Dot system - The integration of the next generation Tim - "Tim 4G" and the Siemens unique Dot Engines (Day optimizing throughput Engine). Short and open appearance (145 cm system length with 70 cm Open Bore Design). Tim 4G's redesigned RF system and all-new coil architecture. - Siemens unique DirectRF(tm) technology enable Tim's new all digital-in/ digital-out design - All-new coil architecture including Dual-Density Signal Transfer Technology - Whole-body superconductive Zero Helium Boil-Off 1.5T magnet - TrueForm Magnet and Gradient Design - Actively Shielded water-cooled Siemens gradient system - Head/Neck 20 DirectConnect, Spine 32 DirectConnect, Body 18, Flex Large/Small 4 Dot offers patient personalization, user guidance and process automation that result in consistent examination results. - Brain Dot Engine is designed to simplify general brain examinations through personalized, guided and automated workflows. - Dot Display and Dot Control Centers - efficient patient preparation. Additional features include: -Tim Application Suite including Neuro, Angio, Cardiac, Body, Onco, Breast, Ortho, Pediatric and Scientific Suite - syngo MR software including 1D/2D PACE, syngo BLADE, iPAT², Phoenix, Inline Technologies. - High performance host computer and measurement and reconstruction system The system (magnet, electronics and control room) can be installed in 30sqm space. For system cooling either the Eco Chiller options or the Separator is required.
1	14416901	**Tim [204x48] XJ Gradients #Ae** Tim [204x48] XJ-gradient performance level Tim 4G with it's newly designed RF system and innovative coil architecture enables high resolution imaging and increased throughput. Up to 204 simultaneously connected coil elements in combination with the standard 48 independent RF channels, allow for more flexible parallel imaging. Maximum SNR through the new Tim 4G matrix coil technolgy. XJ - gradients The XJ- gradients are designed combining high performance and linearity to support clinical whole body imaging at 1.5T. The force compensated gradient system minimizes vibration levels and accoustic noise. The XJ gradients combine 33 mT/m peak amplitude with a slew rate of 125 T/m/s.
1	08464872	**PC Keyboard US english #Tim** Standard PC keyboard with 101 keys.
1	14416914	**Pure White Design #T+D** The MAGNETOM Aera / MAGNETOM Skyra design is available in different light and appealing variants which perfectly integrates into the different environments. The color of the main face plate cover of the Pure White Design Variant with the integrated Dot Control Centers and the unique Dot Display is brilliant white surrounded by a brilliant silver trim. The asymetrical deco area on the left side is colored white matte and also with a brilliant surrounding silver trim. The table cover is presented also in the same color and material selection.
1	14416905	**Tim Table #Ae** The new Tim Table is designed for maximized patient comfort and smooth patient preparation. The unique design of the Tim Table can support up to 250 kg (550 lbs) patients without restricting the vertical or horizontal movement.

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Qty	Part No.	Item Description
1	14418762	**Height leveling kit, 120mm #T+D** Height leveling kit to adjust the Tim Table for MAGNETOM Aera, MAGNETOM Skyra and MAGNETOM Spectra systems which are installed on a pedestal with the following heights: 50 mm -155 mm in combination with the Tim Table
1	14432139	**Advanced Dot Imaging Package #T+D** The following components are already included in the Advanced Dot Imaging Package: - Angio Dot Engine - Abdomen Dot Engine The Angio and Abdomen Dot Engine offer a comprehensive set of guidance and automation, so that robust image quality can be achieved quickly and consistently. Angio Dot Engine The timing of contrast injection and scan is widely considered the most challenging part of an angiographic exam. Angio Dot guides the user through angiographic single or multi station examinations by providing semi-automatic detection of arterial and venous timing windows using a test bolus technique. This information is fed back into the next planning steps automatically adapting scan parameters to the individual patient and patient's condition. Where needed, AutoVoiceCommands support the communication with the patient and ensure optimal timing of breathing, scanning and contrast media. All steps of contrast injection are presented in a simple, automated graphic on the monitor. syngo Inline Composing and the Tim Planning Suite are included. Abdomen Dot Engine provides: - Personalized Exam Strategies - Guidance - Automatic sequence scaling - Auto Navigator - Auto-FoV - Timeline setup and monitoring - Automatic Voice Commands - Auto Bolus Detection - Inline radial range calculation for MRCP - Inline Subtraction - Inline Registration
1	14409198	**Native syngo #Tim** Integrated software package with sequences and protocols for non-contrast enhanced 3D MRA with high spatial resolution. syngo NATIVE particularly enables imaging of abdominal and peripheral vessels and is an alternative to MR angiography techniques with contrast medium, especially for patients with severe renal insufficiency.
1	08464740	**Flow Quantification #Tim** Special sequences for quantitative assessment of flow.
1	07365419	**Argus Flow**
1	14430396	**Spine Dot Engine #T+D** The Spine Dot Engine provides optimized cervical, thoracic and lumbar spine imaging. Amongst various features to support streamlined spine workflow is Labeling of the vertebrae suggested by the system, Tim Planning Suite and In-line Composing. syngo WARP with View Angle Tilting (VAT) technique is provided for reducing in-plane geometric distortions syngo WARP can be used throughout the body.
1	14416944	**DTI Package #T+D** The DTI Package is a bundle of: - Diffusion Tensor Imaging - DTI Evaluation and - DTI Tractography syngo The bundle comprehends all acquisition and postprocessing tools for comprehensive DTI exams.
1	14430391	**RESOLVE #T+D** RESOLVE is a diffusion-weighted, readout segmented EPI sequence optimized towards high resolution imaging with reduced distortions. The sequence uses a very short echospacing compared to single-shot EPI, substantially reducing susceptibility effects. A 2D-navigator correction is applied to avoid artefactsartifacts due to motion-induced phase errors. This combination allows diffusion weighted imaging of the breast, prostate, brain and spinewhole body with a high level of detail and spatial precision.
1	14416941	**Spectroscopy Package #T+D** The Spectroscopy Package is a comprehensive software package which bundles Single Voxel Spectroscopy, 2D Chemical Shift Imaging, 3D Chemical Shift Imaging and syngo Spectroscopy Evaluation. Sequences and protocols for proton spectroscopy, 2D and 3D proton chemical shift imaging (2D CSI and 3D CSI) to examine metabolic changes in the brain (e.g. in tumors and degenerative diseases) and in the prostate are included. Furthermore included is the comprehensive syngo Spectroscopy Evaluation Software which enables fast evaluation of spectroscopy data on the syngo Acquisition Workplace.

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PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	14405328	**TWIST syngo #Tim** This package contains a Siemens unique sequence and protocols for time-resolved (4D) MR angiographic and dynamic imaging in general with high spatial and temporal resolution. syngo TWIST supports comprehensive dynamic MR angio exams in all body regions. It offers temporal information of vessel filling in addition to conventional static MR angiography, which can be beneficial in detecting or evaluating malformations such as shunts. In case of general dynamic imaging, for example an increase in spatial resolution by a factor of up to 2 at 60 seconds temporal resolution (compared to conventional dynamic imaging) is possible due to intelligent k-space sampling strategies. Alternatively, increased temporal resolution at constant spatial resolution is possible.
1	14418521	**syngo Expert-i #T+D** This software application enables remote access to the system (connected via local area network) for planning and processing.
1	14416960	**Shoulder 16 Coil Kit #Ae** The new Tim 4G coil technology with Dual Density Signal Transfer and SlideConnect Technolgy combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility. The Shoulder 16 Coil Kit for examinations of the left or right shoulder consists of a base plate and two different sized iPAT compatible 16 channel coils (Shoulder Large 16 and Shoulder Small 16). These will be attached and can be relocated on the base plate.The 16-element coils with 16 integrated pre-amplifiers ensure maximimum signal-to-noise ratio. Shoulder Large 16 and Shoulder Small 16 will be connected via a SlideConnect plug for fast and easy coil set-up and patient preparation.
1	14416961	**Hand/Wrist 16 #Ae** The new Tim 4G coil technology with Dual Density Signal Transfer and SlideConnect Technology combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility. Hand/Wrist 16 for examinations of the left or right hand and wrist region consists of a base plate and an iPAT compatible 16-channel coil and allows high resolution imaging of the wrist and the hand within one examination. Hand/Wrist 16 will be connected via a SlideConnect plug for fast and easy patient preparation.
1	14416962	**Foot/Ankle 16 #Ae** The new Tim 4G coil technology with Dual Density Signal Transfer and DirectConnect Technolgy combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility. Foot/Ankle 16 for examinations of the left or right foot and ankle region consists of a base plate and an iPAT compatible 16-channel coil and allows high resolution imaging of the foot and ankle within one examination. Foot/Ankle 16 is a cable-less coil and will be connected via DirectConnect for fast and easy patient preparation.
1	14430403	**Tx/Rx 15-channel Knee Coil DDST #Ae** New 15-channel transmitter/receiver coil for joint examinations in the area of the lower extremities. Main features : - 15-element design (3x5 coil elements) with 15 integrated preamplifiers, - iPAT-compatible - SlideConnect Technology
1	14430405	**Special Purpose Coil #Ae** The 4-channel special purpose coil is a no-tune receiver coil designed for examination with small Field-of-Views.
1	14407258	**MR Workplace Table 1.2m** Table suited for syngo Acquisition Workplace and syngo MR Workplace based on syngo Hardware.
1	14407261	**MR Workplace Container, 50cm** 50 cm wide extra case for the syngo host computer with sliding front door to allow change of storage media (CD/DVD/USB).
1	14416948	**Patient Supervision TV #T+D** The supervision solution is customizable and designed to address different site specific requirements. Up to 4 cameras can be connected for patient supervision in the examination or waiting room. This package contains a special video camera for monitoring the patient during an MR examination, conveniently mounted on the wall of the examination room. The information is displayed at an LCD monitor in the control room.
1	14416973	**Comfort Kit #T+D** Vacuum cushions for stable positioning of the patient during the examination. The kit comprises of an integrated vacuum pump and 3 anatomically shaped (spine, head, small joints) cushions of different sizes.

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PRELIMINARY PROPOSAL

Qty	Part No.	Item Description
1	14416952	**Coil Storage Cart #T+D** Specially designed non-ferromagnetic cart for easy storage of the most commonly used coils and accessories.
1	08857828	**UPS Cable #Tim** Power cable for connecting the UPS Powerware PW 9130-3000I (14413662) to the ACC of MAGNETOM Tim and MAGNETOM Tim+Dot systems for backing up the computer. Standard cable length: 9 m.
1	14413662	**UPS Powerware PW9130G-3000T-XLEU** UPS system Eaton PW9130G-3000T-XLEU for MAGNETOM Tim, MAGNETOM Tim+Dot and MAGNETOM Symphony systems for safeguarding computers. Power output: 3.0 kVA / 2.7 kW Bridge time: 5 min full load / 14 min half load Input voltage: 230 VAC
1	MR_PM	**MR Project Management** A Siemens Project Manager (PM) will be the single point of contact for the implementation of your Siemen's equipment. The assigned PM will work with the customer's facilities management, architect or building contractor to assist you in ensuring that your site is ready for installation. Your PM will provide initial and final drawings and will coordinate the scheduling of the equipment, installation, and rigging, as well as the initiation of on-site clinical education.
1	MR_STD_RIG_INST	**MR Standard Rigging and Installation** MR Standard Rigging and Installation This quotation includes standard rigging and installation of your new MAGNETOM system Standard rigging into a room on ground floor level of the building during standard working hours (Mon. - Fri./ 8 a.m. to 5 p.m.) It remains the responsibility of the Customer to prepare the room in accordance with the SIEMENS planning documents Any rigging requiring a crane over 80 tons and/or special site requirements (e.g. removal of existing systems, etc.) is an incremental cost and the responsibility of the Customer. All other "out of scope" charges (not covered by the standard rigging and installation) will be identified during the site assessment and remain the responsibility of the Customer.
1	MR_BTL_INSTALL	**MR Standard Rigging & Install**
1	MR_BUDG_ADDL_RIG	**Budgetary Add'l/Out of Scope Rigging**
1	MR_PREINST_FIXED	**T+D Preinstall kit for fixed table**
1	MR_CRYO	**Standard Cryogens**
1	MR_INT_DOT_BCLS	**MR Dot Training Class** Tuition for (1) imaging professional to attend Classroom Course at Siemens Training Center. The objectives of this class are to introduce the user interface of the common syngo platform, including Dot, and instructions on building protocols, demonstration of software functions, and hands-on sessions. This class includes lunch, economy airfare, and lodging for (1) imaging professional. All arrangements must be arranged through Siemens designated travel agency. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	MR_A_INT_DOT_BCLS	**MR Dot Training Class** Tuition for (1) imaging professional to attend Classroom Course at Siemens Training Center. The objectives of this class are to introduce the user interface of the common syngo platform, including Dot, and instructions on building protocols, demonstration of software functions, and hands-on sessions. This class includes lunch, economy airfare, and lodging for (1) imaging professional. All arrangements must be arranged through Siemens designated travel agency. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	MR_INITIAL_32	**Initial onsite training 32 hrs** MR_INITIAL_32 Up to (32) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.

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Qty	Part No.	Item Description
1	MR_FOLLOWUP_32	**Follow-up training 32 hrs** Up to (32) hours of follow-up on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
2	MR_ADD_32	**Additional onsite training 32 hours** Up to (32) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist if applicable.This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	MR_ADD_24	**Additional onsite training 24 hours** Up to (24) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist if applicable. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	MR_A_DOTENG_CLS	**Syngo DOT Engin Config Class** Tuition for (1) imaging professional to attend a syngo MR DOT Configuration Class at Siemens Training Center. Designed for customers using the MAGNETOM(r) systems using Dot technology, participants will learn the basic principles and workflow of building and modifying Dot Engine protocols through the use of demonstrations, lecture, and hands-on labs using simulation consoles. This class includes lunch, economy airfare, and lodging for (1) imaging professional. All arrangements must be arranged through Siemens designated travel agency. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
1	4MR5142869	**Armrest #MR**
1	KKTECOMR_45	**KKT ECOCHILLER 122L** The KKT ECO 122 -L chiller is a dedicated 20°C cooling system for MAGNETOM Aera which automatically adapts to the different cooling requirements (e.g. system in operation, standby, ...) to reduce the energy consumption for cooling. The cooling system must be used in combination with the IFP (Interface Panel), if there is no on-site chilled water supply at all. The IFP is included in the scope of supply.
1	CHILINST_AVT	**Chiller Start-up and Warranty for TIM**
1	SIMR250A	**Integrated Electrical Cabinet** NOT approved for OSHPD facilities. The Integrated Electrical Cabinet (IEC) is a device that automatically resets the circuit breakers that have been tripped by temporary voltage fluctuations such as power snags or power surges. Voltage fluctuations are generally caused by lightning or during the start-up of a back-up power supply unit. The IEC minimizes helium losses for MR systems due to the helium compressor/cold head not being operational. The IEC - MR250A, which contains all Siemens brand components, is a power distribution solution for MAGNETOM Skyra, Verio, Trio A TIM System, Avanto, Aera, Espree, and Biograph mMR. The IEC includes the required circuit breaker for the MR system (170A) and the circuit breakers for both the chiller (70A) and RF cabin lighting (25A). It also includes a 250A main disconnect circuit breaker, as well as four Siemens Emergency Stop (EPO) buttons. These mushroom pushbuttons are equipped with: a protective shroud, a positive latching function, and a mechanical switching position indicator. The IEC is intended to be operated in 480V 50-60 Hz grids. Siemens Project Manager will coordinate the delivery of the IEC. The electrical installation of the IEC - MR250A cabinet and the EPO buttons is the responsibility of the customer and has to be performed by a qualified electrician.

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Qty	Part No.	Item Description
1	M3SSMREPICBC	**Spectris Solaris EP Injector ICBC** Includes Spectris Solaris EP injector and Integrated Continuous Battery Charger (ICBC). - Optimized color touch screen with few keystrokes. - Six user-programmable phases for added flexibility. - Independent Keep Vein Open (KVO) allows more time to focus on patient. - Large 115 mL saline syringe allows for longer KVO and multiple flushes. - Design of low pressure tubing eliminates dead space in the "T" connection that can waste contrast. - The clear barrel design with molded FluidDots help detect the presence of air in a syringe. - Pressure Limit Setting control software enables user to select from one to six preset maximum pressure limits, ranging from 100-300 psi, and to view current pressure during injection next to the pre-selected maximum value on the Solaris display. Installation, applications and one year warranty provided by Medrad. Not for mobile use, refer to Siemens part number M3SSMR300EPM for the Solaris injector used in a mobile environment. This product has been tested and verified for compatibility with the following Siemens' products: MAGNETOM Trio, Espree, Essenza, Verio, Avanto, Symphony, Aera, Skyra and Biograph mMR. Compatibility with other products cannot be guaranteed and use with any other products may void service contracts and/or system warranties.
1	MR_HPGGB_XW_AE	**HPG GB MR ExWty 6 mos AE FMV$67K**
1	MR_PR_HPGGB_XW_AE	**HPG GB MR ExWty 6 mos AE - Offset**
1	MRWSE	**MR Wall sign -English**

System Total: $1,838,810

OPTIONS:

Qty	Part No.	Item Description	Extended Price
1	14416902	**Tim [204x48] XQ Gradients #Ae** Tim [204x48] XQ-gradients performance level Tim 4G with it's newly designed RF system and innovative coil architecture enables high resolution imaging and increased throughput. Up to 204 simultaneously connected coil elements in combination with the standard 48 independent RF channels, allow for more flexible parallel imaging. Maximum SNR through the new Tim 4G matrix coil technolgy. This option includes also Advanced High Order Shim. XQ - gradients The XQ- gradients are designed combining high performance and linearity to support clinical whole body imaging at 1.5T. The force compensated gradient system minimizes vibration levels and accoustic noise. The XQ gradients combine 45 mT/m peak amplitude with a slew rate of 200 T/m/s.	+ $81,250
1	14416908	**Tim Whole Body Suite #T+D** Tim Whole Body Suite puts it all together. This suite enables table movement for imaging of up to 205 cm (6' 9") FoV without compromise. In combination with Tim's newly designed ultra highdensity array higher spatial and temporal resolution can be achieved along with unmachted flexibility of any coverage up to Whole Body. For faster exams and greater diagnostic confidence.	+ $22,750
1	14416918	**Illumination MoodLight #Ae** The MAGNETOM Aera design is available in different light and appealing variants which perfectly integrates into the different environments. The Illumination MoodLight design variant is comprised of a main face plate cover in an optical appealing brilliant white premium PET-G material with a surrounding Silver trim. The Dot Control Centers and the Dot Display are neatly integrated into this main face plate.The asymetrical deco area on the left side is illuminated with a surrounding brilliant silver trim. One can choose out of a palette of predefined colors. Change the color each week, each day or each patient.The MoodLight creates a patient-friendly environment. The table cover is presented in white with a surrounding silver trim.	+ $22,750

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Qty	Part No.	Item Description	Extended Price
1	14416919	**Illumination w/ Customized Logo#T+D** The MAGNETOM Aera / MAGNETOM Skyra design is available in different light and appealing variants which perfectly integrates into the different environments. The Illumination MoodLight design variant with integrated customizable inscription comprises of a main face plate cover in an optical appealing brilliant white premium PET-G material with a surrounding Silver trim. The Dot Control Centers and the unique Dot Display are neatly integrated into this main face plate. The asymetrical deco area on the left side is illuminated with a surrounding brilliant silver trim. One can choose out of a palette of predefined colors, change the color each week, each day or each patient.Customer specific inscription can be placed at this location. The MoodLight creates a patient-friendly environment. The table cover is presented in white with a surrounding silver trim.	+ $32,500
1	14416906	**Tim Dockable Table #Ae** The new Tim Dockable Table is designed for maximum patient comfort and smooth patient preparation. Tim Dockable Table can support up to 250 kg (550 lbs) patients without restricting the vertical or horizontal movement. The one step docking mechanism and the innovative multi-directional navigation wheel ensure easy maneuvering and handling. Critically ill or immobile patients can now be prepared outside the examination room for maximum patient care, flexibility and speed.	+ $48,750
1	14418746	**Cardiac Dot Engine, USA #T+D** Cardiac examinations: Dot Cardiac - Customized workflows that are easier to repeat. Using anatomical landmarks, standard views of the heart (such as dedicated long axis and short-axis views), are easily generated and can easily be reproduced using different scanning techniques. Scan parameters are adjusted to the patient's heart rate and automatic voice commands are given.	+ $58,500
1	14418479	**Additional PMU Sensor Kit #T+D** Additional PERU, PPU and charging stand.	+ $8,450
1	14416929	**Advanced Cardiac Package #T+D** This package contains special sequences and protocols for advanced cardiac imaging including 3D and 4D syngo BEAT functionalities. It supports advanced techniques for ventricular function imaging, dynamic imaging, tissue characterization, coronary imaging, and more.	+ $32,500
1	14407334	**Argus 4D Ventr.Function syngo #Tim** syngo Argus 4D Ventricular Function software processes MR cine images of the heart and generates quantitative results for physicians in the diagnostic process.	+ $17,550
1	14430392	**Large Joint Dot Engine #T+D** Large Joint Dot Engine optimizes image quality of knee, hip and shoulder scans by proposing the most appropriate protocols according to the examination strategy chosen for the specific patient. It ensures reproducible image quality and streamlines large joint examinations to a great extent. The Large Joint Dot Engine features AutoAlign and AutoCoverage for knee, hip and shoulder, syngo WARP with VAT (View Angle Tilting), and Inline MPR.	+ $32,500
1	14405341	**Mapit syngo #Tim** Based on the T1, T2 or T2* properties of the cartilage syngo ParametricMap allows the early detection of osteoarthritic break down of cartilage structures even before morphological changes occur. The method supports therapeutic decisions in individual patients and can be used to control treatments non-invasively, replacing surgeries or biopsies. The assessment of T1, T2 and T2* properties of tissues in other body regions is also possible. syngo ParametricMap provides very fast 2D and 3D high resolution imaging sequences and the inline calculation of parametric maps for the T1, T2 and T2* properties of the imaged tissue.	+ $7,605
1	07365484	**Image Fusion syngo** This application provides a dedicated evaluation software for spatial alignment (matching) and visualization of image data either from different modalities (CT,MR,NM,PET) or from the same modality but from multiple examinations of the same patient. It supports optimal diagnostic outcome (fusion of morphological and functional information) and therapy planning.	+ $16,250

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Qty	Part No.	Item Description	Extended Price
1	07820082	**Inline Perfusion #Tim** Automatic real-time calculation of Global Bolus Plot (GBP), Percentage of Baseline at Peak map (PBP), and Time-to-Peak map (TTP) with Inline technology.	+ $9,750
1	14418563	**Neuro Perfusion Evaluation,USA #T+D** Neuro Perfusion Evaluation syngo provides a task card for detailed post-processing of brain perfusion data sets. Color display of the relative Mean Transit Time (relMTT), relative Cerebral Blood Volume (relCBV), corrected rel CBV, and relative Cerebral Blood Flow (relCBF) is supported. Flexible selection of the Arterial Input Function (AIF). Furthermore a calculation of maps using the pre-selected local Arterial Input Functions (AIF) is provided. The detailed evaluation of brain perfusion data sets generates parameter maps for TTP and PBP and for the hemodynamic parameters relMTT, relCBV, rel CBVcor and relCBF.	+ $9,750
1	14416965	**Arterial Spin Labeling 3D #T+D** ASL is a non contrast enhanced brain perfusion technique. A 3D volume is acquired with high SNR by using a turbo gradient spin echo technique and an ASL preparation module to achieve clinically feasible scan times.	+ $26,000
1	14409110	**Arterial Spin Labeling 2D** ASL is a non contrast enhanced brain perfusion technique. EPI sequence enhanced for PASL (Pulsed Arterial Spin Labeling) with preparation module (inversion pulse, saturation pulses) and selectable prospective motion correction. Perfusion-weighted color maps and relative cerebral blood flow (relCBF) color maps are calculated with Inline technology.	+ $35,750
1	14416943	**Neuro fMRI Package #T+D** The Neuro fMRI Package is a bundle of: - Inline BOLD Imaging - 3D PACE syngo - BOLD 3D Evaluation syngo - fMRI Trigger Converter The bundle comprehends all acquisition and post processing tools for comprehensive BOLD fMRI exams.	+ $37,570
1	14402527	**SWI #Tim** Susceptibility Weighted Imaging is a high-resolution 3D imaging technique for the brain with ultra-high sensitivity for microscopic magnetic field inhomogeneities caused by deoxygenated blood, products of blood decomposition and microscopic iron deposits. Among other things, the method allows for the highly sensitive proof of cerebral hemorrhages and the high-resolution display of venous cerebral blood vessels.	+ $16,250
1	14416955	**Body 18 #Ae** The new Tim 4G coil technology with Dual Density Signal Transfer and SlideConnect Technolgy combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility: - 18 channels (inherent) or up to 30 (in combination with the Spine 32) - Dual Density Signal Transfer - Ultra light-weight - SlideConnect Technology The Body 18 is part of the standard configuration. The 18-channel coil with its 18 intergrated pre-amplifiers ensures excellent signal-to-noise ratio. The 18 coil elements provide extensive coverage in all directions. The single SlideConnect plug allows for fast and easy patient preparation. The light-weight coil ensures highest patient comfort. The Body 18 Coil features: - 18-element design with 18 integrated preamplifiers (3 clusters of 6 elements each) - Operates in an integrated fashion with the Spine 32 as an 30 channel body coil - Can be combined with further Body 18 coils for larger coverage - Can be positioned in different orientations (0°, 90°, 180°, 270°) for patient specific adaptations - No coil tuning - iPAT compatible in all directions The highly flexible design enables a wide variety of applications including: - Thorax (incl. heart) - Abdomen - Pelvis - Hip Typically combined with: - Head / Neck 20 - Spine 32 - Additional Body 18 coil(s) (optional) - Peripheral Angio 36 (optional) - Flex Large 4 - Flex Small 4 - Loop coils (optional) - Endorectal coil (optional)	+ $48,750

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PRELIMINARY PROPOSAL

Qty	Part No.	Item Description	Extended Price
1	14416958	**Peripheral Angio 36 #Ae** The new Tim 4G coil technology with Dual Density Signal Transfer and SlideConnect Technolgy combines key imaging benefits: excellent image quality, high patient comfort, and unmatched flexibility: - 36 channels - Dual Density Signal Transfer - Ultra light-weight - SlideConnect Technology The 36-channel coil includes 36 integrated pre-amplifiers for excellent signal-to-noise ratio. The single SlideConect Plug allows for fast and easy patient preparation. The Peripheral Angio 36 features: - 36-element design with 36 integrated preamplifiers, distributed over 6 planes with 6 elements each - Operates in an integrated fashion with Body 18 coils and with the Spine 32 . For Whole-Body examinations also with the Head/ Neck 20 - Automatic table feed and active coil switch - Can be utilized head and feet first - Both legs are independently covered with coil elements, maximizing the coil filling factor and the signal-to-noise ratio - No coil tuning - iPAT-compatible - Dual-Density Signal Transfer enables ultra-high density coil designs by integrating key RF components into the local coil - SlideConnect technology for easy coil set up - One cable only for easy handling - Includes special non-ferromagnetic coil cart for safe, user-friendly storage Applications: - High-resolution angiography of both legs incl. Pelvis (by additional use of the Body 18) with highest signal-to-noise ratio - Visualization of the iliac arteries and aorta in combinaton with Body 18 - Bilateral examinations of long bones of the legs Typically combined with: Head/ Neck 20, Body 18, Spine 32, and all flexible coils such as Flex Large 4 or Flex Small 4	+ $39,000
1	14426332	**Tx/Rx CP Head Coil #Ae** Circularly polarized no-tune transmit/receive coil with an open patient-friendly design. The integrated transmit mode allows volume selective excitation. Integrated, extremely low-noise pre-amplifiers permit very high signal-to-noise ratio. Furthermore, the coil is outfit with SlideConnect Technology, allowing for easier patient preparation and less table time for the patient.	+ $52,000
1	14416950	**Supervision Camera Controller #T+D** Additional video camera to allow for comprehensive monitoring of the patient's face independent of patient position during an MR examination. The additional camera is conveniently mounted on the opposite wall in the examination room. Together with the Wide Angle Lens option this camera can also be used wall-mounted for observing the situation in the waiting room. The supervision controller allows for easy layout switch between single views and split screen on the LCD monitor.	+ $7,800
1	14416949	**Additional Camera #T+D** Additional video camera for monitoring the situation in the waiting room (in combination with wide angle option). The additional camera is conveniently mounted on the wall.	+ $1,950
1	14405351	**Patient TV wall support** Wall mount for the patient monitor.	+ $390

FINANCING: The equipment listed above may be financed through Siemens. Ask us about our full range of financial products that can be tailored to meet your business and cash flow requirements. For further information, please contact your local Sales Representative.

Siemens Healthcare is pleased to submit this Preliminary Pricing Proposal. A Preliminary Pricing Proposal is provided for planning purposes only; it is not contractually binding. To receive a contractually binding proposal for the Products listed above, inclusive of Terms, Conditions, and Warranty coverage, please contact your Siemens Healthcare Sales Representative.

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PRELIMINARY PROPOSAL

Detailed Technical Specifications

MAGNETOM Aera - USA

Part No. / Product	Description
14416900 **MAGNETOM Aera - System**	**Aera ex Erlangen ENS_14416900** MAGNETOM Aera - the first 1.5T Tim+Dot system - integrates the next generation Tim - Tim 4G and the Siemens unique Dot Engines (Day Optimizing Throughput Engines) enabling workflow efficiency combined with higher diagnostic confidence due to consistent results. The system includes: **Tim 4G+Dot** Tim 4G provides increased patient comfort and optimized workflow efficiency. Only one patient setup, no repositioning, and no changing of coils. Ultra-light-weighted coils with high density of coil elements for maximized patient comfort and increased SNR. Feet-first positioning for almost all examinations possible reduces claustrophobia. Tim 4G is 4G flexibility, accuracy and speed and brings image quality and acquisition speed to a new level. Dot helps to take away the complexity in MRI scanning through patient personalization, user guidance and process automation. Optimized scan strategies are provided and can be selected based on patient condition, which allows for high quality exams even when conditions change. Integrated decision points allow the user to easily add or remove one or a group of protocols with one click. Step by step real-time on board guidance guides novice users even through the most complicated exams. Process automation allows optimal timing for breathing, scanning, and planning. Dot can be easily customized to follow the individual standards of care. Dot is personalized, guided and automated and designed to improve workflow efficiency and image consistency. MAGNETOM Aera with its 70 cm Open Bore design and a system length of only 145 cm gives a patient friendly appearance that can significantly help patients with anxiety or claustrophobia. **Magnet:** - Ultra-short 137 cm long (145 cm with covers), whole-body superconductive 1.5T magnet with active shielding (AS) technology with counter coils - External Interference Shielding (E.I.S.) - Excellent homogeneity enabled by TrueForm magnet design which allows for a cylindrically optimized homogeneity volume resulting in higher image quality (50 × 50 × 45 cm^3 DEV, typ. 3.6 ppm based on the 24-plane plot method) - The magnet has a helium capacity of approximately 1,280 liters and a typical Helium boil-off rate of 0 l/yr during typical, undisturbed clinical operation depending on the sequences used and examination time, and provided the system is serviced in regular intervals. - It has an integrated magnet cooling system. **Gradient system:** - Actively shielded water-cooled world-class gradient system - True Form Gradient Design - All axes force compensated **DirectRF - RF Transmit/Receive System:** - Fully integrated Transmit and Receive path in the magnet housing including extremely compact water-cooled solid state amplifier with 26.1 kW peak power - High dynamic range - Immediate feedback loop for real-time sequence adaptation

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PRELIMINARY PROPOSAL

Part No. / Product	Description
(Continued) **14416900 MAGNETOM Aera - System**	- Integrated no tune transmit/receive Body Coil - The revolutionary Tim 4G technology allows connecting up to 204 coil elements simultaneously enabling higher SNR and iPAT in all directions. No repositioning of patients is needed even for large Field of View examinations. - Dual-Density Signal Transfer enables ultra-high density coil design by integrating key RF components into the local coil. **Tim 4G Coils**: The new Tim 4G coil technology with Dual-Density Signal Transfer, DirectConnect and SlideConnect Technology combines key imaging benefits: Excellent Image quality, high patient comfort, and unmatched flexibility. The Tim 4G coils are designed for highest image quality combined with easy handling. The high element density of the coils increases SNR and reduces examination times. DirectConnect and SlideConnect™ technology reduce patient set up time significantly. The coils are designed with the patient in mind. Light weighted coils and open design ensure highest patient comfort which results in better patient cooperation and image quality. No coil changing with multi-exam studies saves patient setup- and table time. AutoCollSelect enables dynamic, automatic, or interactive selection of the coil elements within the Field of View and speeding the exam preparation at the host. All coils are time-saving "no-tune" coils. A comprehensive set of pads for comfortable and stable patient positioning together with safety straps are included. - Head/Neck 20 The 20-channel coil with its 20 integrated pre-amplifiers ensures excellent signal-to-noise ratio. The unique DirectConnect technology allows users connecting the 20 coil elements of the Head/Neck20 without cables. The patient friendly open design allows for maximum patient comfort which is supported in addition by a look-out mirrow for claustrophobic patients. The high channel coil is iPAT compatible in all directions. The open and light design of the upper coil part increases patient comfort and is removable for easy patient handling. The lower coil part may remain on the table for most of the examinations can be used without the upper part .The Head/Neck 20 and Spine 32 are smoothly integrated into the patient table, thus enabling high flexibility in imaging and fewer coil changes and easy handling when switching patients. The Head /Neck 20 coil is equipped with two removable cushioned head stabilizers for stable and comfortable patient positioning. The Head/ Neck 20 can be used for applications like head examinations, neck examinations, MR Angiography, combined head/neck examinations or for imaging of the TMJ (temporomandibular joints). Typically combined with the Spine 32 and Body 18 or Peripheral Angio 36 but also other combinations eg with flexible coils like the Flex Large 4 are possible. - Body 18 The 18-channel coil with its 18 integrated pre-amplifiers ensures maximum signal-to-noise ratio. The 18 coil elements of the Body 18 with only one SlideConnect Plug allows for fast and easy patient preparation resulting in less table time. Fast acquisition times enabled by iPAT in all directions. The light-weighted coil ensures highest patient comfort. Body 18 operates in an integrated fashion with the Spine 32 as a 30 channel body coil Body 18 can be combined with further Body 18 coils for larger coverage and positioned in different orientations (0°, 90°, 180°, 270°) for patient specific adaptations The Body 18 is typically used in combination with the Spine 32 for examinations of the thorax, abdomen, pelvis or hip and operates as a 30 channel body coil (3 rings 10 elements).The Body 18 can also be used for cardiac or vascular applications. Through its perfect combinability with the Spine 32, further Body 18 (optional), the Peripheral Angio 36 (optional), but also the Head/Neck20 and all flexible coils (e.g. Flex Large 4, Flex Small 4) it contributes for a broad range of indications up to whole-body imaging. - Spine 32 The 32-channel coil with its 32 integrated pre-amplifiers ensures maximum signal-to-noise ratio. The unique

PRELIMINARY PROPOSAL

Part No. / Product	Description
(Continued) **14416900 MAGNETOM Aera - System**	DirectConnect technology allows connecting the 32 coil elements of the Spine 32 without the need to plug in any cable. The patient friendly ergonomic design allows for maximum patient comfort. The high element coil is IPAT compatible in all directions. Smoothly integrated into the patient table the Spine 32 may remain on the patient table for nearly all exams. The Spine 32 is typically combined with Body 18, Head/Neck 20, Peripheral Angio 36 or Flex Large 4, Flex Small 4. - Flex Large 4/ Flex Small 4 Light-weighted, very flexible, iPAT compatible, 4-element no-tune receiver coils which are made of soft and smooth material. The coils can be wrapped around or used flat. Both coils can be connected via Flex Coil interface. One Flex Coil interface is already delivered as standard. The coils can be used for different examinations ranging from examinations of the extremities to abdominal examinations. **TimTable** - The maximum scan range of the Tim Table is 140 cm. A scan range of 205 cm can be achieved with the Tim Whole Body suite (optional) - The maximum patient weight of 250 kg (550 lbs) is valid for horizontal and vertical movements, which ensures maximized patient comfort for obese patients. - The patient table can be lowered to a minimum height of 52 cm from the floor, for easier patient positioning and better accessibility for geriatric, pediatric or immobile patients. An infusion stand is integrated to ensure fast patient set up also for critical patients. - Multiple Tim4G coils can be connected at once for efficient and patient friendly examinations. - The Tim Table can be moved with two clicks into the isocenter - one click to the upmost position and one click into the isocenter. **Dot (Day Optimizing Throughput) Engine** Dot multiplies the power of Tim resulting in greater image consistency and diagnostic confidence **Dot Control Centers and Dot Display** - The ergonomically designed Dot Control Centers are integrated left and right into the front covers for controlling table movement and interaction with the Dot Display. The Dot Control Centers are well illuminated for easy visual recognition. - Automated table move up to upmost position, to center position or Home position facilitate smooth patient preparation and will reduce table time - Variable (6 levels) ventilation and lighting inside the magnet bore or volume adjustments are possible for increased patient comfort - The Dot Display provides on board guidance for patient set up where it's needed - directly at the scanner. Information such as Patient name or exam type or required patient position, guidance for ECG set up and immediate visualization of physiological curves will be provided for convenient operation. - Almost all table control functions, including ventilation and illumination of the magnet bore, can be also controlled from the operator console for convenient operation. **Dot Technology** Dot makes it easy to get the best possible results for virtually any type of patient. Dot gives uniquely tailored, optimized scans configurable to patient condition or clinical question. Dot provides patient personalization, user guidance and process automation and is of course configurable by the user to adapt to the different clinical needs and standards of care. **Brain Dot Engine** The Brain Dot Engine simplifies general brain examinations with guided and automated workflows customized to the site specific standards of care. The Brain Dot Engine supports the user in achieving reproducible image quality with increased ease of use and time efficient exams. The brain workflow can be personalized to the individual patient condition and clinical need. Several predefined strategies are included, which can be easily selected with one click. They can be changed at any time during the

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Part No. / Product	Description

(Continued)
14416900
MAGNETOM Aera - System
	brain workflow.
	
	Protocols tailored for use of contrast media are integrated.
	- Standard: Standard examination with 2D protocols
	- Resolution focus: Examination with 3D protocols (with e.g. SPACE) for detailed views
	- Speed focus: Examination with fast 2D protocols (with e.g. HASTE) for further speeding up the exam
	- Limited patient capabilities: Examination with *syngo* BLADE protocols
	- to minimize and correct for the effects of motion automatically
	
	Step-by-step user guidance is seamlessly integrated. Example images and guidance text are displayed for each individual step of the scanning workflow. Both - images and text - are easily configurable by the user.
	
	Easy positioning of the patient with AutoPosition. The patient is automatically placed at the isocenter without any laser marking required.
	
	AutoAlign Head allows automatically slice positioning and aligns on the anatomically derived sagittal, coronal, and axial slices of the localizer. The operator-free alignment and anatomical marking are consistent, independently of patient age, head position, or disease.
	
	Automatic real-time calculation of trace-weighted images and ADC maps with Inline DiffusionTechnology.
	
	Easy rerun or repeat with functionality allows for reduced table time even in case of patients with pain or claustrophobia. An image inside the examination UI can be selected and a rerun of the corresponding series can be triggered with identical sequences or parameters. Alternatively an exam can be repeated with a changed strategy.
	
	The Brain Dot Engine as all Dot Engines can be modified by the user to their individual standard of care.
	
	Tim Application Suite
	The Tim Application Suite offers a complete range of clinically optimized sequences, protocols and workflow functionalities for all body regions. Excellent head-to-toe imaging can be accomplished with the sequences and features included in this application suite. To enable this comprehensive application range, nine dedicated application packages have been included.
	
	- Neuro Suite
	- Angio Suite
	- Cardiac Suite
	- Body Suite
	- Onco Suite
	- Breast Suite
	- Ortho Suite
	- Pediatric Suite
	- Scientific Suite
	
	Neuro Suite
	Comprehensive head and spine examinations can be performed with dedicated programs. High resolution protocols and fast protocols for uncooperative patients are provided. The Neuro Suite also includes protocols for diffusion imaging, perfusion imaging, and fMRI. It includes for example:
	- EPI sequences and protocols for diffusion, perfusion and fMRI for advanced neurological applications. Diffusion weighted imaging is possible with up to 16 b-values in the orthogonal directions. Dynamic Analysis software (included in standard configuation) enables calculation of:
	  - ADC maps
	  - t-test maps from the EPI images for fMRI
	  - Time-to-Peak maps for perfusion analysis.
	- Whole spine protocols acquire in multiple steps via software controlled table movement in a single click.
	- 3D isotropic resolution volume imaging using T1 3D MPRAGE / 3D FLASH, SPACE DarkFluid, T2 SPACE

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Part No. / Product	Description
(Continued) **14416900 MAGNETOM Aera - System**	and 3D TSE - T2-weighted high resolution 3D Restore protocols optimized for inner ear examinations - Whole-spine protocols in multiple steps with software controlled table movement - 2D and 3D MEDIC protocols for T2-weighted imaging, particularly for C-spine examinations in axial orientation where reproducibility is difficult due to CSF pulsations and blood flow artifacts - 3D Myelograms with 3D HASTE and 3D True-FISP for anatomical details - Dynamic sacro-iliac joint imaging after contrast administration using a fast T1-weighted FLASH 2D sequence - Spine diffusion protocols to differentiate osteoporosis versus tumor infiltration and post-radiotherapy changes versus residual tumor with PSIF sequence - Precision filter for high spatial accuracy e.g. for neuro intra-operative imaging and stereotactic planning - 3D CISS (Constructive Interference in Steady State) for excellent visualization of fine structures such as cranial nerves. High resolution imaging of inner ear and spine - AutoAlign Head LS providing a fast, easy, standardized, and reproducible patient scanning supporting reading by delivering a higher and more standardized image quality **Angio Suite** Excellent MR Angiography can be performed to visualize arteries and veins with or without contrast agent. *Contrast-enhanced MRA* - 3D contrast-enhanced MRA protocols for e.g. single step, dynamic, peripheral, whole body MRA with the shortest TR and TE. The strong gradients make it possible to separate the arterial phase from the venous phase. - TestBolus workflow for optimized bolus timing and superb image quality. - CareBolus functionality for accurate determination of the bolus arrival time and the "Stop and Continue" of the 3D ce-MRA protocol after the 2D bolus control scan. - Dynamic ce-MRA for 3D imaging over time. *Non-contrast-MRA and venography* - 2D and 3D Time-of-Flight (ToF) protocols for MRA for the Circle of Willis, carotids, neck vessels, and breath-hold protocols for abdominal vessels - Triggered 2D ToF sequences for non-contrast MRA, particularly of the abdomen and the extremities - 2D/3D Phase-Contrast - MR venography with 2D/3D Time-of-Flight (ToF) and Phase-Contrast - TONE (Tilted Optimized Non-saturation Excitation) and MTC (Magnetization Transfer Contrast) techniques for improved Contrast-to-Noise Ratio (CNR) *Image processing tools* - MPR, MIP, MinIP, and 3D SSD - Inline MIP for immediate results - Inline subtraction of pre- and post-contrast measurements - Inline standard deviation maps of Phase-Contrast measurements for delineation of arteries and veins **Cardiac Suite** The cardiac suite covers comprehensive 2D routine cardiac applications, ranging from morphology and ventricular function to tissue characterization. Featuring *syngo* BEAT 2D in conjunction with IPAT and T-PAT techniques. *Cardiac views* - Fast acquisition of the basic cardiac orientations for further examination planning - Cardiac scouting provides users with a step-by-step procedure for the visualization and planning of typical cardiac views, e.g. based on TrueFISP or Dark Blood TurboFLASH: short axis, 4-chamber and 2-chamber views. *syngo BEAT* - Unique tool for fast and easy cardiovascular MR imaging - E.g. 1 click change from FLASH to TrueFISP for easy contrast optimization - 1-click to switch arrhythmia rejection on / off - 1-click change from Cartesian to radial sampling to increase effective image resolution (e.g. in pediatric patients) and avoid folding artifacts in large patients

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PRELIMINARY PROPOSAL

Part No. / Product	Description

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(Continued) **14416900** **MAGNETOM Aera - System**	*Visualization of structural cardiovascular pathologies with CMR - syngo BEAT* - Breath-hold and free breathing techniques for strong contrast between the blood and vascular structures. Dark Blood TSE and HASTE imaging are available for the structural evaluation of the cardiothoracic anatomy, including vessels or heart valves. Cine techniques (FLASH & TrueFISP) for high-resolution valve evaluation - Multiple contrasts such as T1- and T2-weighted imaging for use in diseases such as myocarditis (inflammation / hyperaemia), ARVD (fibrous-fatty degeneration) or acute myocardial infarction (edema) - Dark-blood TSE with motion compensation for high-quality vessel wall imaging in small or large vessels *Tools for rapid evaluation of left or right ventricular function* - Acquisition of a stack of short-axis slices (standard segmented FLASH, or advanced segmented TrueFISP) - Automatic adjustment of the acquisition window to the current heart rate - Use of the inline ECG for graphical ECG triggering setup - Retrospective gating with cine sequences (TrueFISP, FLASH) - Protocols for whole-heart coverage - iPAT integration for highest temporal and spatial resolution - Real-time imaging in case the patient is not able to hold his breath *Dynamic imaging and tissue characterization with syngo BEAT* - Protocols for high-contrast and high-resolution tissue characterization - Protocols for stress and rest imaging with TrueFISP or TurboFLASH contrast support the acquisition of multiple slices with high resolution and arbitrarily adjustable slice orientation for each slice - T-PAT with mSENSE and GRAPPA for advanced parallel imaging provides fast high-resolution dynamic imaging - Segmented IR TrueFISP / FLASH with TI scout for optimization of tissue contrast - Advanced tissue characterization with 2D phase-sensitive IR (PSIR) sequences TrueFISP and FLASH contrast. Magnitude and phase-sensitive images with one acquisition - Simple: no adjustment of inversion time (TI) necessary with PSIR technique - Ungated single-shot PSIR imaging for tissue characterization under difficult conditions: free-breathing technique that can be applied even in case of arrhythmia Physiological Measurement Unit (PMU) - Wireless Physio Control - Synchronizes the measurement with the physiological cycles (triggering to minimize motion artifacts caused by cardiac and respiratory movements) - Wireless Sensors - Wireless Vector ECG / respiration and pulse sensors for physiologically synchronized imaging, rechargeable battery-powered - for optimized patient handling - Physiological Signals Display - ECG (3 channels) - Pulse - Respiration - External Trigger Input Display ECG Triggering: - Acquisition of multiple slices, e.g. of the heart, at different phases of the cardiac cycle - Excellent image quality by synchronizing data acquisition with cardiac motion - Peripheral Pulse Triggering: - Reduces flow artifacts caused by pulsatile blood flow - Excellent image quality by synchronizing data acquisition to the pulsatile blood flow - Respiratory Triggering: - Excellent image quality by synchronizing data acquisition with the respiratory motion

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Part No. / Product	Description
	- External Triggering: - Interface for trigger input from external sources (e.g. Patient Monitoring System) inside the examination room

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(Continued) **14416900** **MAGNETOM Aera - System**	- Interface for trigger input from external sources (e.g. pulse generator, trigger sources for fMRI) outside the examination room - Optical trigger output for fMRI - Retrospective gating for ECG, peripheral pulse, and external trigger input **Breast Suite** MR imaging has proven a very high sensitivity for breast lesions and is the gold standard for the examination of silicone implants. Extremely high spatial and temporal resolution can be achieved in very short measuring times by using iPAT with GRAPPA. Excellent soft tissue differentiation, customized protocols (e.g. with fat saturation or water excitation or silicone excitation), as well as flexible multiplanar visualization allow for fast, simple and reproducible evaluation of MR breast examinations. This package includes: - Quantitative evaluation and fast analysis of the data with colorized Wash-in, Wash-out, Time-To-Peak, Positive-Enhancement-Integral, MIPtime and combination maps with Inline technology or for offline calculation - High-resolution 2D protocols for morphology evaluation - High-resolution 3D protocols covering both breasts simultaneously - Protocols to support interventions (fine needle and vacuum biopsies, wire localization) - Protocols for evaluating breasts with silicone implants - Automatic and manual frequency adjustment, taking into account the silicone signal - Detection of the silicone signal either to suppress the silicone signal, if the surrounding tissue is to be evaluated, or to suppress the tissue signal in order to detect an implant leakage - SPAIR - robust fat sat (robust fat suppression using an adiabatic frequency selective inversion pulse) - DIXON - 2-point Dixon with 3D VIBE, the following contrasts can be obtained: in-phase, opposed phase, fat and water image. - iPAT with GRAPPA for maximum resolution in short time - Inline subtraction and MIP display - Offline subtraction, MPR and MIP display - *syngo* REVEAL: diffusion imaging for breast exams - iPAT Extension allows bilateral 3D sagittal breast imaging with Fat Sat or Water excitation The Breast Suite also includes: ***syngo* VIEWS (Volume Imaging with Enhanced Water Signal)** - bilateral - both breasts are examined simultaneously - axial - the milk ducts are directly displayed - fat-saturated or water-excited - fat complicates clinical evaluation and is suppressed - near-isotropic 3D measurement - the same voxel size in all three directions for reconstruction in any slice direction - submillimeter voxel - highest resolution for precise evaluation **Body Suite** Body Suite covers your needs for clinical body applications. Ultrafast high resolution 2D and 3D protocols are provided for abdomen, pelvis, MR Colonography, MRCP, dynamic kidney, and MR Urography applications. Siemens unique 2D PACE technique makes body imaging easy allowing for multi-breath hold examinations as well as free breathing during the scans. Motion artifacts are greatly reduced with 2D PACE Inline technology. This package includes: - Free breathing 2D PACE applications with 2D/3D HASTE (RESTORE) and 2D/3D TSE (RESTORE)

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Part No. / Product	Description
	- Optimized fast single shot HASTE protocols and high-resolution 3D RESTORE protocols based on SPACE and TSE for MRCP and MR Urography examinations ***ABDOMEN:*** *2D:* - T1w (FLASH) breath-hold scans +/- Fat Sat (SPAIR, Q-FatSat, In-/opp-phase) - T2w (HASTE, TSE/BLADE, EPI) breath-hold scans +/- Fat Sat (SPAIR, FatSat, STIR)

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(Continued) **14416900** **MAGNETOM Aera - System**	- T1w (TFL) triggered scans (2D PACE free breathing) in-/opp-phase - T2w (HASTE, TSE/BLADE, EPI) triggered scans (2D PACE free breathing) +/- Fat Sat (SPAIR,FatSat, STIR) as well as HASTE- and TSE-multi-echo - Optimized fast single shot HASTE protocols and high-resolution 3D RESTORE protocols based on SPACE and TSE for MRCP and MR urography examinations *3D:* - Dixon (VIBE 2pt-Dixon) breath-hold scans, following contrasts can be obtained: in-phase, opposed phase, fat and water image. - Dynamic (VIBE + Q-FatSat) protocols for best visualization of focal lesions with high spatial and temporal resolution - Colonography bright lumen with T2-weighted TrueFISP and dark lumen with T1-weighted VIBE ***PELVIS:*** - High-resolution T1w, T2w pelvic imaging (prostate, cervix) - Isotropic T2w SPACE 3D protocols for tumor search in the pelvis - Dynamic volume examinations with 3D VIBE - *syngo* REVEAL: diffusion imaging for liver and whole body exams **Onco Suite** MR imaging has an excellent advantage of soft tissue contrast, multi-planar capabilities and the possibility of selectively suppressing specific tissue e.g. fat or water. This helps visualize pathologies, particularly metastases. The Onco Suite features a collection of sequences as well as protocols and evaluation tools that guide through a detailed screening of clinical indications, such as in hepatic neoplasms. This package includes: - STIR TSE and HASTE, FLASH in-phase and opposed-phase protocols with a high sensitivity to metastases visualization - Dynamic imaging protocols for assessment of the kinetic behavior for lesion visualization and characterization - Quantitative evaluation and fast analysis of the data with colorized Wash-in, Wash-out, Time-To-Peak, Positive-Enhancement-Integral, MIPtime and combination maps with inline technology or for offline calculation - Display and analysis of the temporal behavior in selected regions of interest with the included MeanCurve post-processing application. This includes the capability of using additional datasets as a guide for defining regions of interest even faster and easier than before. - *syngo* REVEAL: diffusion imaging for liver and whole body exams Dedicated prostate protocols for detection, localization, and staging of tumors and recurrences - *syngo* REVEAL (diffusion-weighted imaging) - Protocols with high temporal resolution allow time course evaluation based on pharmacokinetic modeling **OrthoSuite** Ortho Suite is a comprehensive collection of protocols for joint and spine imaging. MR imaging is especially suitable for avascular necrosis and internal derangements. The protocols included in this Suite can also be applied for imaging of tumors and infections. This package includes: - 2D TSE protocols for PD, T1 and T2-weighted contrast with high in-plane resolution and thin slices - 3D MEDIC, 3D TrueFISP protocols with water excitation for T2-weighted imaging with high in-plane resolution

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	and thin slices - High resolution 3D VIBE protocol for MR arthrography (knee, shoulder and hip) - 3D MEDIC, 3D TrueFISP, 3D VIBE protocols with water excitation having high isotropic resolution, optimized for 3D post-processing - PD SPACE with fat saturation and T2 SPACE with high isotropic resolution optimized for 3D post-processing - Whole spine single-step or multi-step protocols - Excellent fat suppression in off-center positions, e.g. in the shoulder due to high magnet homogeneity

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(Continued) **14416900** **MAGNETOM Aera - System**	- Dynamic TMJ and ilio-sacral joint protocol - Susceptibility-insensitive protocols for imaging in the presence of a prosthesis - Multi-Echo SE sequence with up to 32 echoes for the calculation of T2 time maps (calculation included in the Scientific Suite) - High resolution 3D DESS (Double Echo Steady State): T2 / T1-weighted imaging for excellent fluid-cartilage differentiation **Pediatric Suite** The parameters for pediatric imaging vary significantly in comparison to the parameters for adults. The reasons are developing tissues, body size, faster heart rates and restricted compliance with breath-hold commands. Protocols can be adapted for imaging infants. **Scientific Suite** Scientific Suite supports the scientifically oriented user with an easy access to application-specific data for further processing and advanced image computation methods. - Support of USB memory sticks - Access to the file system by means of a secure and convenient browser - Anonymization of patient data - Easy generation of AVIs and screenshots for integration into presentations and training videos - Export function for tables, statistics and signal-time-courses in a communal format (MeanCurve, Spectroscopy, DTI evaluation) - Advanced image computation methods such as T2 and T1 time calculation, addition, subtraction, multiplication, division, and integration of images The sequences, features and techniques for acquisition and reconstruction included in the Tim Application Suite are described in detail below. **Sequences** Spin Echo family of sequences: - Spin Echo (SE) - Single, Double, and Multi Echo (up to 32 echoes); Inversion Recovery (IR) - 2D / 3D Turbo Spin Echo (TSE) - Restore technique for shorter TR times while maintaining excellent T2 contrast; TurboIR: Inversion Recovery for STIR, DarkFluid T1 and T2, TrueIR; Echo Sharing for dual-contrast TSE - 2D / 3D HASTE (Half-Fourier Acquisition with Single Shot Turbo Spin Echo) - Inversion Recovery for STIR and DarkFluid contrast - SPACE for 3D imaging with high isotropic resolution with T1, T2, PD, and DarkFluid Contrast Gradient Echo family of sequences: - 2D / 3D FLASH (spoiled GRE) - dual echo for in- / opposed phase imaging 3D VIBE (Volume Interpolated Breathhold Examination) - quick fat saturation; double echo for in-phase / opposed phase 3D imaging; DynaVIBE: Inline 3D elastic motion correction for multi phase data sets of the abdomen; Inline Breast Evaluation - 2D / 3D MEDIC (Multi Echo Data Image Combination) for high resolution T2 weighted orthopedic imaging and excellent contrast - 2D / 3D TurboFLASH - 3D MPRAGE; single shot T1 weighted imaging e.g. for abdominal imaging during free

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	breathing - 3D GRE for field mapping - 2D / 3D FISP (Fast Imaging with Steady State Precession) - 2D / 3D PSIF - PSIF Diffusion - Echo Planar Imaging (EPI) - diffusion-weighted; single shot SE and FID e.g. for BOLD Imaging and Perfusion-weighted Imaging; 2D / 3D Segmented EPI (SE and FID) - ce-MRA sequence with Inline subtraction and Inline MIP - 2D / 3D Time-of-Flight (ToF) Angiography - single slab and multi slab; triggered and segmented - 2D / 3D Phase Contrast Angiography

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(Continued) **14416900** **MAGNETOM Aera - System**	- *syngo* BEAT Tool - TrueFISP segmented; 2D FLASH segmented; - Magnetization-prepared TrueFISP (IR, SR, FS); IR TI scout; Retrogating Standard Fat/Water Imaging - Fat and Water Saturation. Additional frequency selective RF pulses used to suppress bright signal from fatty tissue. Two selectable modes: weak, strong - Quick FatSat - SPAIR: robust fat suppression for body imaging using a frequency selective inversion pulse - Fat / Water Excitation. Spectral selective RF pulses for exclusive fat / water excitation - Dixon technique for fat and water separation - based on VIBE (2 point Dixon) Standard Techniques - True Inversion Recovery to obtain strong T1-weighted contrast - Dark Blood inversion recovery technique that nulls fluid blood signal - Saturation Recovery for 2D TurboFLASH, gradient echo, and T1-weighted 3D TurboFLASH with short scan time (e.g. MPRAGE) - Freely adjustable receiver bandwidth, permitting studies with increased signal-to-noise ratio - Freely adjustable flip angle. Optimized RF pulses for image contrast enhancement and increased signal-to-noise ratio - MTC (Magnetization Transfer Contrast). Off-resonance RF pulses to suppress signal from certain tissues, thus enhancing the contrast. Used e.g. in MRA - Argus viewer for reviewing cine studies• - Report Viewer for DICOM structured reports including report editing - Dynamic Analysis for addition, subtraction, division, standard deviation, calculations of ADC maps, T1 and T2 values, TTP, t-Test, etc. - Image Filter - 3D post-processing MPR, MIP, MinIP, SSD - Flexible film formats and paper print - Data storage of images and cine AVI files on CD / DVD with DICOM viewer as the viewing tool for hand out to the patients or referrals - Selectable centric elliptical phase reordering via the user interface - Multiple Direction Diffusion Weighting (MDDW) - perform diffusion tensor imaging with multiple diffusion weightings and up to 12 directions for generating data sets. - Inversion Recovery to nullify the signal of fat, fluid or any other tissue Standard techniques for Flow Artifact reductions - LOTA (LongTerm Data Averaging) technique to reduce motion and flow artifacts - Pre-saturation techniques using RF saturation pulses to suppress flow and motion artifacts - Tracking SAT bands maintain constant saturation of venous and/or arterial blood flow e.g. for 2D/3D

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	sequential MRA - TONE (Tilted Optimized Non-saturating Excitation - variable excitation flip angel to compensate inflow saturation effects in 3D MRA - selectable on desired flow direction and speed - Gradient Motion rephasing permitting effective reduction of flow artifacts Standard Motion Correction - *syngo* Blade - improves image quality by minimizing and correcting for the effects of motion during an MR sequence acquisition. e.g. head, spine, orthopedic imaging and the abdomen - 1D PACE (Prospective Acquisiton CorrEction) allows examination of patients with free breathing - 2D PACE (Precise Motion Correction) detects and corrects respiratory motion eg of the heart or liver MAGNETOM Aera runs *syngo* MR software. *syngo*® is the unique software platform for medical applications. Parallel working and one-click exams are efficiently supported and increase productivity. Parallel scanning and reconstruction are standard.

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14416900
MAGNETOM Aera - System
	The unique Phoenix technique is the easiest way to exchange protocol data. It supports intelligent extraction of sequence parameters from images acquired on a MAGNETOM Aera system.
	Inline technologies, scan@center or AutoVoiceCommands speed up the workflow further.
	The context-sensitive "Online Help" function and *syngo* Scan Assistant offer support and propose solutions to MR-specific questions and parameter conflicts.
	
	Studies can be easily networked and managed using the standard DICOM 3.0 protocol for efficient support of workflow. The following standard functions are supported: Send/Receive, Query/Retrieve, and Basic Print for DICOM-compatible laser cameras (camera is not included in the basic unit), DICOM Worklist, DICOM Storage Commitment (SC) DICOM Modality Perform Procedure Step (MPPS), DICOM Structured Report (SR), DICOM Study Split.
	
	Patient Communication
	- The intercom system includes an ergonomically designed patient communication unit for desktop positioning on the *syngo* Acquisition Workplace and pneumatic headphones for the patient.
	- Active Noise Cancellation allows for increased user comfort in the control room combined with comprehensive patient supervision.
	- It controls emergency table stop, volume control of speaker and headphones in the examination room, volume control of speaker in the control room, response to the patient's activation of the assistance-call button and provides a connection to an external audio system (external audio system is not included in the basic unit) for music playback.
	
	Computer system
	The high performance host computer and the new high performance measurement and reconstruction system are ideally suited for even the most demanding applications. The PC-based computer system uses the intuitive *syngo* MR user interface. The computer system includes the following components:
	High-performance measurement and reconstruction system
	- Two Intel Quadcore Processor ≥ E 5540
	- clock rate of ≥ 2 × 2.53 GHz
	- Main memory (RAM) of 48 GB,
	- Hard disk for raw data ≥ 300 GB
	- Hard disk for system software ≥ 100 GB
	- Parallel Scanning and Reconstruction of up to 8 data sets
	- Reconstruction speed
	  - 12.195 recons per second (256 x 256 FFT, full FoV)
	  - 37.914 recons per second (256 x 256 FFT, 25 % recFoV)
	
	High-performance host computer
	- Intel Xeon processor ≥ W3520 QuadCore

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	- clock rate ≥ 2.66 GHz
	- Main Memory (RAM) ≥ 4 GB
	- three hard disks
	  - system SW ≥ 146 GB SAS
	  - data base ≥ 146 GB SAS
	  - images ≥ 146 GB SAS
	- DVD-R writer for CD-R (approx. 4000 images 256^2 DICOM Standard, ISO 9660) and DVD-R (approx. 25 000 images 256^2 DICOM Standard, ISO 9660) storage of DICOM data or other data like AVI files
	  - DVD-ROM drive
	  - Electronic mouse.
	
	- The combination of host computer and the measurement and reconstruction system offers a truly powerful imaging system designed for large image matrix sizes of up to 1024 x 1024. The unrestricted multitasking capability allows time-saving parallel scanning and reconstruction.
	- High-resolution 19" color LCD flat screen monitor with 1280 x 1024 pixel display, integrated gamma correction

Part No. / Product	Description
(Continued) **14416900** **MAGNETOM Aera - System**	for optimum display of radiographic grayscale images and automatic backlight control for long term brightness stability. **Installation:** - The relatively lightweight design of the MAGNETOM Aera in most cases eliminates the need for structural building reinforcements and thus facilitates installation in upper floors. - The compact integrated design allows for short installation times and reduces the required space to less than 30 sqm (323 sq. ft.) for the entire installation. The minimum room height clearance is only 2.40 m (7' 10"). - MAGNETOM Aera allows siting of the system without a dedicated computer room - no additional cooling or floor requirements. - MAGNETOM Aera combines state-of-the-art performance with peace of mind. High system availability is ensured by the expert, highly trained Siemens MR service engineers; - Your Siemens service contract (not included in the basic unit) offers a comprehensive range of benefits such as Uptime Remote Diagnostics for improved productivity and maximum uptime.
14416901 **Tim [204x48] XJ Gradients #Ae**	**Tim [204x48] performance level** Tim 4G offers DirectRF - a completely redesigned RF architecture. This new all digital-in/ digital-out design integrates all RF transmit and receive components at the magnet, eliminating analog cables for true signal purity. This compact and efficient design enables an dynamic feedback control for temporal stability and power linearity. The all-new innovative coil architecture packs more coil elements in a smaller space and allows for simultaneous connection of up to 204 coil elements. Combined with the 48 independent RF channels advanced IPAT capabilities and SNR are enabled. An additional benefit of multiple coil elements and receiver channels is improved performance in multi-directional, i.e. three dimensional, high-speed, high-resolution IPAT in the head-feet, anterior-posterior or left-right directions. **XJ gradients** Siemens XJ gradients provide actively shielded, water cooled world-class gradients. All axes are force-compensated. The XJ gradients have: - Maximum gradient amplitude of 33 mT/m, per axis, i.e. 57 mT/m vector summation gradient performance, - Maximum slew rate 125 T/m/s per axis, i.e. 216 T/m/s vector summation, - Minimal rise time 264 µs, from 0 to 33 mT/m amplitude - Maximum output voltage for each of the gradient axes 2000 V - Maximum output current for each of the gradient axes 625 A

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	- Separate cooling channels that simultaneously cool primary and secondary coils allow the application of extremely gradient intensive techniques in a new class of performance. - 100% duty cycle for fast and demanding techniques such as ultra-short TE MRA in continuous operation, thin slice single breath-hold liver studies and EPI imaging techniques (all optional in appropriate clinical packages). - Variable Field-of-View selection from 0.5 cm to 50 cm (up to 45 cm in z direction) for optimal coverage and highest spatial resolution in diagnostic. The minimum slice thickness in 2D and 3D is 0.1 mm and 0.05 mm, respectively. - Acquisition of sagittal, transverse, coronal, single oblique and double oblique slices with highest resolution. - The extremely compact water-cooled gradient amplifier features a modular expandable design with excellent linearity and pulse reproducibility. It is digitally controlled and has very low switching losses due to ultrafast solid state technology.
08464872 **PC Keyboard US english #Tim**	The keys of the numerical key panel are assigned to syngo-specific functions and labeled with the corresponding syngo icons. The keyboard supports the country specific special characters.
14416914 **Pure White Design #T+D**	The unique color and material selection enhances the visual appeal of the new system design, thereby creating an enticing, patient-friendly impression. The Dot Control Centers and the unique Dot Display are neatly integrated into this main face plate. The

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(Continued) **14416914** **Pure White Design #T+D**	aesthetically pleasing and ergonimcally designed control elements of the Dot Control Centers are well illuminated for easy visual recognition. In particular, the table cover and the asymmetric left deco area cover have also been designed to promote a modern visual appearance. This combination of ingenuity and practical design as presented with "Pure White" design with its brilliant white and the silver trim simply makes the MAGNETOM an overall visually appealing system and creates a patient-friendly environment.
14416905 **Tim Table #Ae**	The new MAGNETOM Aera table with its light appealing design allows for a fast patient preparation and maximized patient comfort. It provides unobstructed foot space for attending staff and direct access to the patient. The patient table can be lowered to a minimum height of 52 cm from the floor, for easier patient positioning and better accessibility for geriatric, pediatric or immobile patients. The Tim Table can be moved with two clicks into the isocenter - one click to the upmost position and one click into the isocenter. The tabletop travels beyond the rear end of the system, enabling additional patient access. An infusion stand is integrated to allow for fast patient set up of critical patients. Multiple Tim4G coils can be connected at once for efficient and patient friendly examinations. The seamless integration of multiple Tim4G coils is possible via 4 SlideConnect and 4 DirectConnect connector slots, which are embedded in the table. This allows for comprehensive examinations without the need of repositioning.
14432139 **Advanced Dot Imaging Package #T+D**	**Angio Dot Engine** *Guidance View* - Step-by-step user guidance is seamlessly integrated. - Example images and guidance text are displayed for each individual step of the scanning workflow. - Both images and text are easily configurable by the user *Test bolus* - Automatic detection of arterial / venous timing window *Feedback of bolus timing information* - Timing information is fed back into planning steps and parameters are adapted automatically *Auto Voice Commands* - Integrated into the scanning workflow.

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	- The system plays them automatically at the right point in time. - This ensures optimal timing of scanning, breathing and contrast media. - The user can monitor which breath hold or pauses are actually played, and could add pauses between the automatic breath hold commands if necessary *Customization* Existing Dot Engines can be modified by the user to their individual standard of care. - Add/remove protocol steps - Change guidance content (images and text) - Change or add Dot Exam Strategies and Decision Points - Modify the Parameter View Application Packages: *syngo* Inline Composing - Automatic anatomical or angiographic composing of multiple adjacent coronal or sagittal images - Composed images can be automatically loaded into Graphical Slice Positioning for scan planning purposes Tim Planning Suite With the Tim Planning Suite, multiple regions in the entire body can be examined in a minimum of time through measurement planning on a single FoV of any desired size. **Abdomen Dot Engine**

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(Continued) **14432139** **Advanced Dot Imaging Package #T+D**	*Patient View* - Within the Patient View the user can easily tailor the exam to each individual patient. - Several pre-defined Dot Exam Strategies are integrated. The user just selects the appropriate strategy with one click and the queue and the complete scan set-up are automatically updated. Furthermore protocols tailored for use of contrast media are integrated. Dot Exam Strategies allows personalizing the workflow to the individual patient condition and clinical need. The following predefined strategies are included: - Standard with breath-hold - Standard with PACE triggering - Limited patient capabilities using *syngo* BLADE and PACE triggering. *Guidance view* - Step-by-step user guidance is seamlessly integrated. - Example images and guidance text are displayed for each individual step of the scanning workflow. - Both images and text are easily configurable by the user *Parameter View* - This new view displays the parameters that are really needed for this scan set-up. - This reduced set of protocol parameters allows the user to concentrate on the essentials. - The Parameter View can be opened at any time during an examination Additional functionalites: Automatic sequence scaling according to physiological characteristic. (Auto FoV, AutoNavigator, breath-hold adaptations). Auto Navigator based automatic breathing pattern detection and scaling of triggered scans.

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	Automatic FoV: the optimal FoV is automatically estimated based on the localizer images. *Dot Decisions* Decisions are seamlessly integrated into the scanning workflow. The user just selects the queue and the appropriate protocol or set of protocols are automatically added. For the abdomen MRCP and Diffusion decision points are offered. Timeline setup and monitoring for best overview of multi-phase breath-hold examinations and CM enhancement curve visualization. *Auto Voice Commands* The system plays them automatically at the right time point. This ensures optimal timing of scanning, breathing and contrast media. The user can monitor which breath hold or pauses are actually played, and could add pauses between the automatic breath hold commands if necessary. Auto Bolus Detection initiates automatically the dynamic upper abdomen examination based on bolus detection. The user can override this function. *Inline radial range calculation for MRCP* MRCP is measured and inline Radial Ranges are automatically generated. *Inline Subtraction* Within the contrast-enhanced abdomen exam, multiple phases are acquired: native, arterial phase, portal-venous phase and late-phase. The scanner automatically subtracts the native measurement from the arterial, portal-venous and late phase. *Inline Registration* For best visualization of lesions, the system automatically performs a registration / alignment of the anatomy for the different dynamic phases. The importance of registration / correction can be seen when examining nodular

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(Continued) **14432139** **Advanced Dot Imaging Package #T+D**	enhancing pathologies. *Customization* Existing Dot Engines can be modified by the user to their individual standard of care. - Add / remove protocol steps - Change guidance content (images and text) - Change or add Dot Exam Strategies and Decision Points - Modify the Parameter View
14409198 **Native syngo #Tim**	*syngo* NATIVE offers: - Non-contrast enhanced MRA - Separate imaging of arteries and veins - Visualization of - e.g. - renal arteries or peripheral vessels The *syngo* NATIVE package comprises: - *syngo* NATIVE TrueFISP - *syngo* NATIVE SPACE
08464740 **Flow Quantification #Tim**	Flow Quantification enables the acquisition of flow encoded images and the evaluation of blood as well as of cerebro-spinal fluid (CSF). Sequences include: - ECG triggered 2D phase contrast with IPAT support - Retrospective reconstruction algorithms for full R-R interval coverage - Maxwell Term Compensation

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07365419 **Argus Flow**	The combination of automated contouring and easy-to-use editing tools, provides users with a rapid way to quantify flow parameters. Argus Flow includes: - Calculation of flow and velocity parameters(e.g. mean and max velocity, mean, cumulative, prograde, retrograde flow) for large and small vessels. - Semi-automatic detection of regions of interest over time - Color-coded display of velocity values - Calculation of flow and velocity parameters (e.g. peak velocity, average velocity, flow, integral flow) - Graphical and tabular display of the results (e.g. flow-time curves) - Integration of the results in Argus structured report and storage in DICOM format for documentation.
14430396 **Spine Dot Engine** **#T+D**	The Spine Dot Engine provides optimized cervical, thoracic and lumbar spine imaging for patients of all conditions. Spine Dot Engine provides the functionality to simplify your spine workflow by providing tools to reduce examination times, achieve optimal image quality, and assist you during reading. - User guidance step-by-step - AutoPosition - AutoAlign Spine with intervertebral disc detection - AutoCoverage - AutoSatPosition - Initial and interactive snapping - AutoLabeling of vertebrae - Automatic curved multiplanar reconstructions of 3D datasets

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(Continued) **14430396** **Spine Dot Engine** **#T+D**	The Spine Dot Engine includes: - Tim Planning Suite license - In-line Composing license - *syngo* WARP - high bandwidth protocols tailored to reduce susceptibility artifacts. Available protocols include T1-weighted, T2-weighted, proton density and STIR contrast. View Angle Tilting (VAT) technique is provided for reducing in-plane geometric distortions syngo WARP can be used throughout the body. *The Spine Dot Engine does not support whole spine imaging in its first release.*
14416944 **DTI Package #T+D**	**Diffusion Tensor Imaging** Diffusion Tensor Imaging allows for a complete description of the diffusion properties of the brain within the scope of the tensor diffusion model, both for anisotropic and isotropic diffusion. Efficient diffusion direction schemes are pre-defined to allow for optimal diffusion directional resolution. Schemes with up to 256 directions can be selected. Inline technology enables automatic and immediate calculation of the diffusion tensor, including grey-scale and colored "fractional anisotropy" (FA) map derived from it. Details: - Measurements with up to 256 different directions and with up to 16 different b-values - Inline calculation of tensor, grey-scale and colored FA map, ADC map and trace-weighted image - Support of parallel imaging (iPAT) - Clinical protocols with full head coverage, incl. inline calculation of tensor, FA, ADC and trace-weighted images in 4 minutes.

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	DTI Tractography *syngo* *syngo* DTI Tractography is optimized for the clinical use by providing advanced 3D visualization of white matter tracts in the context of 2D or 3D anatomical datasets and DTI datasets. DTI data sets can be explored fast and intuitively using the interactive QuickTracking. QuickTracking instantaneously displays the tract originating from the mouse pointer position while moving over the DTI data set. This also allows identifying qualified regions to place seeding ROIs. Seed points can be set to assess connectivity by tracking with single ROI and with multiple ROIs.Furthermore they can be placed in fused views displaying the anatomical reference and e.g. the colored FA map simultaneously. Texture Diffusion, a highly versatile in-plane visualization of white matter tracts, allows to display and read DTI Tractography results on PACS reading stations and in the OR. At the same time the package provides the scientific user with the flexibility to configure the tracking algorithm and to change display settings for the tracts. Tract and seeding ROI statistics are included to support publications (e.g. mean/max FA value, min/mean/max ADC value). All views can be exported as DICOM images or bitmaps. Tract and seeding ROI statistics can be exported as html files. **DTI Evaluation** Clinical applications are supported by a dedicated DTI evaluation mode to support diagnostics of white matter diseases (e.g. multiple sclerosis and brain maturation disorders). Based on the tensor, in addition to the already inline-calculated parameter maps, further maps characterizing the anisotropy of diffusion properties can be calculated and stored. Multiple diffusion parameter maps (e.g. Fractional Anisotropy, ADC, b=0) and an anatomical image are displayed next to each other in the same slice position for comparison. The images can be evaluated together based on ROIs and the results can be documented in a table. The display options include 2D and 3D tensor graphics, colour-coded images and overlay images on the anatomical images. In addition, the package offers the scientific user full flexibility of 2- and 3-dimensional visualization of the diffusion tensor with measures of isotropic and anisotropic (fractional and relative) diffusion, Eigen vectors (E1, E2, E3) of the diffusion tensor and shape-descriptive measures of the diffusion tensor (linear, planar, spherical).
14430391 **RESOLVE #T+D**	RESOLVE is a diffusion-weighted, readout-segmented EPI sequence optimized towards high resolution imaging with reduced distortions. The sequence uses a very short echo-spacing compared to singleshot

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(Continued) **14430391** **RESOLVE #T+D**	EPI, substantially reducing susceptibility effects. A 2Dnavigator correction is applied to avoid artefacts artifacts due to motioninduced phase errors. This combination allows diffusion weighted imaging of the breast, prostate, brain and spinewhole body with a high level of detail and spatial precision. Additionally, an automatic reacquisition of data with large phase errors can be used to ensure that diffusion-weighted images of the brain are not affected by CSF pulsation. *S-Text o For neuro applications where high-resolution diffusion is required. Is the basis of distortion insensitive high-resolution DTI, e.g. in spine.Especially beneficial for 3T systems.*
14416941 **Spectroscopy Package #T+D**	The Single Voxel Spectroscopy option is used to measure proton spectra from single voxels. The spectra may show alterations in brain metabolism e.g. in brain tumors, in degenerative changes of the brain and in metabolic diseases. The possibility of automatic adjustment, measurement and evaluation permits near automatic spectroscopy measurements. The whole procedure, including the evaluation of the spectra using the mandatory spectroscopy evaluation option, takes approx. 6 minutes and can be done by doctors or technologists. The 2D Chemical Shift Imaging option is used to measure 2D proton spectroscopic data to generate metabolite images e.g. in brain tumors, metabolic diseases of the brain and degenerative changes in brain metabolism. The whole procedure, including the generation of metabolite images using the spectroscopy evaluation takes approximately 8 minutes. The 3D Chemical Shift Imaging option is used to measure 3D proton spectroscopic data and allows for the evaluation of the spectra in measured volumes and the generation of metabolite images and spectral maps, e.g. in cases of brain tumors, metabolic diseases of the brain and degenerative changes in brain metabolism. The whole

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	procedure, including the generation of metabolite images using the spectroscopy evaluation takes approximately 10-16 minutes Optimized protocols for 3D CSI in the prostate are also included. The evaluation software is fully integrated in *syngo* MR. Evaluation protocols adapted to the scan protocols carry out a complete and automatic evaluation of the measured data. The following functions are included: - Subsequent water suppression with optional phase correction - Apodization - Zero filling - Fourier transformation - Base line correction - Automatic or manual phase correction - Curve fitting and peak labeling - Summaries in tabular form of the essential results specifying the metabolites, their position, integrals and signal ratios in relation to a selectable reference. - Capability of exporting spectroscopy header information and data into a documented external format. - Automated peak normalization to tissue, water or reference. For CSI the following functions are included: - Spectra of selected voxels are automatically calculated, corrected for possible B0 deviations and displayed. - Spectral fit is automatically optimized for each voxel. - CSI data can be represented as spectral maps and colored metabolite images that can be superposed onto anatomical images.
14405328 **TWIST syngo #Tim**	*syngo* TWIST provides: - Visualization of contrast agent dynamics in the vessel system of interest with maximum flexibility. - Needs only a low amount of contrast agent.

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(Continued) **14405328** **TWIST syngo #Tim**	- Imaging in all body regions, e.g. carotids, pulmonary and peripheral vessels with brilliant spatial and temporal resolution. - Clear separation of the arterial and venous phase. - High speed acquisition by intelligent k-space strategies and use of IPAT, powered by Tim. - *syngo* TWIST provides fat suppression using water selective excitation. - Inline technologies, such as subtraction and MIP are provided for optimal workflow. - In case of very high spatial resolution *syngo* TWIST may even replace conventional static MR angio. Moreover, *syngo* TWIST does not require any bolus timing - just inject and go.
14418521 **syngo Expert-i #T+D**	The option is integrated in the *syngo* user interface thus enables easy access to the user interface of the *syngo* Acquisition Workplace for planning and processing support purposes. The access is protected by appropriate security mechanisms (active enabling prior to every connection through the user present on site, password protection), in order to prevent unwanted connections. The client software can be operated on any commercial PC with the following specification: - Operating system: Windows NT or XP - 32 bit graphics board - 850 MHz CPU

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14416960 Shoulder 16 Coil Kit #Ae	The iPAT compatible Shoulder 16 Large and Shoulder 16 Small are ergonimically designed and adapted to the shape of the shoulder. The different sizes obtain maximum image quality for different body sizes: - 165 mm (6.5 in) diameter for small and medium sized shoulders - 200 mm (7.9 in) diameter for large shoulders The coils can be used either for left or right shoulders. It features sliding attachments to the base plate and can easily be adjusted for comfortable positioning. The coils excels in highest resolution imaging with exceptional signal/noise ratio.
14416961 Hand/Wrist 16 #Ae	The 16-element coil with 16 integrated pre-amplifiers excels in highest resolution imaging with exceptional signal/noise ratio, while taking full advantage of iPAT in all directions. Hand/Wrist 16 is ergonomically designed and adapted to the shape of the hand/wrist region. The coil features a hinged design of the upper part and slidable attachment to the base plate. Together with the included stabilization pads the coil allows easy, fast and comfortable patient positioning.
14416962 Foot/Ankle 16 #Ae	The 16-element coil with 16 integrated pre-amplifiers excels in highest resolution imaging with exceptional signal/noise ratio, while taking full advantage of iPAT in all directions. Foot/Ankle 16 is ergonomically designed and features a boot-like coil design. Together with the included stabilization pads the coil allows easy, fast and comfortable patient positioning.
14430403 Tx/Rx 15-channel Knee Coil DDST #Ae	Thanks to its 15-channel design this coil is perfectly suited for high-resolution images with excellent SNR. With the arrangement of the antennas in three rings of 5 elements each, the coil is specially designed for parallel imaging with high acceleration factors. The coil is positioned on a laterally movable support and therefore allows for comfortable patient positioning of both legs for off-center examinations. SlideConnect Technology allows for fast and easy patient preparation, resulting in less table time. Furthermore, the upper part can be removed for easier patient positioning. Additional cushions allow for optimum patient immobilization. The integrated transmission function makes volume-sensitive excitation with greatly reduced RF power possible on the one hand and, on the other, prevents aliasing artifacts (e.g. due to the other knee).

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Part No. / Product	Description
14407258 **MR Workplace Table 1.2m**	The table design matches the MED-wide uniform design with silver-finished rim, use of friendly colors matching the Siemens color pattern for MAGNETOM and SOMATOM. - Width 120 cm - Depth 80 cm - Height 72 cm
14407261 **MR Workplace Container, 50cm**	The table design matches the MED-wide uniform design with silver-finished rim, use of friendly colors matching the Siemens color pattern for MAGNETOM and SOMATOM. Table height 72 cm, matching the *syngo* Acquisition Workplace and *syngo* MR Workplace console table, for installation in the operator room either directly to the left or right of the *syngo* Acquisition Workplace or *syngo* MR Workplace console table or separately. - Width 50 cm - Depth 80 cm - Height 72 cm Alternatively this casing is also suited for the Recon image processor (except for the MR systems with the Tim generation: there the Recon image processor is always placed inside the electronics cabinet).
14416948 **Patient Supervision TV #T+D**	Special video camera for monitoring the patient during an MR examination. Color 640 x 480 pixel LCD monitor may be positioned at the *syngo* Acquisition Workplace or at a convenient wall location (wall support not included in scope of delivery) in the control room.
14416973 **Comfort Kit #T+D**	Vacuum cushions for positioning and stabilization of the patient during the examination. The comfort kit may significantly reduce patient exam times and optimize image quality by minimizing the occurence of motion artifacts caused by involuntary patient motion. The material of the cushions is a leather imitation, which is very soft to the touch, and easy to clean. The cushions are filled with tiny Styrofoam pellets and will conform to the exact shape of the anatomy around which they are placed. With the help of the vacuum, the region to be examined will be fixated. The vacuum connector is integrated in the patient table. The kit comprises a vacuum pump and 3 anatomically shaped cushions of different sizes (spine, head, and small joints). The head and the small joints cushions are delivered with two washable pillowcases each.
14416952 **Coil Storage Cart #T+D**	The cart may be rolled to convenient locations in the examination room and can be opened up to work like a shelf. The coil storage cart has multiple drawers and trays as well as many other storage spaces for coils, cushions and miscellaneous items. Its dimensions are: Width 140 cm (4' 7") when closed and 280 cm (9' 12") when opened, depth 54 cm (1'9") and height 121 cm (3'12").
08857828 **UPS Cable #Tim**	Power cable to connect the 3 KVA Powerware 9125 small UPS system (pn PWR9125H3000) to the ACC cabinet of the MAGNETOM Avanto/ Espree/ Tim Trio for backing up the host computer and imager. Configuration includes connection box. The standard cable length is 9 m.
14413662 **UPS Powerware PW9130G-3000T-XLEU**	Voltage range: 180 - 276 V Input frequency: 50 / 60 Hz Output voltage: 230 VAC Dimensions (H x W x D): UPS 346 x 214 x 412 mm incl. UPS bracket set Weight: approx. 36 kg

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Part No. / Product	Description
MR_A_DOTENG_CLS Syngo DOT Engin Config Class	Tuition for (1) imaging professional to attend a syngo MR DOT Configuration Class at Siemens Training Center. Designed for customers using the MAGNETOM® systems using Dot technology, participants will learn the basic principles and workflow of building and modifying Dot Engine protocols through the use of demonstrations, lecture, and hands-on labs using simulation consoles. This class includes lunch, economy airfare, and lodging for (1) imaging professional. All arrangements must be arranged through Siemens designated travel agency. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
4MR5142869 Armrest #MR	An MR-compatible arm rest that supports the patient's arm on the magnet patient table when starting intravenous lines. The board is removed after the IV is inserted. This product has been tested and verified for compatibility with the following Siemens' products: MAGNETOM Trio, Verio, Espree, Essenza, Avanto, Symphony, Area Skyra and Biograph mMR. Compatibility with other products cannot be assured and may void service contracts and/or system warranties.
KKTECOMR_45 KKT ECOCHILLER 122L	**Chiller KKT ECO 122 - L** Function: Supplies dedicated primary chilled water in cases where no chilled water supply is available on site. Air-cooled version, for outdoor installation up to a maximum distance of 25 m for connection to the IFP, incl. 50 m FOC for control. The cooling capacity of the chiller is 45 kW, the chilled water temperature is 20°C, the water flow is 130 l/min. Ambient temperature: -20 to +48°C Connection rating: 21 kW Voltage: 3/PE 400 V to 480 V / 50/60 Hz Fuse rate: 63 A Power consumption: 47 A Dimensions: 2000 mm x 1100 mm x 2100 mm (height x width x depth). Weight: 710 kg Noise level at a distance of 10 m at outside temperatures of: 21°C 46 dB(A) 32°C 51 dB(A) 48°C 57 dB(A) **IFP (Interface Panel)** Main functions of the IFP: - Interface function between the KKT chiller and the MR cabinet. - Water supply for MREF, MBB, CBB and TX box. Additional devices such as integrated differential pressure control, a pressure gage, and a filter are used in order to guarantee the precise functioning of the cooling circuit, especially for the cold head compressor (MREF). The connection must be made locally with 2" lines up to a maximum distance of 25 m. Dimensions: 800 mm x 1150 mm x 210 mm (height x width x depth). Weight: 67 kg
CHILINST_AVT Chiller Start-up and Warranty for TIM	Start up and initial set up service performed by the chiller manufacturer or designated service representative. This service does not include the piping and other prerequisite siting, of the waterchiller, which are the responsibility of the customer. 12 months warranty and performed by the chiller manufactuer.
M3SSMREPICBC Spectris Solaris EP Injector ICBC	Includes Spectris Solaris EP injector and Integrated Continuous Battery Charger (ICBC). - Optimized color touch screen with few keystrokes. - Six user-programmable phases for added flexibility. - Independent Keep Vein Open (KVO) allows more time to focus on patient. - Large 115 mL saline syringe allows for longer KVO and multiple flushes. - Design of low pressure tubing eliminates dead space in the "T" connection that can waste contrast.

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(Continued) **M3SSMREPICBC Spectris Solaris EP Injector ICBC**	- The clear barrel design with molded FluidDots help detect the presence of air in a syringe. - Pressure Limit Setting control software enables user to select from one to six preset maximum pressure limits, ranging from 100-300 psi, and to view current pressure during injection next to the pre-selected maximum value on the Solaris display. Installation, applications and one year warranty provided by Medrad. **Not for mobile use, refer to Siemens part number M3SSMR300EPM for the Solaris injector used in a mobile environment.** **This product has been tested and verified for compatibility with the following Siemens' products: MAGNETOM Trio, Espree, Essenza, Verio, Avanto, Symphony, Aera, Skyra and Biograph mMR. Compatibility with other products cannot be guaranteed and use with any other products may void service contracts and/or system warranties.**
MRWSE MR Wall sign - English	Highly durable 1mm PVC wall signs with high-tack, double-back tape. Sticks to most any surface. English. 12" x 18".
14416902 Tim [204x48] XQ Gradients #Ae (Optional)	**Tim [204x48] performance level** Tim 4G offers DirectRF a completely redesigned RF architecture. This new all digital-in/ digital-out design integrates all RF transmit and receive components at the magnet, eliminating analog cables for true signal purity. This compact and efficient design enables a dynamic feedback control for temporal stability and power linearity. The all-new innovative coil architecture packs more coil elements in a smaller space. Therefore up to 204 coil elements can be simultaneously connected. The newly designed ultra high density array is an essential part supplementing Tim4G. Combined with the 48 independent RF channels advanced iPAT capabilities and SNR are enabled. An additional benefit of multiple coil elements and receiver channels is improved performance in multi-directional, i.e. three dimensional, high-speed, high-resolution iPAT in the head-feet, anterior-posterior or left-right directions. This option includes also Advanced High Order Shim. **XQ gradients** Siemens XQ gradients provide actively shielded, water cooled world-class gradients. All axes are force-compensated. The XQ gradients have: - Maximum gradient amplitude of 45 mT/m, per axis, i.e. 78 mT/m vector summation gradient performance, - max. slew rate 200 T/m/s per axis, i.e. 346 T/m/s vector summation, - minimal rise time 225 µs, from 0 to 45 mT/m amplitude - Max. output voltage for each of the gradient axes 2250 V - Max. output current for each of the gradient axes 900 A - Separate cooling channels that simultaneously cool primary and secondary coils allow the application of extremely gradient intensive techniques in a new class of performance. - 100% duty cycle for fast and demanding techniques such as ultra-short TE MRA in continuous operation, thin slice single breath-hold liver studies and EPI imaging techniques (all optional in appropriate clinical packages). - Variable Field-of-View selection from 0.5 cm to 50 cm (up to 45 cm in z direction) for optimal coverage and highest spatial resolution in diagnostic. The minimum slice thickness in 2D and 3D is 0.1 mm and 0.05 mm, respectively. - Acquisition of sagittal, transverse, coronal, single oblique and double oblique slices with highest resolution. - The extremely compact water-cooled gradient amplifier features a modular expandable design with excellent linearity and pulse reproducibility. It is digitally controlled and has very low switching losses due to ultrafast solid state technology.

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Part No. / Product	Description
14416908 **Tim Whole Body Suite #T+D (Optional)**	Tim and the Tim Whole Body Suite enable for true whole body MR scanning for head-to-toe imaging. Whole body imaging with highest image quality without patient repositioning and without the need to change a single coil, not even once, this means whole body imaging without compromise. The Tim Whole Body Suite features: - The all-new Tim Table or Tim Dockable Table enable a full Field-of-View with coverage up to 205 cm (6' 9"). The table top has the same length as the standard system without whole body capabilities. Additional free space is required at the rear part of the magnet to ensure, that the table movement is not limited by the rear wall. - Table movement to its full extent can be remotely controlled from the operator console either by the operator or by sequence protocols. - Protocols and programs for whole body MR angiography and morphology e.g. for metastasis visualization and preventive care examinations. - Whole body MR Angiography is possible with high speed, high resolution and high image contrast on the entire volume combining high speed gradients and iPAT. - The large FoV of 205 cm supports the assessment of metastases distribution in the body with sequences such as TIRM (Turbo Inversion Recovery).
14416918 **Illumination MoodLight #Ae (Optional)**	The unique color and material selection enhances the visual appeal of the new system design of MAGNETOM Aera, thereby creating an enticing, patient-friendly impression. The Dot Control Centers and the unique Dot Display are neatly integrated into this main face plate. The aesthetically pleasing and ergonimcally designed control elements are well illuminated for easy visual recognition. In particular, the table cover and the asymmetric left deco area cover have also been designed to promote a modern visual appearance. This combination of ingenuity and practical design as presented with "Illumination MoodLight" design with its brilliant white and illuminated color and material composition surrounded by the brilliant silver trim simply makes MAGNETOM Aera an overall visually appealing system and creates a patient-friendly environment.
14416919 **Illumination w/ Customized Logo#T+D (Optional)**	The unique color and material selection enhances combined with the unique customizable inscription enhances the visual appeal of the new system design of the MAGNETOM thereby creating an enticing, patient-friendly impression. The Dot Control Centers and the unique Dot Display are neatly integrated into this main face plate. The aesthetically pleasing and ergonimcally designed control elements are also well illuminated for easy visual recognition. In particular, the table cover and the asymmetric left deco area cover have also been designed to promote a modern visual appearance. This combination of ingenuity and practical design as presented with "Illumination MoodLight" design with its brilliant white and illuminated color and material composition surrounded by the brilliant silver trim simply makes the MAGNETOM an overall visually appealing system and creates a patient-friendly environment.
14416906 **Tim Dockable Table #Ae (Optional)**	The new MAGNETOM Aera table with its light appealing design allows for a fast patient preparation and maximized patient comfort. It provides unobstructed foot space for attending staff and direct access to the patient. The patient table can be lowered to a minimum height of 56 cm (18.5") from the floor, for easier moving of immobile patients and better access for geriatric, pediatric patients or immobile patients. The Tim Table can be moved with two clicks into the isocenter - one click to the upmost position and one click into the isocenter. The tabletop travels beyond the rear end of the system, enabling additional patient access. Multiple Tim4G coils can be connected at once for efficient patient set up and patient friendly examinations. The seamless integration of multiple Tim4G coils is possible via 4 SlideConnect and 4 DirectConnect connector slots, which are embedded in the table. This allows for comprehensive examinations without the need of repositioning. The Tim Dockable Table is easily adjustable for height even in the undocked state. A minimum height of 61 cm allows for easy wheelchair access or easy patient movement to the hospital bed. The integrated infusion stand and arm rests allow for fast patient set up anywhere and also for critical patients

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SIEMENS REPRESENTATIVE
Samuel Shuck - (901) 829-2891

PRELIMINARY PROPOSAL

Part No. / Product	Description
14418746 **Cardiac Dot Engine, USA #T+D (Optional)**	**Cardiac Dot Engine** ***Guidance View*** - Step-by-step user guidance is seamlessly integrated. - Example images and guidance text are displayed for the individual steps of the scanning workflow. - Both images and text are easily configurable by the user ***Patient View*** - Within the Patient View the user can easily tailor the exam to each individual patient (e.g. patient with arrhythmia, breath hold capability). - Pre-defined Dot Exam Strategies are integrated. The user just selects the appropriate strategy with one click and the queue and the complete scan set-up are automatically updated ***AutoFoV (automatic Field of View calculation)*** - Based on the localizer images the optimal FoV is automatically estimated. - If the patient moves during the examination, this step can be repeated at any time ***Automated parameter adaptation*** - Scan parameters are automatically adapted to the patient's condition (e.g. heart rate) ***Novel heart localization method*** - On-board guidance visually facilitates anatomic landmark settings which are used for calculation - Automated localization - Automated localization of short-axis views ***Cardiac Views*** - Easy selection of cardiac views (e.g. 3 chamber view) during scan planning ***Inline Ventricular Function Evaluation*** - *syngo* Inline VF performs volumetric evaluation of cardiac cine data fully automatically right after image reconstruction. - If desired, inline calculated segmentation results can be loaded to 4D Ventricular Function Analysis for further review or processing ***Cardiac specific layout for the Exam task*** - layouts show the new physio display and are configured for every step of the exam ***Automated Naming*** - Automated naming of series depending on cardiac views and sequence type ***Auto Voice Commands*** - Seamlessly integrated into scanning workflow. - Played automatically - The user controls breath-hold or pauses are actually played - Ability to add pauses between automatic breath-holds ***Dot Exam Strategies*** The workflow can be personalized to the individual patient condition and clinical need. The following predefined strategies are included. They can be changed at any time during the workflow: - **Standard:** Segmented acquisition techniques - **Limited patient capabilities:** switch to real-time and single shot imaging if breath-hold is not possible or arrhythmias occur ***Customization*** Existing Dot Engines can be modified by the user to their individual standard of care.

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PRELIMINARY PROPOSAL

Part No. / Product	Description
(Continued) **14418746 Cardiac Dot Engine, USA #T+D (Optional)**	- Add/remove protocol steps - Change guidance content (images and text) - Change or add Dot Exam Strategies and Decision Points - Modify the Parameter View
14418479 Additional PMU Sensor Kit #T+D (Optional)	This second set of sensors including a charging station, known as the Wireless PMU Sensor Kit, may be of advantage to hospitals and radiological practices that show considerable use of ECG and respiratory triggering. One PERU (Physiological ECG and Respiratory Unit) and PPU (Peripheral Pulse Unit) will be permanently available, while the second set is being charged.
14416929 Advanced Cardiac Package #T+D (Optional)	Combining the unique advantages of Tim and *syngo* BEAT with IPAT and powerful gradients, it allows performing cardiac MR examinations without compromise in image resolution or acquisition speed. *syngo* BEAT is a unique tool for fast and easy cardiovascular MR imaging. It provides 1-click switch from cine imaging to tagging for wall motion evaluation and 1-click switch from 2D to 3D imaging. *syngo* BEAT automatically adjusts all parameters associated with the changes. **Cardiac and Vessel Morphology** - Multi echo technique for e.g. thalassemia assessment - 3D aortopathy imaging with free breathing (SPACE) **Global or Regional Wall Motion Analysis with *syngo* BEAT** - 3D cine acquisition for full CT-like heart coverage - 2D segmented FLASH for visualization of the regional wall motion using various tagging techniques (grid or stripes) **Dynamic myocardial imaging with *syngo* BEAT** - Ultra-fast, high-SNR sequence for dynamic imaging with GRE EPI contrast for stress and rest exams **Tissue characterization with *syngo* BEAT** - Robust myocardial tissue characterization with 3D PSIR (phase-sensitive inversion recovery), e.g. after myocardial infarction or for differentiation of cardiomyopathies - Fast and complete coverage of the myocardium with IR 3D FLASH and TrueFISP **Coronary imaging with *syngo* BEAT** - 3D Whole-Heart non-contrast Coronary MRA - 3D Whole-Heart MRA with advanced free-breathing navigator compensating diaphragm shifts during the acquisition (motion-adaptive respiratory gating)
14407334 Argus 4D Ventr.Function syngo #Tim (Optional)	This package includes Argus Function as well as Argus 4D Ventricular Function. Argus Function: - Automatic, semi-automatic, or manual segmentation of the left and semi-automatic or manual segmentation of the right ventricle. - Volumetric analysis and wall thickness analysis. - Output of parametric results, volume-time curves and bull's-eye plots. - DICOM Structured Reporting. Argus 4D Ventricular Function: - Calculation of volumetric cardiac data of a given patient very quickly and easily. - Parametric results and volume-time curves are calculated opon automatic creation and adaptation of a 4D model of the left ventricle. - The resulting 4D model of the patient's heart can be visualized superimposed to anatomical images as a reference.

PRELIMINARY PROPOSAL

Part No. / Product	Description
14430392 **Large Joint Dot Engine #T+D (Optional)**	*Dot Exam Strategies* The workflow can be personalized to the individual patient condition and clinical need. The Large Joint Dot Engine comes with the following predefined strategies, which the user can select according to patient conditions or change at any time during the workflow, when conditions change: - Image quality: Achieve high image quality in a reasonable scan time with 2D and 3D protocols. - Speed focus: Examine patients in a short time frame with protocols being accelerated to the maximal extent. - Motion artifact reduction: Compensate for the effects of motion, e.g. with motion insensitive *syngo* BLADE protocols. - Artifacts reduction: Reduce susceptibility artifacts, using *syngo* WARP. *AutoAlign* - Automated, localizer based positioning and alignment of slice groups to the anatomy, relying on anatomical landmarks. Providing fast, easy, and reproducible patient scanning and supporting the reading by consistently delivering high image quality with a standardized slice orientation. *Inline MPRs - Automatic multiplanar reconstruction for 3D datasets* - The Multi Planar Reconstruction (MPR) tool uses the position information from the AutoAlign algorithm and can be easily configured to automatically generate required 2D images from high resolution 3D acquisitions. *syngo WARP Susceptibility Artifact Reduction* - 2D TSE sequences with high bandwidth protocols tailored to reduce susceptibility artifacts. Available protocols include T1-weighted, T2-weighted, proton density and STIR contrast. *Guidance View* - Step-by-step user guidance is seamlessly integrated. - Example images and guidance text are displayed for each individual step of the scanning workflow. - Both images and text are easily configurable by the user *Customization* The Large Joint Dot Engine can be modified by the user to their individual standard of care. - Add/remove protocol steps - Change guidance content (images and text) - Change or add Dot exam strategies - Add clinical decision points - Add/remove parameters in the parameter viewing card
14405341 **Mapit syngo #Tlm (Optional)**	Features: - 3D VIBE sequence for Inline T1 mapping - Multiecho spin echo sequence for Inline T2 mapping - 3D Multiecho gradient echo sequence for Inline T2* mapping - iPAT compatibility - Protocols for Inline parametric mapping Using iPAT the 3D sequences provide isotropic imaging extremely high resolution while maintaining clinical measurement times. These data sets allow for the multi planar reconstruction of all planes. 3D is necessary to properly visualize the whole articular cartilage since it typically has a complex shape. In addition the accuracy of isotropic high resolution 3D data sets is superior because partial volume effects between e.g. synovial fluid and cartilage are minimized. For the visualization of the parametric maps in the anatomical context the maps can be displayed as a colored overlay onto anatomical images using the optional package "*syngo* Image Fusion"
07365484 **Image Fusion syngo**	**CT, MR, NM, or PET images** are accepted as input for image fusion. Studies can be done with the same modality or with different modalities.

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PRELIMINARY PROPOSAL

Part No. / Product	Description
(Optional)	

Part No. / Product	Description
(Continued) **07365484** **Image Fusion syngo (Optional)**	**Registration Algorithms:** - Easy-to-use visual alignment with 6 degrees of freedom (3x translation, 3x rotation) - Landmark based registration with convenient landmark editor for point-based registration using anatomical landmarks - Automatic registration - Storage of transformation matrix after registration for later retrieval with datasets **Visualization Techniques:** - Side by side visualization of both datasets with correlated pointer and correlated scrolling with dog ears - 2D alpha-blending in monochrome or pseudo-color with adjustable balance between the two superimposed data sets. Storage of fused results as secondary capture images.
07820082 **Inline Perfusion #Tim (Optional)**	**Inline Technology – Processing Instead of Post-processing.** Inline Technology helps to streamline the clinical workflow by automating post-processing steps before image viewing. This facilitates getting clinical results immediately. This package integrates inline technology with perfusion imaging. Automatic real-time calculation of Global Bolus Plot (GBP), Percentage of Baseline at map (PBP) and Time-to-Peak map (TTP) with Inline technology is possible. An optimized EPI sequence for perfusion-diagnostics is included in the standard Tim Application Suite. With this package real-time calculations are done of anatomical images and, in addition, of a global bolus plot and a Time-to-Peak map for visualizing the time dependence of tissue perfusion.
14418563 **Neuro Perfusion Evaluation,USA #T+D (Optional)**	**Post-processing features:** - Flexible selection of the Arterial Input Function (AIF) by the user. - Pixelwise calculation of the hemodynamic parameters relative Mean Transit Time (relMTT), relative Cerebral Blood Volume (relCBV), relative Cerebral Blood Flow (relCBF), corrected relative Cerebral and Blood Flow (relCBF) for compensation of blood brain barrier leakage. - Pixelwise calculation of maximum signal loss due to contrast agent enhancement (Percentage of Baseline at Peak, PBP) and of the time to the maximum signal loss (Time-To-Peak, TTP). - Display of the global signal time course (averaged over all slices) to assess the quality of the exam. - Predefined post-processing protocols available, user definable post-processing protocol are possible. **Visualization features:** - Colored display of relMTT-, relCBV-, relCBF-, relCBFcor, PBP- and TTP-maps. - Zoom, pan, annotate. - Colored images can be saved as DICOM images.
14416965 **Arterial Spin Labeling 3D #T+D (Optional)**	*syngo* ASL 3D provides the physician a tool for fast qualitative perfusion assessment throughout the whole brain without the use of a contrast agent. High spatial resolution 3D volumes are acquired with echo planar imaging and multiple refocusing pulses (GRASE). This 3D technique provides rel CBF, perfusion weighted scans and segmented acquisition.
14409110 **Arterial Spin Labeling 2D (Optional)**	2D multi-slice EPI sequence with full IPAT compatibility for rapid assessment of relative CBF. Consists of a spatially selective inversion pulse combined with different types of saturation pulses (slice presaturation, label slab saturation) and can be classified under PASL (Pulsed Arterial Spin Labeling). Fully automated Inline calculation of relCBF color maps for assessment of perfusion. Prospective motion correction and spatial filtering can be applied to the inline calculation to improve the image

PRELIMINARY PROPOSAL

Part No. / Product	Description
	quality.

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PRELIMINARY PROPOSAL

Part No. / Product	Description
14416943 **Neuro fMRI Package** **#T+D** **(Optional)**	**Inline BOLD Imaging** The BOLD imaging package allows the user to define protocols which, apart from the measurement, configure automatic evaluation of the measured data during the scan. With Inline Technology it is thus possible to generate statistical images (t-value) based on 3D motion corrected and spatially filtered data automatically in real time without any further user interaction. The Inline display of activation cards allows the user to decide during the scan whether enough statistical power has built up for his brain mapping task or if the examination is corrupted by motion. As a result examinations will be shorter with a higher success rate. Functional brain mapping can be easily integrated into the clinical routine e.g. prior to neurosurgical interventions. Additional Features: - Inline retrospective 3D motion detection and correction in 3 rotational and 3 translational directions - Inline t-statistics calculation for variable paradigms and display of t-value images - Statistical evaluation by means of "General Linear Model (GLM)": - Paradigms can be configured - Transitions between passive and active states can be modelled by the hemodynamic response function - Correction of low-frequency trends - Allows for time delays due to the BOLD-EPI slice order during a measurement - Display of GLM design matrix - Display of a continuously updated t-value card during measurement - Display of colored activation cards continuously updated during measurement, overlaid over the respective BOLD images using Inline technology - MOSAIC image mode for accelerating display, processing and storage of images **3D PACE *syngo*** By tracking the patients head 3D PACE reduces motion resulting in increased data quality beyond what can be achieved with a retrospective motion correction. As a result the sensitivity and specificity of BOLD experiments are increased. Features: - Real time prospective motion correction: Highest accuracy real time motion detection algorithm feeding a real time feed back loop to the acquisition system with updated positioning information - 3D motion correction for 6 degrees of freedom (3 translation and 3 rotation) - Motion related artifacts are avoided in first place instead of correcting for them retrospectively - Significant reduction of motion-related artifacts in statistical evaluations - Increased sensitivity and specificity of BOLD experiments **BOLD 3D Evaluation *syngo*** All tasks from statistical evaluation of the fMRI datasets to reading and exporting results are supported by BOLD 3D Evaluation *syngo:* Generation of statistical maps: - In cases an inline calculated statistical map is not available a statistical map can be generated easily using processing protocols. An intuitive editor UI allows the paradigm definition and offers the selection of head motion correction, image filters and statistical evaluation. - Predefined processing protocols and paradigms are available, which can be edited if required. Statistical evaluation using General Linear Model (GLM) - Transitions between passive and active states modeled by the hemodynamic response function. - Correction of low-frequency trends. - Corrects for time delays due to the BOLD-EPI slice order during a measurement. - Output of a t-value map and the GLM design matrix Inline monitoring of the fMRI exam - During an ongoing BOLD imaging exam results are calculated (by Inline BOLD imaging) and displayed in real time.

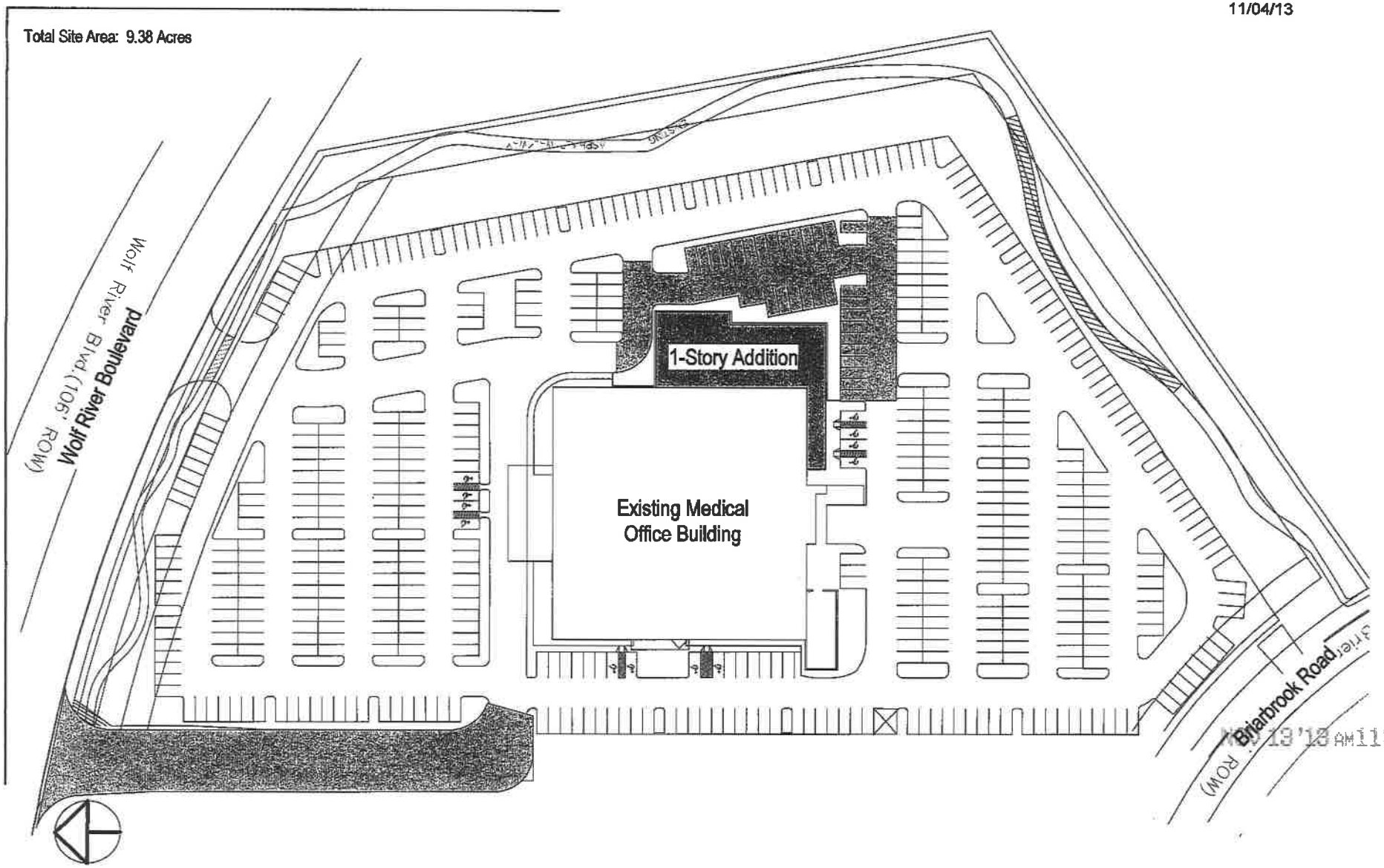
B: III (A)
Plot Plan

The West Cancer Center

7945 Wolf River Boulevard, Germantown, TN 38138

11/04/13

C.O.N. Site Plan



healthcare

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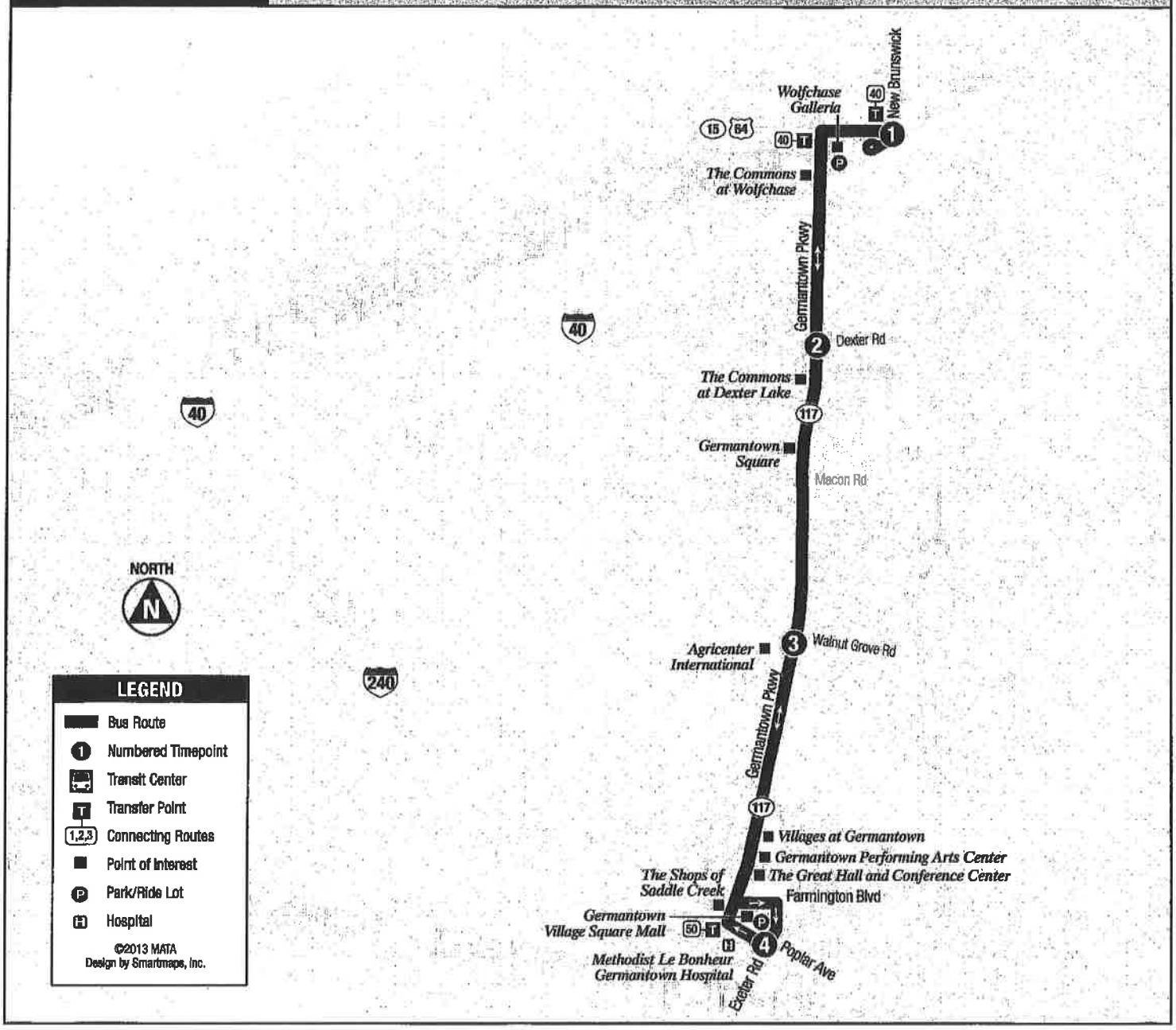
B: III (B)
Road Maps and
Public Transportation Route

Route 82 Germantown



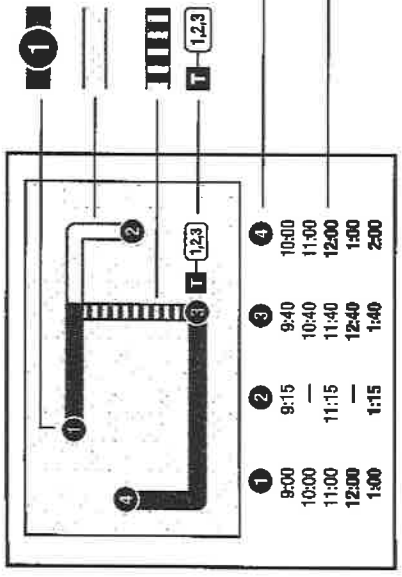
MONDAY – FRIDAY • SOUTHBOUND

	1 Wolfchase Galleria	2 Germantown Pkwy at Dexter Rd	3 Germantown Pkwy at Walnut Grove	4 Poplar Ave at Exeter Rd
AM	7:07	7:23	7:36	7:46
	8:31	8:47	9:00	9:10
PM	3:07	3:23	3:36	3:46
	4:31	4:47	5:00	5:10

MONDAY – FRIDAY • NORTHBOUND

	4 Poplar Ave at Exeter Rd	3 Germantown Pkwy at Walnut Grove	2 Germantown Pkwy at Dexter Rd	1 Wolfchase Galleria
AM	6:25	6:35	6:48	7:04
	7:49	7:59	8:12	8:28
PM	2:25	2:35	2:48	3:04
	3:49	3:59	4:12	4:28
	5:13	5:23	5:36	5:52

INSTRUCTIONS



The bus stops at this location at listed times.
Look for the column of times below the matching symbol in the schedule.

Only certain trips operate along this portion of the route.
See the schedule for trips that provide service here.

The bus operates express along this portion of the route.

Transfer point. Shows where this bus intersects with other routes that are available for transfer.

The bus stops at the times listed below the numbered symbol.
Light times are A.M.; **bold** times are **P.M.**

The timetable shows when the bus is scheduled to depart.
Actual departure times may vary and depend upon traffic and weather conditions. Arrive at the bus stop about 10 minutes early to avoid missing the bus.

MATA FARES

BASE FARES — **EFFECTIVE: DECEMBER 4, 2011**

Adult Base Fare	$1.75
*City Student Base Fare	$1.35
*County Student Base Fare	$1.55
*Seniors & Individuals w/Disabilities	$0.85
Express Base Fare	$2.35

* MATA ID REQUIRED.

ZONE 1 FARE

Base Fare Plus Additional Zone Fare	+ $0.85

(See Route Map for Zone Boundaries)

MULTI-RIDE PASSES

Daily FastPass	$3.50
7-Day FastPass	$16.00
31-Day FastPass	$50.00
31-Day Express FastPass	$60.00
*Student Daily FastPass	$2.75
*Student 7-Day FastPass	$13.00
*Student 31-Day FastPass	$40.00
Senior/Disabled Daily FastPass	$1.75
*Senior/Disabled 7-Day FastPass	$8.00
*Senior/Disabled 31-Day FastPass	$25.00
*Senior/Disabled 31-Day Express FastPass	$30.00

* MATA ID REQUIRED. Students in grades 1-12, seniors and people with disabilities must have a valid MATA ID to receive the FastPass at a reduced price. Two forms of identification must be presented to obtain ID at MATA's Customer Service Center. (A Medicare card is a valid form of identification.)

Route schedules may be subject to change without notice.

MATA INFORMATION

Airways Transit Center
3033 Airways Boulevard ..... (901)722-7080

American Way Transit Center
3921 American Way ..... (901) 722-0322

North End Terminal
444 N. Main Street ..... (901) 523-8134

MATA Administrative Offices

1370 Levee Road	(901) 722-7100
Route and Schedule Information	(901) 274-6282
Lost and Found	(901) 523-8134
Comments, Compliments, Complaints	(901) 522-9175
Main Street Trolley	(901) 577-2640
MATAplus Information	(901) 722-7171
TTY Hearing and Speech Impaired	(901) 523-2817

Large print schedules are available upon request.

Visit us at: www.matatransit.com

Effective 09/22/13

ROUTE 82

MATA

Germantown

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- Agricenter International
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- Germantown Village Square Mall
- Methodist Le Bonheur Germantown Hospital

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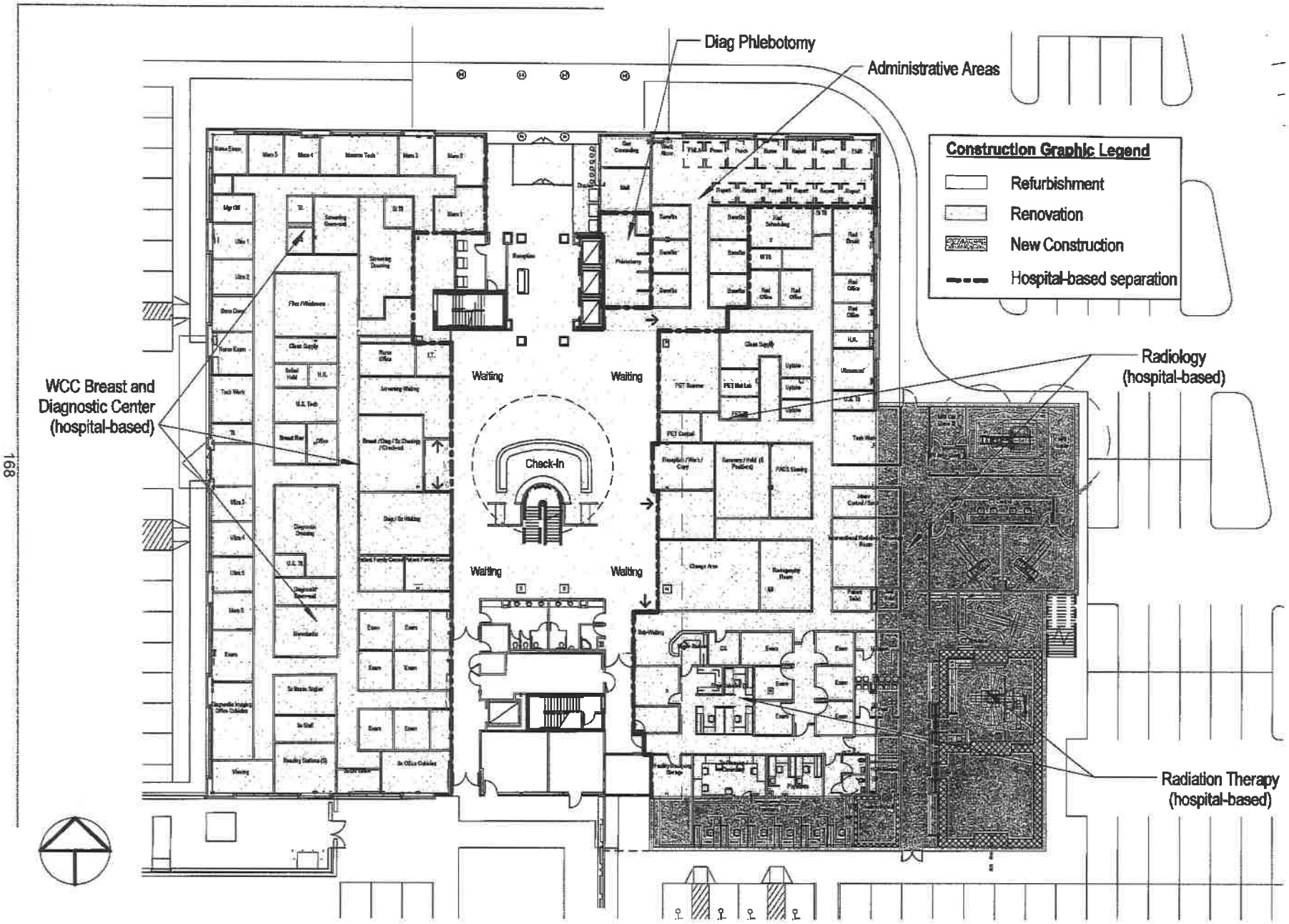
B: IV
Floor Plans

C.O.N. 1st Floor Plan

The West Cancer Center

7945 Wolf River Boulevard, Germantown, TN 38138

11/04/13



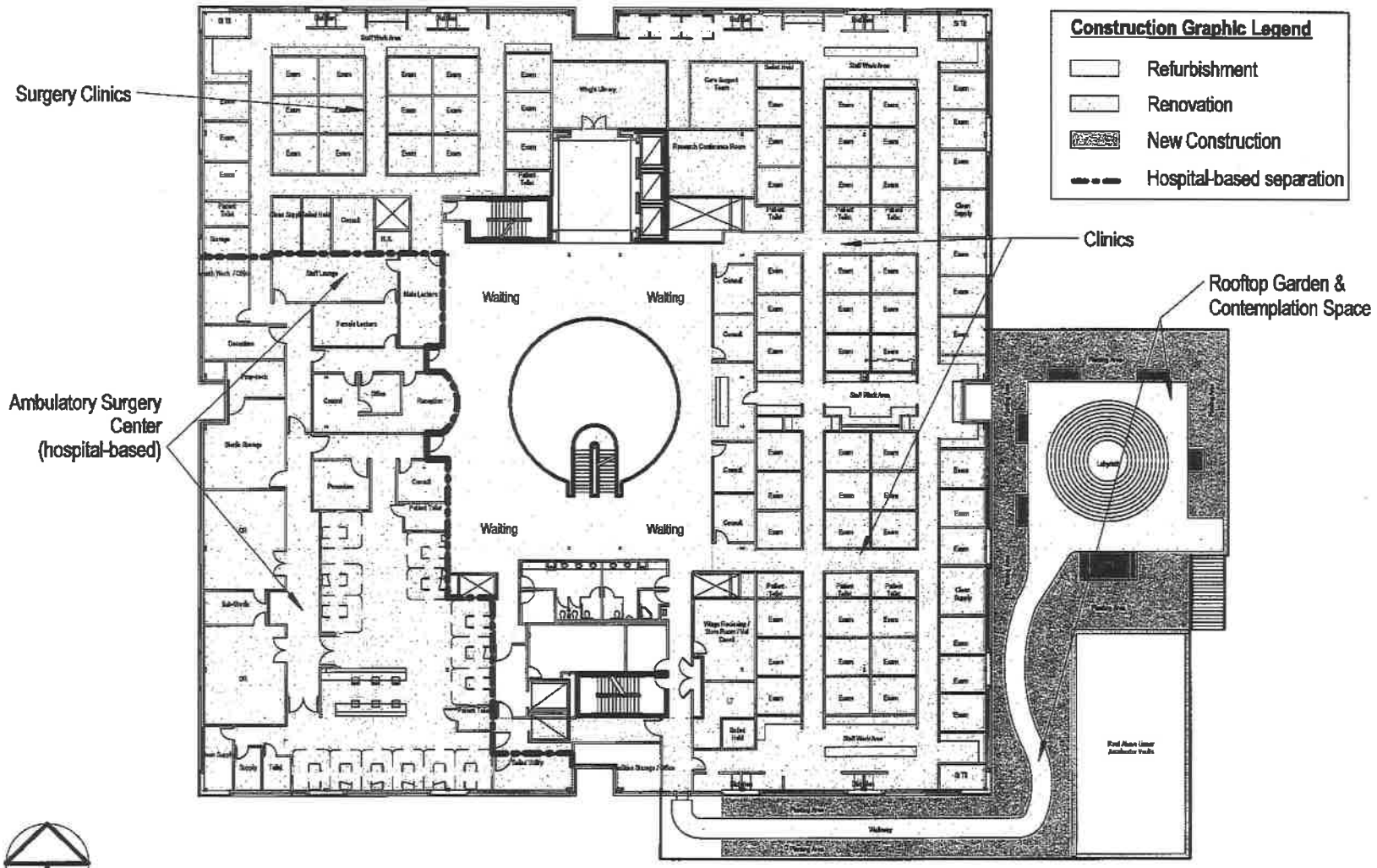
brg3healthcare

C.O.N. 2nd Floor Plan

The West Cancer Center

7945 Wolf River Boulevard, Germantown, TN 38138

11/04/13



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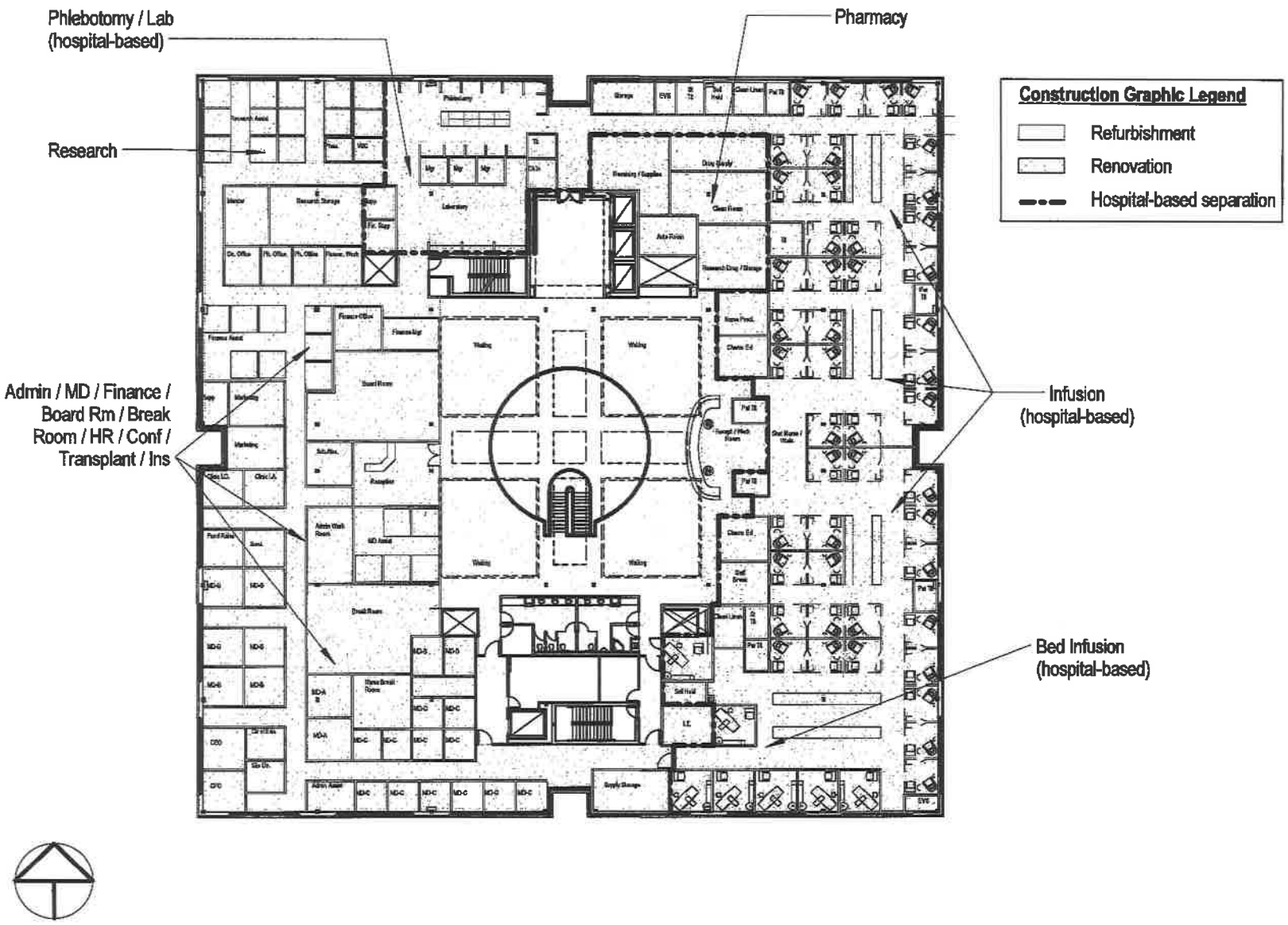
brg.as healthcare

The West Cancer Center

7945 Wolf River Boulevard, Germantown, TN 38138

11/04/13

C.O.N. 3rd Floor Plan



brg3Shealthcare

C: MRI Services (7)(d) Outpatient Diagnostic Services System Policy

	THIS	REPLACES
INDEX	S-05-051	
REVISED	04/03/06	01/10/06
EFFECTIVE	01/01/01	
PAGE	1 of 2	

SYSTEM POLICY

ORIGINATOR: Administration

SUBJECT: Outpatient Orders for Diagnostic Services

PURPOSE: To establish guidelines under which the medical staff can order outpatient, non-surgical services in a Methodist Healthcare facility.

FUNCTIONS AFFECTED: Patient Access Services (including Scheduling, Patient Registration, Outpatient Care Center), all ancillary service areas, Health Information Management (outpatient record department) and Utilization Review.

POLICY: Methodist Healthcare recognizes that federal legislation placed an affirmative duty on Hospitals and Physicians to document authorization and medical necessity for outpatient diagnostic services. Failure to abide by CMS regulations has serious penalties for providers of healthcare, including the possibility of personal liability for those who do not properly document and code.

All functions affected must work with Medical staff members and referring physicians to ensure that the following guidelines are met prior to procedures being performed:

1. All requests for diagnostic outpatient services (i.e. any test, procedure, treatment or other service) must be accompanied by a **written, signed and dated** Physician order. A Physician or a Nurse Practitioner may submit this signed order. Rubber stamp signatures are not acceptable. In the case of recurrent care outpatient encounters, one order will be valid for 6 months as long as the physician name, treatment regimen and medical necessity documentation remains unchanged.

2. Patients arriving for an outpatient diagnostic service for whom an order has not been sent to Patient Access or the ancillary department prior to the patients' arrival, will be asked to wait or be rescheduled until the order is received by facsimile or other appropriate means.

In order to ensure compliance for our coding and billing functions, this policy will be followed for all payer groups (not just our Medicare patient population).

C: LINAC Services (6)(f)
Medical Director CV

Holger L. Gieschen, M.D.

Office:
Memphis Radiological Professional Corporation
7695 Poplar Pike
Germantown,TN 38139

Phone: Office: (901) 685-2696
Home: (901) 861-5398

Home:
2186 Houston Pass
Germantown, TN 38139

E-mail: holger.gieschen@mlh.org

PROFESSIONAL EXPERIENCE

2010- 2012	Chairman of Methodist Healthcare Cancer Committee
2007 – present	Director of Radiation Oncology Methodist Healthcare, Memphis and Germantown ,TN
Feb 2003 – Feb 2011	Board Member Memphis Radiological Professional Corporation
Feb 1999 - present	Memphis Radiological Professional Corporation Methodist University Hospital Memphis,TN

- 3 D conformal External Beam Radiotherapy
- Intensity Modulated Radiotherapy (IMRT)
- Image Guided Radiotherapy (IGRT)
- Stereotactic Body Radiotherapy (SBRT)
- HDR Brachytherapy
  - Accelerated Partial Breast Irradiation
    - MammoSite
    - SAVI
    - Contura
  - Gynecologic applications
  - Soft tissue interstitial implants
- LDR Brachytherapy
- Prostate Seed Implants
- Gamma Knife Radiosurgery
- Glia-Site Brachytherapy
- Coronary Intravascular Brachytherapy
  - Novoste Beta-cath
  - Guidant Galileo III System

Jan 1997 – Jan 1999	Massachusetts General Hospital Boston, MA Clinical Associate, Dept of Radiation Oncology
July 1995 – Jan 1999	Cape and Island Radiation Therapy Center Cape Cod Hospital Hyannis, MA Attending Physician

- 3 D conformal External Beam Radiotherapy
  - Render Plan System
- Prostate Seed Implants

July 1991 – June 1995	Medical College of Virginia Richmond VA. Dept. of Radiation Oncology Residency in Radiation Oncology
Apr 1994 – Apr 1995	Chief Resident
Feb 1990 – June 1991	Washington Hospital Center Washington D.C. Dept. of Internal Medicine U.S. Internship
Jan 1987 – Dec 1989	Medizinische Hochschule (Medical College of Hannover) Hannover, Germany Dept. of Internal Medicine – Nephrology Residency

ACADEMIC APPOINTMENTS

Assistant Professor , Dept. of Radiology
University of Tennessee

BOARD CERTIFICATION

Radiation Oncology (American Board of Radiology)
July 1996

Re-certification: April 2006- expires 2016

EDUCATION

Oct 1980 – Oct 1986	Christian-Albrecht-University, Medical School Kiel, Germany Doctorate in Medicine 11/21/86
Sept 1977 – May 1980	Buergermeister-Smidt-Gymnasium Bremerhaven, Germany Major: Mathematics and Physics Degree: Abitur 5/21/80

OTHER EXAMINATIONS

Educational Commission for Foreign Medical Graduates
(ECFMG- Certificate)
July 1989

Federation Licensing Examination (Flex Exam)
Dec 1991

PUBLICATIONS – ARTICLES

Gieschen HL, Spiro IJ, Suit HD, Ott MJ, Rattner DW, Ancukiewicz M, Willett CG
Long-Term Results of Intraoperative Electron Beam Radiotherapy for Primary and Recurrent Retroperitoneal Soft Tissue Sarcoma. International Journal of Radiation Oncology, Biology, Physics 50 (1):127-131:2001

Holger L. Gieschen, Christopher G. Willett, Ira J. Spiro,. Herman D. Suit, David W Rattner, Mark J. Ott Long-Term Results of Intraoperative Electron Beam Radiotherapy for Primary and Recurrent Retroperitoneal Soft Tissue Sarcoma. International Journal of Radiation Oncology, Biology, Physics 42 (Suppl 1): 192, (Abstr) 1998

Kavanagh BD, Gieschen HL, Schmidt-Ullrich RK, Arthur D, Zwicker R, Kaufman N, Goplerud DR, Segretti EM, West RJ. A pilot study of concomitant boost accelerated superfractionated radiotherapy for stage III cancer of the uterine cervix International Journal of Radiation Oncology, Biology, Physics 38(3):561-568, 1997

Gieschen H, Kavanagh B, Kaufman n, West R, Goplerud D, Schmidt-Ullrich R. A Pilot Study of Accelerated Superfractionated Radiotherapy for Locally Advanced Cancer of the Uterine Cervix Interational Journal of Radiation Oncology, Biology, Phusics 32 (Suppl 1): 225,(Abstr) 1995

Zwicker RD, Atari NA, Kavanagh BD, Gieschen HL, Arnfield MR, Khandekwal SR, Schmidt-Ullrich RK. Clinical use of a digital simulator for rapid setup verification in high dose rate brachytherapy. International Journal of Radiation Oncology, Biology, Physics. 33(4): 931-6, 1995 Nov 1.

Gutsche, H.-U., Bonnke, P., Gieschen, H., Niedermayer, W. Effect of Cyclosporine A (CsA) on the activity of the tubologlomerular feedback mechanism. The Juxtaglomerular Apparatus, 469-472. Elsevier, Amsterdam. 1988.

Gieschen, Holger Effekt von Diltiazem und Captopril auf die Funktionsparameter der Rattenniere nach Ciclosportin-A-Vorbehandlung unter Natriumchloridarmer Diaet. Doctoral Dissertation.Kiel, Germany. 1989.

PUBLICATIONS – BOOK CHAPTERS

Chapter 18: Electron or Orthovoltage IORT for Retroperitoneal Sarcomas
Holger L. Gieschen, Christopher G. Willett, John Donohue, Iry Peterson, Ira J. Spiro, Felipe A. Calvo, Leonard L. Gunderson in: Textbook on Intraoperative Irradiation – Techniques and Results. First Edition 1999

PRESENTATIONS

Holger L. Gieschen, Christopher G. Willett, Ira J. Spiro, David W. Rattner, Mark J. Ott, Herman D. Suit
Long-Term Results of Intraoperative Electron Beam Radiotherapy for Primary and Recurrent Retroperitoneal Soft Tissue Sarcoma. Oral Presentation- ASTRO 40th Annual Meeting, Phoenix, Arizona, 1998

Holger L. Gieschen, Prostate Specific Antigen (PSA) Following Definitive External Beam Radiotherapy – The Cape Cod Hospital Experience - Poster
ASTRO PSA Symposium, San Antonio, Texas
September 28, 1996

Gieschen H, Kavanagh B, Kaufman, West R, Goplerud D, Schmidt-Ullrich R. A Pilot Study of Accelerated Hyperfractionated Radiotherapy for Locally Advanced Cancer of the Uterine Cervix – Poster Discussion Session
ASTRO 37th Annual Meeting, Miami Beach, FL October 8-11, 1995

TRAINING IN SPECIAL TECHNIQUES AND APPLICATIONS

Certification in Intracoronary Brachytherapy using the Novoste® Brachytherapy Delivery System, 2001

Leksell Gamma-Knife Training Program
Cromwell Hospital Gamma Knife Centre, London, UK
Oct. 1999

Ultrasonically Guided I^{125}/Pd^{103} Seed Implantation for the Treatment of Early Stage Prostate Cancer
Northwest Hospital, Seattle, WA Jan 1996
with additional training in this technique at St. Elisabeth Hospital, Boston, MA

Papillon-Technique for the treatment of primary and recurrent rectal cancer.
Roswell Park Cancer Institute, Buffalo, NY 1995

OTHER PROFESIONAL ACTIVITIES

Practice Accreditation Surveyor for the American College of Radiology 1998 to 2001

BLS and ACLS Certification

AWARDS

Valedictorian, 1980
Bürgermeister-Smidt-Gymnasium
Bremerhaven, Germany

PROFESSIONAL MEMBERSHIPS

American Society for Therapeutic Radiology and Oncology (ASTRO), (1991)

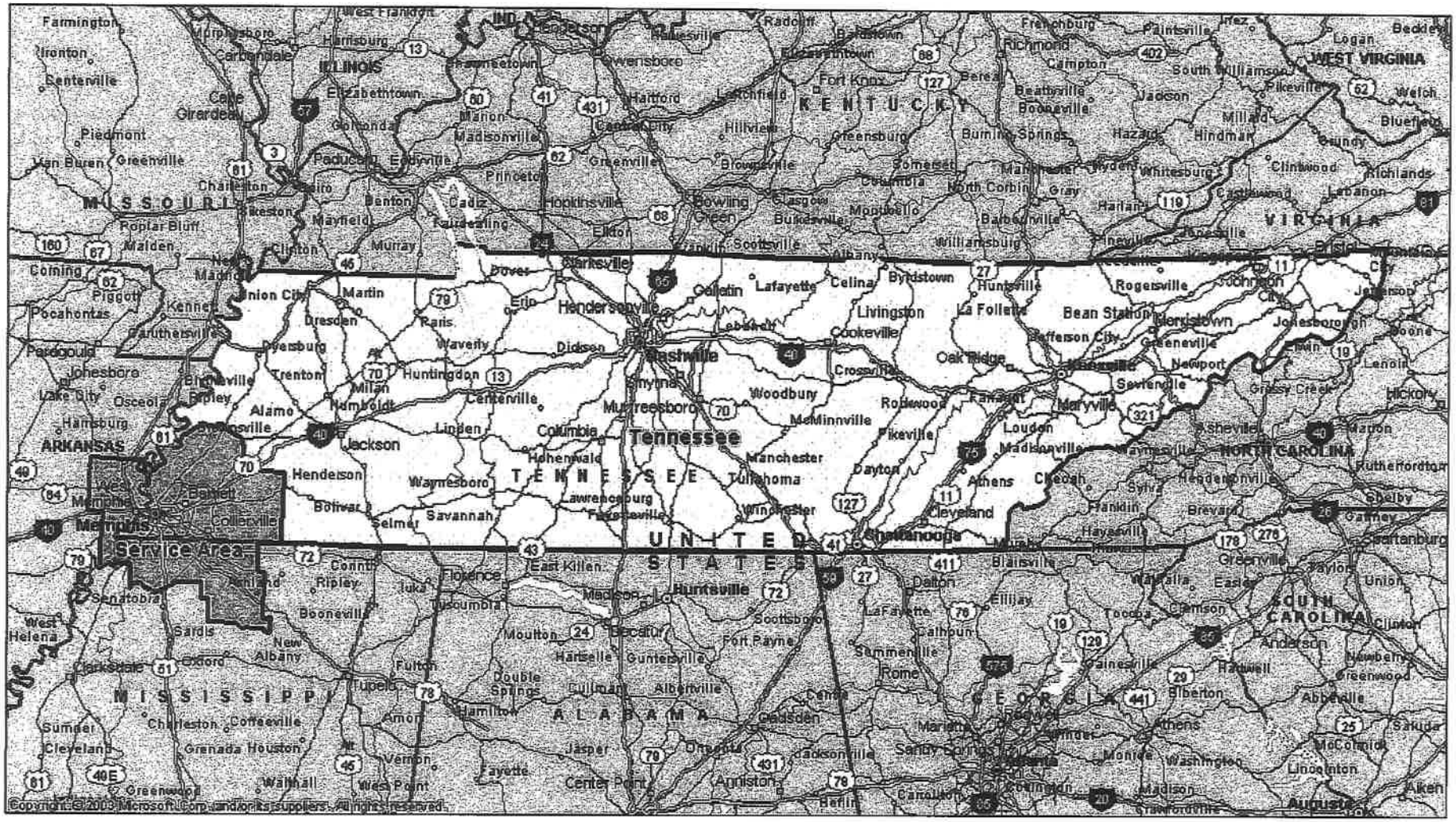
American College of Radiology (ACR), (1997)

Fletcher Society, (1997)

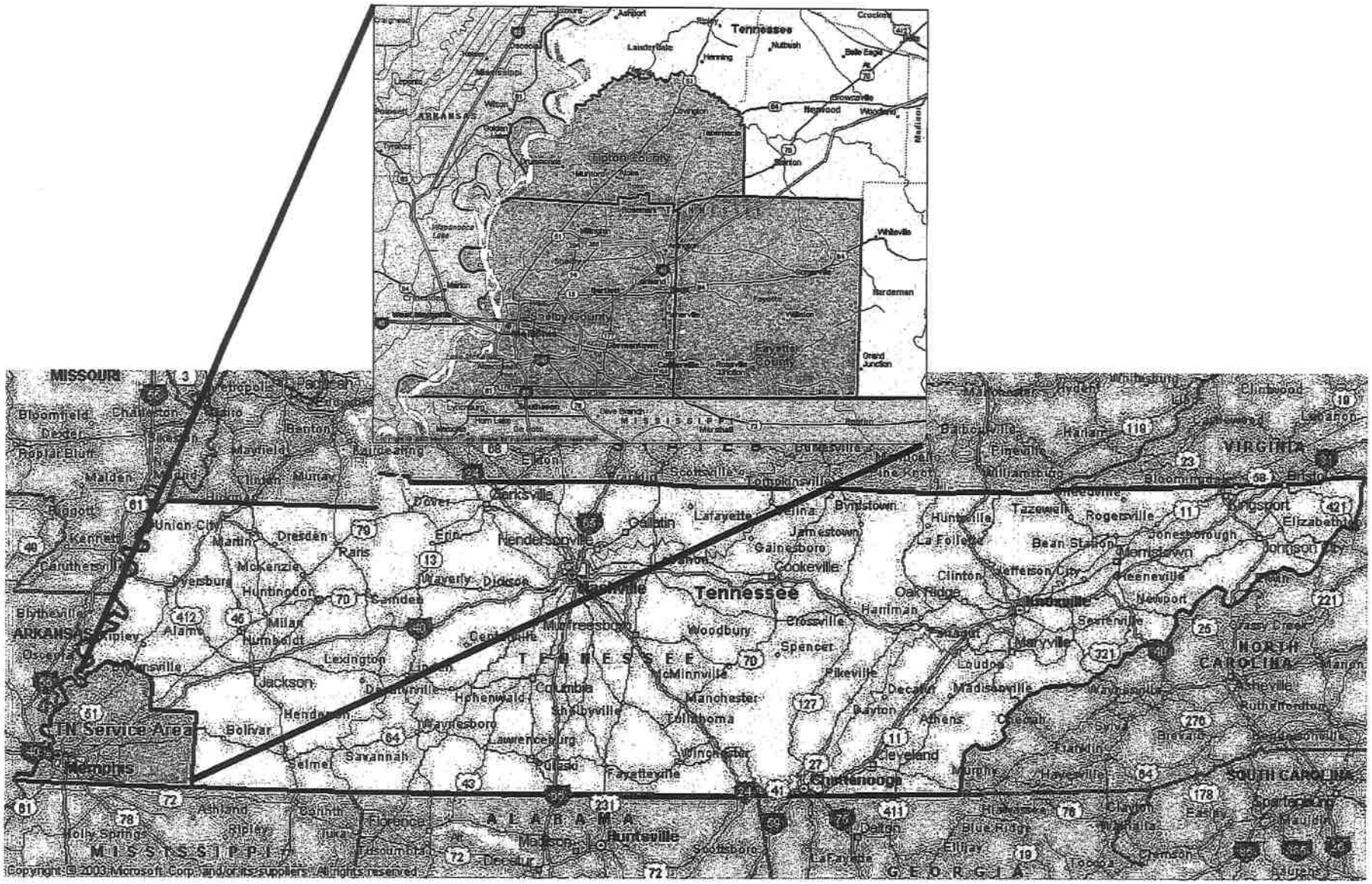
Holger L. Gieschen, M.D. November 1, 2013

C: Need (3)
Service Area Map

Methodist Healthcare – Memphis Hospitals
Primary Service Area



Methodist Healthcare – Memphis Hospitals
Tennessee Portion of Service Area



C: Economic Feasibility (1)(c)
Moveable Equipment Listing >$50,000

MOVEABLE EQUIPMENT LIST > $50,000

ITEM DESCRIPTION	TOTAL
LINAC	$1,916,102
MRI 1.5T	$1,838,810
High Does Rate Unit	$220.000
Anesthesia Machine	$120,000
Sterilizer	$100,000
Washer	$100,000
Operating Room Lights	$95,000
Operating Room Table	$55,000

C: Economic Feasibility (1)(d) Documentation of Construction Cost Estimate

November 11, 2013

Mr. Erich Mounce
Chief Executive Officer
West Cancer Center
100 Humphreys Blvd.
Memphis, TN 38120

RE: VERIFICATION OF CONSTRUCTION COST ESTIMATE –
WEST CANCER CENTER, MEMPHIS, TENNESSEE

Dear Mr. Mounce:

We have reviewed the construction cost estimates and descriptions for the project in the CON packet and compared them to typical construction costs we have experienced in the Mid South region for healthcare construction.

It is brg3s's opinion, that in today's dollar the projected $19.2 million construction budget is consistent with the cost value for this type of construction and similar projects in this market. The budget includes $15.7 million for construction, $0.48 million for site work, $1.5 million design/A&E fees and $1.6 million for contingency. While specific finish choices and market conditions can greatly affect the cost of any project, the costs assumed in the estimate appear adequate for mid range finishes used in a healthcare environment for the scope of work for the West Cancer Center.

In providing opinions of probable construction cost, the Client understands the Consultant has no control over the cost or availability of labor, equipment or material, or over market conditions or the Contractor's method of pricing and that the Consultant's opinions of probable construction costs are made on the basis of the Consultants professional judgment and experience. The consultant makes no warranty, express or implied, that the bids or the negotiated cost of the work will not vary from the Consultant's opinion of probable construction cost.

This facility includes PET Scanner, MRI, CT and Linear Accelerators and will be designed in accordance with all applicable federal and state standards, regulations and guidelines, licensing agency requirements and with equipment manufacturer's specifications at the proposed location of the West Cancer Center, Wolf River Blvd., Germantown, TN.

Please do not hesitate to contact us if you require any additional information.

Sincerely,

brg3s

Jon R. Summers, AIA
Principal

11 W. Huling Avenue
Memphis, Tennessee 38103
t 901.260.9600
f 901.531.8042
w brg3s.com

brg3s

C: Economic Feasibility (2) Documentation of Availability of Funding

Methodist℠
Le Bonheur Healthcare

November 7, 2013

Melanie Hill
Executive Director
Tennessee Health Facilities Commission
Andrew Jackson State Office Building
500 Deaderick Street, Suite 850
Nashville, TN 37243

Dear Ms. Hill:

This is to certify that Methodist Healthcare – Memphis Hospitals has adequate financial resources for the Methodist Healthcare – Memphis Hospitals WEST CANCER CENTER project. The applicant, Methodist Healthcare–Memphis Hospitals, is a not-for-profit corporation that operates five Shelby County hospitals under a single license. The applicant is a wholly-owned subsidiary of a broader parent organization, Methodist Healthcare, which is a not-for-profit corporation with ownership and operating interests in multiple other healthcare facilities of several types in West Tennessee and North Mississippi. Cash is held at the corporate level. Methodist Healthcare has available cash balances to commit to this project. The capital cost of the project is estimated at $60,554,193.

Sincerely,

Chris McLean
Senior Vice President Finance

C: Economic Feasibility (4)
Detail of Other Revenue and Expense

Defining "Other" categories

Other Operating Revenue:

Cafeteria
Drugs
Telephone rental
Vending
Office Rental
Ground Transportation
Fix Wing
Grants
United Way Grants
Misc. Income

Other Expenses:

Benefits
Repairs and Maintenance
Professional Fees
Contract Services
Accounting/Auditing Fees
Legal/Consulting Fee
Advertising
Dues and Subscriptions
Education/ Travel
Utilities
Insurance
Food services
Laundry Services
Print Shop
Telephone
Transcription
Academic Support
Contributions
License/Accredidations Fees
Postage/Freight
Procurement Card Exp

Other Revenue/Expenses:

Capital Campaign Funding
Interest Income
Gain/Loss on Disposal of PPE

Project Data Chart

Other Operating Revenue:

Cafeteria
Drugs
Gift Shop
Telephone
Vending
Shared Svc
Tuition/Student Fees
Office Rentals
Parking
340b Program
HealthSouth
Trauma Fund
Rental Income
Transp (ground & fixed wing)
Gamma Knife
Grants
Other

C: Economic Feasibility (10)
Financial Statements

Methodist Le Bonheur Healthcare
Balance Sheet
September 2013
(in thousands)

Economic Feasiblity - 10

ASSETS:	
CURRENT ASSETS:	
CASH & TEMPORARY INVESTMENTS:	
UNRESTRICTED	787,315
RESTRICTED	14,523
TOTAL CASH & TEMPORARY INVESTMENTS	801,838
ACCOUNTS RECEIVABLE:	
PATIENT	725,690
ALLOW DBTFUL ACCTS & CONTR ADJ	518,371
NET PATIENT ACCOUNTS RECEIVABLE	207,319
MEDICARE / MEDICAID PROGRAMS	-
AFFILIATES	-
PLEDGE CAMPAIGN	2,602
OTHER	15,403
TOTAL ACCOUNTS RECEIVABLE	225,324
INVENTORIES	24,500
PREPAID EXP & OTHER CURRENT ASSETS	9,397
ASSETS LIMITED TO USE-CURRENT PORTION	891
TOTAL CURRENT ASSETS	1,061,950
ASSETS LIMIT TO USE-LESS CURR PORTION	39,611
PROPERTY PLANT & EQUIPMENT-NET	878,763
UNAMORTIZED DEBT ISSUE COSTS	12,933
SWAPS MARKET VALUE	0
ADVANCES TO AFFILIATES	0
PLEDGE CAMPAIGN-LONG TERM	3,959
OTHER ASSETS	40,501
TOTAL ASSETS	2,035,717
LIABILITIES AND NET ASSETS:	
CURRENT LIABILITIES:	
ACCOUNTS PAYABLE	60,704
ACCRUED PAYROLL & PAYROLL TAXES	22,048
ACCRUED PTO	33,856
ACCRUED SELF INSURANCE COSTS	19,373
ACCRUED INTEREST	4,323
OTHER ACCRUED EXPENSES	5,900
MEDICARE / MEDICAID PROGRAMS	7777
AFFILIATES	0
LONG TERM DEBT-CURRENT PORTION	15676
TOTAL CURRENT LIABILITIES	169,657
LONG TERM DEBT LESS CURRENT PORTION	584,805
ACCRUED PENSION LIABILITY	186,136
HPL LONG TERM RESERVE	18,656
SWAPS MARKET VALUE	55,792
OTHER LONG TERM LIABILITIES	6,466
ADVANCES FROM AFFILIATES	0
MINORITY INTEREST	4,604
TOTAL LIABILITIES	1,026,118
NET ASSETS:	
UNRESTRICTED	987,689
TEMPORARILY RESTRICTED	18,482
PERMANENTLY RESTRICTED	3,428
TOTAL NET ASSETS	1,009,599
TOTAL LIABILITIES AND NET ASSETS	2,035,717

Methodist Healthcare – Memphis Hospitals
Income Statement
Period Ended September 2013
($000's)

Revenues	
Gross patient service revenues	$ 3,868,386
Deductions from revenue	2,824,440
Net patient service revenues	1,043,946
Other Operating Revenue	31,782
Other Non-Operating Revenue	886
Total revenues	1,076,614
Expenses	
Salaries and benefits	419,043
Supplies and other	518,416
Depreciation and amortization	54,791
Interest	(2,416)
Total expenses	989,834
Net Income	$ 86,780

KPMG

METHODIST LE BONHEUR HEALTHCARE AND AFFILIATES

Combined Financial Statements

December 31, 2012 and 2011

(With Independent Auditors' Report Thereon)

KPMG LLP
Suite 900
50 North Front Street
Memphis, TN 38103-1194

Independent Auditors' Report

The Board of Directors
Methodist Le Bonheur Healthcare:

Report on the Financial Statements

We have audited the accompanying combined financial statements of Methodist Le Bonheur Healthcare and Affiliates (the System), which comprise the combined balance sheets as of December 31, 2012 and 2011, and the related combined statements of operations, changes in net assets, and cash flows for the years then ended, and the related notes to the combined financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these combined financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of combined financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these combined financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the combined financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the combined financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the combined financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the combined financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the combined financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

KPMG LLP is a Delaware limited liability partnership, the U.S. member firm of KPMG International Cooperative ("KPMG International"), a Swiss entity.

KPMG

Opinion

In our opinion, the combined financial statements referred to above present fairly in all material respects, the financial position of Methodist Le Bonheur Healthcare and Affiliates as of December 31, 2012 and 2011, and the results of their operations and their cash flows for the years then ended in accordance with U.S. generally accepted accounting principles.

KPMG LLP

Memphis, Tennessee
April 26, 2013

METHODIST LE BONHEUR HEALTHCARE AND AFFILIATES

Combined Balance Sheets

December 31, 2012 and 2011

(In thousands)

Assets		2012	2011
Current assets:			
Cash and cash equivalents	$	71,677	71,558
Investments		746,608	569,779
Net patient accounts receivable		190,102	170,705
Due from third-party payors		—	523
Other current assets		49,373	45,013
Assets limited as to use – current portion		682	897
Total current assets		1,058,442	858,475
Assets limited as to use, less current portion		40,616	40,754
Property and equipment, net		821,718	808,006
Other assets		54,956	58,613
Total assets	$	1,975,732	1,765,848
Liabilities and Net Assets			
Current liabilities:			
Accounts payable	$	57,829	58,581
Accrued expenses and other current liabilities		91,583	85,280
Due to third-party payors		17,903	—
Long-term debt – current portion		15,658	18,849
Total current liabilities		182,973	162,710
Long-term debt, less current portion		600,833	515,322
Estimated professional and general liability costs		25,081	25,392
Accrued pension cost		197,608	190,519
Other long-term liabilities		88,743	92,448
Total liabilities		1,095,238	986,391
Net assets:			
Unrestricted		852,139	751,126
Temporarily restricted		20,282	20,081
Permanently restricted		3,351	3,004
Total net assets attributable to Methodist Le Bonheur Healthcare		875,772	774,211
Noncontrolling interests		4,722	5,246
Total net assets		880,494	779,457
Commitments and contingencies			
Total liabilities and net assets	$	1,975,732	1,765,848

See accompanying notes to combined financial statements.

METHODIST LE BONHEUR HEALTHCARE AND AFFILIATES

Combined Statements of Operations

Years ended December 31, 2012 and 2011

(In thousands)

	2012	2011
Unrestricted revenues and other support:		
Net patient service revenue	$ 1,562,285	1,356,646
Provision for uncollectible accounts	(135,201)	(109,570)
Net patient service revenue less provision for uncollectible accounts	1,427,084	1,247,076
Other revenue	55,200	30,639
Net assets released from restrictions used for operations	13,012	9,055
Total unrestricted revenues and other support	1,495,296	1,286,770
Expenses:		
Salaries and benefits	724,897	662,305
Supplies and other	599,393	473,492
Depreciation and amortization	85,345	85,282
Interest	27,287	25,586
Total expenses	1,436,922	1,246,665
Operating income	58,374	40,105
Nonoperating gains (losses):		
Investment income, net	24,012	36,271
Change in fair value of interest rate swaps	3,798	(38,084)
Unrealized gain (loss) on trading securities, net	37,984	(27,261)
Impairment of land	(332)	—
Impairment of goodwill	(928)	(3,800)
Total nonoperating gains (losses), net	64,534	(32,874)
Revenues, gains and other support in excess of expenses and losses, before noncontrolling interests	122,908	7,231
Noncontrolling interests	(1,424)	(382)
Revenues, gains and other support in excess of expenses and losses	121,484	6,849
Other changes in unrestricted net assets:		
Accrued pension cost adjustments	(22,289)	(85,813)
Other	(68)	—
Net assets released from restrictions used for capital purposes	1,886	2,895
Increase (decrease) in unrestricted net assets	$ 101,013	(76,069)

See accompanying notes to combined financial statements.

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METHODIST LE BONHEUR HEALTHCARE AND AFFILIATES

Combined Statements of Changes in Net Assets

Years ended December 31, 2012 and 2011

(In thousands)

	Unrestricted	Temporarily restricted	Permanently restricted	Noncontrolling interests	Total
Balances at December 31, 2010	$ 827,195	22,743	2,840	7,068	859,846
Revenues, gains and other support in excess of expenses and losses	6,849	—	—	382	7,231
Distributions to minority shareholders	—	—	—	(2,204)	(2,204)
Accrued pension cost adjustments	(85,813)	—	—	—	(85,813)
Donor-restricted gifts, grants, and bequests	—	9,116	164	—	9,280
Investment income, net	—	172	—	—	172
Net assets released from restrictions used for operations	—	(9,055)	—	—	(9,055)
Net assets released from restrictions used for capital purposes	2,895	(2,895)	—	—	—
Change in net assets	(76,069)	(2,662)	164	(1,822)	(80,389)
Balances at December 31, 2011	751,126	20,081	3,004	5,246	779,457
Revenues, gains and other support in excess of expenses and losses	121,484	—	—	1,424	122,908
Distributions to minority shareholders	—	—	—	(1,948)	(1,948)
Accrued pension cost adjustments	(22,289)	—	—	—	(22,289)
Other	(68)	—	—	—	(68)
Donor-restricted gifts, grants, and bequests	—	14,502	347		14,849
Investment income, net	—	597	—	—	597
Net assets released from restrictions used for operations	—	(13,012)	—	—	(13,012)
Net assets released from restrictions used for capital purposes	1,886	(1,886)	—	—	—
Change in net assets	101,013	201	347	(524)	101,037
Balances at December 31, 2012	$ 852,139	20,282	3,351	4,722	880,494

See accompanying notes to combined financial statements.

METHODIST LE BONHEUR HEALTHCARE AND AFFILIATES

Combined Statements of Cash Flows

Years ended December 31, 2012 and 2011

(In thousands)

	2012	2011
Cash flows from operating activities:		
Change in net assets	$ 101,037	(80,389)
Adjustments to reconcile change in net assets to net cash provided by operating activities, net of effects of acquisitions:		
Depreciation and amortization	85,345	85,282
Unrealized (gain) loss on trading securities, net	(37,984)	27,261
Change in fair value of interest rate swaps	(3,798)	38,084
Provision for uncollectible accounts	135,201	109,570
Restricted contributions and investment income	(1,117)	(1,184)
Equity in net income of equity investees	1,401	(163)
Impairment of land	332	—
Impairment of goodwill	928	3,800
Gain on disposal of property and equipment	(70)	(99)
Accrued pension cost adjustments	22,289	85,813
Changes in operating assets and liabilities:		
Accounts receivable	(154,598)	(112,742)
Other current assets and due from third-party payors	(3,835)	(4,056)
Other assets	1,336	(3,534)
Accounts payable, accrued expenses and due to third-party payors	23,454	(7,445)
Other long-term liabilities, estimated professional and general liability costs and accrued pension costs	(15,418)	(31,315)
Net cash provided by operating activities	154,503	108,883
Cash flows from investing activities:		
Capital expenditures	(98,812)	(73,344)
Proceeds from sales of property and equipment	253	561
Sales of investments	1,665,243	1,237,632
Purchases of investments	(1,803,922)	(1,269,685)
Change in assets limited as to use	237	(187)
Purchase of businesses	(74)	(2,389)
Net cash used in investing activities	(237,075)	(107,412)
Cash flows from financing activities:		
Proceeds from issuance of long-term debt	100,500	128
Repayment of long-term debt	(18,926)	(16,028)
Restricted contributions and investment income	1,117	1,184
Net cash provided by (used in) financing activities	82,691	(14,716)
Net increase (decrease) in cash and cash equivalents	119	(13,245)
Cash and cash equivalents at beginning of year	71,558	84,803
Cash and cash equivalents at end of year	$ 71,677	71,558

See accompanying notes to combined financial statements.

C: Orderly Development (1)
List of Managed Care Contracts

SCHEDULE N - HEALTH CARE PLANS ACCEPTED*

State ID 79276

The Health Consumer Right-to-Know Act of 1998 which was signed by Governor Sunquist in May, 1998 requires hospitals to report to the Department of Health "health care plans accepted by the hospital" as well as a variety of information that is included in earlier schedules of the Joint Annual Report. In order to allow the Joint Annual Report to meet the entire reporting requirement described in this act, please list all health insurance plans with which you currently - as of the last day of this reporting period - have a valid contract. List each plan separately not just the name of the company. For example, if you have contracts to provide services to individuals enrolled in Blue Choice and Blue Preferred, list both plans and do not only list Blue Cross & Blue Shield of Tennessee.

Plans:

Ace Pump
American Healthcare Alliance
Americraft CartonIWestern Container
Arkansas Managed Care Organization (AMCO)
Assurant Health
Beech Street Corporation
City of Dyersburg
Cityof Germantown
Crittenden Regional Hospital
Langston Companies, Inc.
Minicipal Health Benefit Fund
North Mississippi Health Link, Inc
North Mississippi Health Services Employee Health Plan
Nova Net, Inc.
Razorback Concrete Company
Secure Horizons (Medicare Advantage)
Sharp PHO
United Healthcare of Tennessee
Blue Cross Blue Shield Tennessee -Preferred
Blue Cross Arkansas
Cigna -CHMO
Cigna -Flex
Cigna -PPO
Methodist Le Bonheur Healthcare
Health Scope Benefits
AR Blue Cross MediPak (Medicare Advantage)
HealthSprings (Medicare Advantage) HMO
CBCA Administrators, Inc.
Greater Missouri Educational Trust - GMET
Health Choice PRO (Payer Requested Option) - 2006
Hospitality Management Advisors, Inc.
Principal Edge Network 9/1/2010
Second Presbyterian and Christian Psychological Center

C: Orderly Development (7)(c)
License from
Board of Licensing
Health Care Facilities

Board for Licensing Health Care Facilities

State of Tennessee

0000000109

No. of Beds 1583

DEPARTMENT OF HEALTH

This is to certify, that a license is hereby granted by the State Department of Health to

METHODIST HEALTHCARE - MEMPHIS HOSPITALS *to conduct and maintain a*

Hospital METHODIST HEALTHCARE - MEMPHIS HOSPITALS

Located at 1265 UNION AVENUE, MEMPHIS

County of SHELBY *, Tennessee.*

This license shall expire SEPTEMBER 14 *,* 2014 *, and is subject to the provisions of Chapter 11, Tennessee Code Annotated. This license shall not be assignable or transferable, and shall be subject to revocation at any time by the State Department of Health, for failure to comply with the laws of the State of Tennessee or the rules and regulations of the State Department of Health issued thereunder.*

In Witness Whereof, we have hereunto set our hand and seal of the State this 14TH *day of* SEPTEMBER *,* 2013 *.*

In the Distinct Category(ies) of: GENERAL HOSPITAL
PEDIATRIC PRIMARY HOSPITAL
TRAUMA CENTER LEVEL 2

NOV 19 '13 AM 11:24

By Vincent J. Davis, MPH
DIRECTOR, DIVISION OF HEALTH CARE FACILITIES

By John J. Dreyzehner
COMMISSIONER

C: Orderly Development (7)(d)(1) TDH Licensure Survey and Plan of Correction

FEB - 4 2008

STATE OF TENNESSEE
DEPARTMENT OF HEALTH
WEST TENNESSEE HEALTH CARE FACILITIES
781-B AIRWAYS BOULEVARD
JACKSON, TENNESSEE 38301-3203

January 29, 2008

Ms. Peggy Troy, Administrator
Methodist Healthcare Memphis Hospitals
1211 Union Avenue, Ste 700
Memphis, TN 38104

RE: Licensure Surveys

Dear Ms. Troy:

Enclosed is the statement of deficiencies for the licensure surveys completed at your facility on **January 17, 2008**. Based upon 1200-8-1, you are asked to submit an acceptable plan of correction for achieving compliance with completion dates and signature within **ten (10) days from the date of this letter.**

Please address each deficiency separately with positive and specific statements advising this office of a plan of correction that includes acceptable time schedule, which will lead to the correction of the cited deficiencies. **Enter on the right side of the State Form, opposite the deficiencies**, your planned action to correct the deficiencies and the expected completion date. The completion date can be no longer than **45 days from the day of survey.** Before the plan can be considered "acceptable," it must be signed and dated by the administrator

Your plan of correction must contain the following:

- How the deficiency will be corrected;
- How the facility will prevent the same deficiency from recurring.
- The date the deficiency will be corrected;
- How ongoing compliance will be monitored.

Please be advised that under the disclosure of survey information provisions, the Statement of Deficiencies will be available to the public.

If assistance is needed, please feel free to call me at 731-421-5113.

Sincerely,

Celia Skelley TW

Celia Skelley, MSN, RN
Public Health Consultant Nurse 2

CS/TW

STATEMENT OF DEFICIENCIES AND PLAN OF CORRECTION	(X1) PROVIDER/SUPPLIER/CLIA IDENTIFICATION NUMBER:	(X2) MULTIPLE CONSTRUCTION A. BUILDING 03 - METHODIST NORTH BUIL B. WING	(X3) DATE SURVEY COMPLETED
	TNP531109		01/16/2008

NAME OF PROVIDER OR SUPPLIER	STREET ADDRESS, CITY, STATE, ZIP CODE
METHODIST HEALTHCARE MEMPHIS HOSPIT	1265 UNION AVE SUITE 700 MEMPHIS, TN 38104

(X4) ID PREFIX TAG	SUMMARY STATEMENT OF DEFICIENCIES (EACH DEFICIENCY MUST BE PRECEDED BY FULL REGULATORY OR LSC IDENTIFYING INFORMATION)	ID PREFIX TAG	PROVIDER'S PLAN OF CORRECTION (EACH CORRECTIVE ACTION SHOULD BE CROSS-REFERENCED TO THE APPROPRIATE DEFICIENCY)	(X5) COMPLETE DATE
H 871	1200-8-1-.08 (1) Building Standards (1) The hospital must be constructed, arranged, and maintained to ensure the safety of the patient. This Rule is not met as evidenced by: Methodist North Based on observation, it was determined that the facility failed to maintain all parts of the building. The findings included; On 1/16/08 these items were found during the tour of the building: a. On the 5th floor a sprinkler head defector was found bent by room 511 in the corridor. b. On the 4th floor the oxygen storage room door would not close and latch. c. On the 3rd floor a penetration was found around the duct above the ceiling by room 308. d. On the 2nd floor at the entrance of the Cath lab by the elevators the hand rail had came lose from the wall. e. On the 2nd floor the fire doors(2-FD-222) at the entrance of the Cath Lab did not close and latch. f. On the 2nd floor at the Cardiac Short Stay a hole in the wall was found behind the fire door. g. On the 1st floor in the O R Preop holding, storage was being stored in the patient holding areas. h. In the Newborn Instension Care has 2 of 3 Emergency lights that did not work when tested. i. The door to the oxygen storage room (140) did not close and latch. j. The smoke detector outside the Dialysis room is approximately 12 inches from the supply vent from the air conditioner.	H 871	Building Standards a. Sprinkler head was repaired. A full inspection of corridor sprinkler heads was completed on 02/06/2008 with findings of 7 bent heads from a total of 278 inspected. These sprinkler heads will be replaced by March 7th. b. Door latch was replaced. Random fire door inspections will continue to ensure that all fire doors are included in the program and not just those that are located in the hallways at fire barriers. c. Repaired penetration. We believe this to be an isolated occurrence as no other penetrations were found. Continue quarterly random penetration inspections and annual full building penetration inspections. d. Changed hand rail to wall guard. Will inspect elevator service lobbies for best application of wall guard versus hand rails and change as appropriate. e. Door latch was repaired on Continue random fire door inspections and ensure that all fire doors are included in the program. f. The hole in the wall has been repaired. This appeared to an isolated incident, which occurred very recently. An inspection of every set of fire doors that are held open found that this was the only door with an issue.	01/23/08 01/17/08 01/16/08 01/22/08 01/17/08 01/18/08

Division of Health Care Facilities

TITLE (X6) DATE

LABORATORY DIRECTOR'S OR PROVIDER/SUPPLIER REPRESENTATIVE'S SIGNATURE

STATEMENT OF DEFICIENCIES AND PLAN OF CORRECTION	(X1) PROVIDER/SUPPLIER/CLIA IDENTIFICATION NUMBER: TNP531109	(X2) MULTIPLE CONSTRUCTION A. BUILDING 03 - METHODIST NORTH BUIL B. WING	(X3) DATE SURVEY COMPLETED 01/16/2008
NAME OF PROVIDER OR SUPPLIER METHODIST HEALTHCARE MEMPHIS HOSPIT	STREET ADDRESS, CITY, STATE, ZIP CODE 1265 UNION AVE SUITE 700 MEMPHIS, TN 38104		

(X4) ID PREFIX TAG	SUMMARY STATEMENT OF DEFICIENCIES (EACH DEFICIENCY MUST BE PRECEDED BY FULL REGULATORY OR LSC IDENTIFYING INFORMATION)	ID PREFIX TAG	PROVIDER'S PLAN OF CORRECTION (EACH CORRECTIVE ACTION SHOULD BE CROSS-REFERENCED TO THE APPROPRIATE DEFICIENCY)	(X5) COMPLETE DATE
H 871	Continued From page 1 k. In the basement 3 tables, a screen and a small metal cart are sitting in the corridor of the medical records. Methodist South, No Deficiencies Methodist University Hospital, No Deficiencies Methodist Grmantown Hospital, No Deficiencies Methodist Behavioral Health Hospital, No Deficiencies Methodist Lebonheur Childrens Hospital, No Deficiencies	H 871	Continued from page 1 g. Supplies were immediately removed during the survey. Unannounced random inspections will be conducted and documented by Safety / Facilities Services at least monthly in this area to ensure compliance for the next 3 months. Any deficiencies will be immediately corrected and in-service training will be immediately provided to department personnel. h. Emergency lights were replaced . Testing of the battery powered lights will occur on a monthly basis. i. Door latch was replaced. Continue random fire door inspections and ensure that all fire doors are included in the program and not just those that are located in the hallways at fire barriers. j. Smoke detector was immediately moved on the day of the inspection, As we find smoke detectors within 3 feet of a supply / return diffusers, we will move them. We aware of this requirement for all new construction / renovations and will enforce compliance. k. All items were immediately removed from the corridor during the inspection. Unannounced random inspections will be conducted and documented by Safety / Facilities Services at least monthly in this area to ensure compliance for the next 3 months. Any deficiencies will be immediately corrected and in-service training will be immediately provided to department personnel.	01/16/08 01/21/08 01/17008 01/16/08 01/16/08

STATEMENT OF DEFICIENCIES AND PLAN OF CORRECTION	(X1) PROVIDER/SUPPLIER/CLIA IDENTIFICATION NUMBER: TNP531109	(X2) MULTIPLE CONSTRUCTION A. BUILDING ____ B. WING ____	(X3) DATE SURVEY COMPLETED 01/17/2008
NAME OF PROVIDER OR SUPPLIER METHODIST HEALTHCARE MEMPHIS HOSPIT	STREET ADDRESS, CITY, STATE, ZIP CODE 1265 UNION AVE SUITE 700 MEMPHIS, TN 38104		

(X4) ID PREFIX TAG	SUMMARY STATEMENT OF DEFICIENCIES (EACH DEFICIENCY MUST BE PRECEDED BY FULL REGULATORY OR LSC IDENTIFYING INFORMATION)	ID PREFIX TAG	PROVIDER'S PLAN OF CORRECTION (EACH CORRECTIVE ACTION SHOULD BE CROSS-REFERENCED TO THE APPROPRIATE DEFICIENCY)	(X5) COMPLETE DATE
H 732	1200-8-1-.06 (9)(b) Basic Hospital Functions (9) Food and Dietetic Services. (b) The hospital must designate a person to serve as the food and dietetic services director with responsibility for the daily management of the dietary services. The food and dietetic services director shall be: 1. A dietitian; or 2. A graduate of a dietetic technician or dietetic assistant training program, correspondence or classroom, approved by the American Dietetic Association; or 3. A graduate of a state-approved course that provided ninety (90) or more hours of classroom instruction in food service supervision and has experience as a food service supervisor in a health care institution with consultation from a qualified dietitian. This Rule is not met as evidenced by: Based on review of the hospital's food service contract,of licensure regulations, of personnel files and interviews it was determined the facility failed to meet licensure qualification requirements for 3 of 5 facility Food Service Directors (Facility # 1, 2, and 3) under the hospital license and to follow these State Hospital Regulations. The findings included: 1. Review of the hospital contract for dietary services revealed the following documentation under Article 4 - Compliance with laws: "4.1 Compliance. [The food service contract	H 732	Basic Hospital Functions Qualified Interim Food and Nutrition Services Director has been named for Methodist Le Bonheur Children's Medical Center, Methodist North Hospital and Methodist South Hospital. The Food and Nutrition Services Director job description has been revised to require one of the following: 1) a dietician; or 2) a graduate of a dietetic technician or dietetic assistant training program, correspondence or classroom, approved by the American Dietetic Association; or 3) a graduate of a state-approved course that provided ninety (90) or more hours of classroom instruction in food service supervision and has experience as a food service supervisor in a health care institution with consultation from a qualified dietitian. Food and Nutrition Services Director positions have been posted and recruitment will continue to permanently fill the positions.	02/29/08

STATEMENT OF DEFICIENCIES AND PLAN OF CORRECTION	(X1) PROVIDER/SUPPLIER/CLIA IDENTIFICATION NUMBER: TNP531109	(X2) MULTIPLE CONSTRUCTION A. BUILDING B. WING	(X3) DATE SURVEY COMPLETED 01/17/2008
NAME OF PROVIDER OR SUPPLIER METHODIST HEALTHCARE MEMPHIS HOSPIT	STREET ADDRESS, CITY, STATE, ZIP CODE 1265 UNION AVE SUITE 700 MEMPHIS, TN 38104		

(X4) ID PREFIX TAG	SUMMARY STATEMENT OF DEFICIENCIES (EACH DEFICIENCY MUST BE PRECEDED BY FULL REGULATORY OR LSC IDENTIFYING INFORMATION)	ID PREFIX TAG	PROVIDER'S PLAN OF CORRECTION (EACH CORRECTIVE ACTION SHOULD BE CROSS-REFERENCED TO THE APPROPRIATE DEFICIENCY)	(X5) COMPLETE DATE
H 732	Continued From page 1 company] and the System agree to comply with all applicable laws, rules and regulations". 2. Review of personnel files for the Food Services Directors at Facilities 1, 2 and 3, failed to show they met the licensure regulations for a food service director. During an interview on 1/14/08, at 10:30 AM, the Food Service Director for Facility #1 confirmed he/she did not have the qualifications to meet the licensure regulation. During an interview on 1/15/08, at 9:30 AM, the Food Service Director for Facility #2 confirmed he/she did not have the qualifications to meet the licensure regulation. During an interview on 1/16/08, at 1:30 PM, the Hospital Clinical Risk Management Director was unable to provide documentation that the Food Service Directors from Facility 1, 2 or 3 met these Licensure Regulations.	H 732	Continued from page 1 A check off sheet will be utilized to ensure that before an individual is offered a position as Food and Nutrition Director at any facility in Methodist Le Bonheur Healthcare, the above qualifications are met and one of the following is provided to the HR Recruiter and/or Regional Director of Operations: 1) Copy of CDR Registered Dietitian card, or 2) Copy of CDR Registered Dietetic Technician card, or 3) Copy of certificate of graduation from a state approved CDM class. There will be three (3) required levels of approval for each candidate that is chosen for the food and dietetic services director position at Methodist Le Bonheur Healthcare: 1) Regional Director of Operations with Morrison 2) Regional Vice President with Morrison 3) Methodist Le Bonheur Healthcare Facility Administrative Liaison or the Methodist Le Bonheur Healthcare Facility Human Resource Director. The dietary department will be included in the quarterly Human Resource Department audit. The facility liaison Director at each facility will review the personnel files on an annual basis and at time of new hire.	

C: Orderly Development (7)(d)(2) Joint Commission Accreditation and Survey Summary

Methodist Healthcare
Memphis Hospitals
Memphis, TN

has been Accredited by

The Joint Commission

Which has surveyed this organization and found it to meet the requirements for the

Hospital Accreditation Program

April 20, 2013

Accreditation is customarily valid for up to 36 months.

Rebecca J. Patchin, MD.
Chair, Board of Commissioners

Organization ID #: 7874
Print/Reprint Date: 06/19/13

Mark R. Chassin, MD, FACP, MPP, MPH
President

The Joint Commission is an independent, not-for-profit, national body that oversees the safety and quality of health care and other services provided in accredited organizations. Information about accredited organizations may be provided directly to The Joint Commission at 1-800-994-6610. Information regarding accreditation and the accreditation performance of individual organizations can be obtained through The Joint Commission's web site at www.jointcommission.org.

This reproduction of the original accreditation certificate has been issued for use in regulatory/payer agency verification of accreditation by The Joint Commission. Please consult Quality Check on The Joint Commission's website to confirm the organization's current accreditation status and for a listing of the organization's locations of care.

The Joint Commission

June 11, 2013

Re: # 7874
CCN: #440049
Program: Hospital
Accreditation Expiration Date: April 20, 2016

Gary S. Shorb
President/CEO
Methodist Healthcare Memphis Hospitals
1211 Union Avenue
Memphis, Tennessee 38104

Dear Mr. Shorb:

This letter confirms that your April 15, 2013 - April 19, 2013 unannounced full resurvey was conducted for the purposes of assessing compliance with the Medicare conditions for hospitals through The Joint Commission's deemed status survey process.

Based upon the submission of your evidence of standards compliance on June 03, 2013 and June 04, 2013, the areas of deficiency listed below have been removed. The Joint Commission is granting your organization an accreditation decision of Accredited with an effective date of April 20, 2013. We congratulate you on your effective resolution of these deficiencies.

§482.11 Compliance with Federal, State and Local Laws
§482.13 Patient's Rights
§482.25 Pharmaceutical Services
§482.41 Physical Environment
§482.51 Surgical Services

The Joint Commission is also recommending your organization for continued Medicare certification effective April 20, 2013. Please note that the Centers for Medicare and Medicaid Services (CMS) Regional Office (RO) makes the final determination regarding your Medicare participation and the effective date of participation in accordance with the regulations at 42 CFR 489.13. Your organization is encouraged to share a copy of this Medicare recommendation letter with your State Survey Agency.

This recommendation applies to the following location(s):

Breast Diagnostic Center - Germantown
7945 Wolf River Blvd., Germantown, TN, 38138

Cardiovascular Outpatient Diagnostic Center
7460 Wolf River Blvd., Germantown, TN, 38138

Le Bonheur Children's Hospital
848 Adams, Memphis, TN, 38103

Le Bonheur Children's Hospital Audiology
7945 Wolf River Blvd., Germantown, TN, 38138

Le Bonheur Cordova Urgent Care
8035 Club Parkway, Cordova, TN, 38018

Le Bonheur East Diagnostic Center
806 Estate Place, Memphis, TN, 38120

Le Bonheur Urgent Care at Hacks Cross
8071 Winchester Rd., Ste. 2, Memphis, TN, 38125

Le Bonheur Urgent Care East
806 Estate Place, Memphis, TN, 38120

Methodist Comprehensive Wound Healing Center
1251 Wesley Drive, Suite 107, Memphis, TN, 38116

Methodist Diagnostic Center Germantown
1377 South Germantown Rd., Germantown, TN, 38138

Methodist Germantown Radiation Oncology Center
1381 South Germantown Rd., Germantown, TN, 38138

Methodist Healthcare Outpatient Services
100 North Humphreys Blvd., Memphis, TN, 38120

Methodist Healthcare Outpatient Services
1588 Union, Memphis, TN, 38104

Methodist Healthcare Outpatient Services
240 Grandview Drive, Brighton, TN, 38011

Methodist Le Bonheur Germantown Hospital
7691 Poplar Avenue, Germantown, TN, 38138

Methodist North Hospital
3960 New Covington Pike, Memphis, TN, 38128

Methodist Sleep Disorders Center
5050 Poplar Suite 300, Memphis, TN, 38114

The Joint Commission

Methodist South Hospital
1300 Wesley Drive, Memphis, TN, 38116

Methodist University Hospital
1265 Union Avenue, Memphis, TN, 38104

MHMH GI Lab - Southwind
3725 Champion Hills Drive, Memphis, TN, 38125

Midtown Diagnostic Center
1801 Union Ave, Memphis, TN, 38104

North Comprehensive Wound Healing Center
3950 New Covington Pike, Memphis, TN, 38128

We direct your attention to some important Joint Commission policies. First, your Medicare report is publicly accessible as required by the Joint Commission's agreement with the Centers for Medicare and Medicaid Services. Second, Joint Commission policy requires that you inform us of any changes in the name or ownership of your organization, or health care services you provide.

Sincerely,

Mark Pelletier

Mark G. Pelletier, RN, MS
Chief Operating Officer
Division of Accreditation and Certification Operations

cc: CMS/Central Office/Survey & Certification Group/Division of Acute Care Services
CMS/Regional Office 4 /Survey and Certification Staff

www.jointcommission.org

Headquarters
One Renaissance Boulevard
Oakbrook Terrace, IL 60181
630 792 5000 Voice

C: Proof of Publication

Legal Notices: General 526

Legal Notices: General 526

SUBSTITUTE TRUSTEE'S ... scription of the property

NOTIFICATION OF INTENT TO APPLY FOR A CERTIFICATE OF NEED

This is to provide official notice to the Health Services and Development Agency and all interested parties, in accordance with T.C.A. § 68-11-1601 et seq., and the Rules of the Health Services and Development Agency, that Methodist Healthcare-Memphis Hospitals (a general hospital), owned and managed by Methodist Healthcare-Memphis Hospitals (a not for profit corporation), intends to file an application for a Certificate of Need to establish a comprehensive cancer center, to relocate linear accelerator, positron emission tomography/computed tomography (PET/CT), magnetic resonance imaging (MRI) and computed tomography (CT) services and equipment, to replace the MRI equipment, to acquire an additional linear accelerator and to establish ambulatory operating rooms. The facility will be located at 7945 Wolf River Boulevard, Germantown, TN 38138 and will be operated as an outpatient department of Methodist Healthcare – Memphis Hospitals under the name WEST CANCER CENTER. The project includes a full array of cancer services and programs. The project involves approximately 8,050 square feet of new space and 101,235 of renovated space. This project does not involve inpatient beds or other services for which a certificate of need is required. The estimated project costs are $60,554,193.

The anticipated date of filing the application is on or before November 13, 2013. The contact person for this project is Carol Weidenhoffer, Corporate Director of Planning, Research and Business Development, who may be reached at: Methodist Healthcare, 1407 Union Avenue, Suite 300, Memphis, TN, 38104, 901-516-0679.

Upon written request by interested parties, a local Fact-Finding public hearing shall be conducted. Written requests for hearing should be sent to:

Health Services and Development Agency
Andrew Jackson Building, 9th Floor
502 Deaderick Street
Nashville, Tennessee 37243

Pursuant to T.C.A. § 68-11-1607(c)(1), (A) Any health care institution wishing to oppose a Certificate of Need application must file a written notice with the Health Services and Development Agency no later than fifteen (15) days before the regularly scheduled Health Services and Development Agency meeting at which the application is originally scheduled; and (B) Any other person wishing to oppose the application must file written objection with the Health Services and Development Agency at or prior to the consideration of the application by the Agency.

Legal Notices: General 526

attempt to collect a debt ... without further publication, upon announcement at the time and place for the sale set forth above. W&A No. 1286 109175

DATED November 5, 2013
WILSON & ASSOCIATES P.L.L.C.
Successor Trustee
1521 Merrill Drive,
Suite D-220
Little Rock, Arkansas 72211
(501) 219-9388
W&A No. 1286 109175
FHA No. 483-3571082
CAST: November 8, 2013
November 15, 2013
November 22, 2013
FOR SALE INFORMATION, VISIT WWW.MYFIR.COM and WWW.REALTYTRAC.COM

SUBSTITUTE TRUSTEE'S SALE

Sale at public auction will be on December 10, 2013 at 10:00AM local time, at the north door, Tipton County Courthouse, Covington, Tennessee pursuant to Deed of Trust executed by Courtney D. Wilburn, single woman, to Robert L. Crawford, Trustee, as trustee for Mortgage Electronic Registration Systems, Inc. ("MERS"), solely as nominee for Evolve Bank & Trust on August 26, 2011 at Record Book 1526, Page 639, Instrument No. 150429; conducted by Shapiro & Kirsch, LLP having been appointed Substitute or Successor Trustee, all of record in the Tipton County Register's Office. Default has occurred in the performance of the covenants, terms, and conditions of said Deed of Trust and the entire indebtedness has been declared due and payable.

Party Entitled to Enforce the Debt: Wells Fargo Bank, NA, its successors and assigns

The following real estate located in Tipton County, Tennessee, will be sold to the highest call bidder:

Described property located at Tipton County, Tennessee, to wit:

Lot 122, Williamsburg Estates, Section E, as shown on Plat of record in Plat Cabinet E, Slide 85, in the Register's Office of Tipton County, Tennessee, to which plat reference is hereby made for a more particular description of said property.

Being the same property conveyed to Susan Wells by Warranty Deed of record at Book 1295, Pages 300-301, dated August 18, 2006, filed August 30, 2006, in the Register's Office of Tipton County, Tennessee.

Legal Notices: General 526

Being the same property ... Trust, said property being real estate situated in Weakley County, Tennessee, and being more particularly described as follows:

Situated in the Seventh (7th) Civil District in the County of Weakley, in the State of Tennessee, and described as follows:

Tract 1

Lot Number 21 in the Gene Crawford Subdivision of the City of Dresden, Tennessee, a plat of which is of record in Plat Book 2, Page 8 ROWCT, to which reference is hereby made for a more complete description.

Tract 2

Lot Number 22 in the Gene Crawford Subdivision of the City of Dresden, Tennessee, a plat of which is of record in Plat Book 2, Page 8 ROWCT, to which reference is hereby made for a more complete description.

ALSO KNOWN AS: 9030 Highway 22, Dresden, Tennessee 38225

This sale is subject to all matters shown on any applicable recorded plat; any unpaid taxes; any restrictive covenants, easements, or setback lines that may be applicable; any statutory rights of redemption of any governmental agency, state or federal; any prior liens or encumbrances as well as any priority created by a fixture filing; and to any matter that an accurate survey of the premises might disclose. In addition, the following parties may claim an interest in the above-referenced property: David A. Campbell; Joann Campbell; First State Bank; David A. Campbell; Joann Campbell

The sale held pursuant to this Notice may be rescinded at the Successor Trustee's option at any time. The right is reserved to adjourn the day of the sale to another day, time, and place certain without further publication, upon announcement at the time and place for the sale set forth above. W&A No. 1286 234685

DATED October 29, 2013
WILSON & ASSOCIATES P.L.L.C.
Successor Trustee
1521 Merrill Drive,
Suite D-220
Little Rock, Arkansas 72211
(501) 219-9388
FHA No. 482-4192026
W&A No. 1286 234685
CAST: November 8, 2013
November 15, 2013
November 22, 2013

Legal Notices: General 526

DSaleNoticeTN-shellie-sw... executed by Helen Marie Gurley, an unmarried person, to Wesley D. Turner, Trustee, on May 7, 2004 at Book D725, Page 414; all of record in the Fayette County Register's Office.

Party entitled to enforce security interest: Wells Fargo Bank, N.A., as Trustee, for the certificate holders of the Asset-Backed Pass-Through Certificates, Series 2004-WCW1, its successors and assigns

The following real estate located in Fayette County, Tennessee, will be sold to the highest call bidder subject to all unpaid taxes, prior liens and encumbrances of record:

Description of Lot 45, Proposed Phase III, Timberlane Subdivision in Civil District Number Six, Fayette County, Tennessee.

Street Address: 211 Walnut Bend Road, Arlington, Tennessee 38002

Parcel Number: 039-108.09

Current Owner(s) of Property: Helen Marie Gurley, unmarried

The street address of the above described property is believed to be 211 Walnut Bend Road, Arlington, Tennessee 38002, but such address is not part of the legal description of the property sold herein and in the event of any discrepancy, the legal description referenced herein shall control.

SALE IS SUBJECT TO TENANT(S) RIGHTS IN POSSESSION.

SUBJECT TO A 1998 Fleetwood MANUFACTURED HOME, SERIAL NUMBER MSFLW23A40273 and MSFLW23B40273, IS BELIEVED TO BE PERMANENTLY AFFIXED TO THE REAL PROPERTY. IT SHALL BE THE RESPONSIBILITY OF THE PURCHASER TO UNDERTAKE ANY AND ALL LEGAL STEPS NECESSARY TO OBTAIN THE TITLE TO SAID MOBILE HOME.

All right of equity of redemption, statutory and otherwise, and homestead are expressly waived in said Deed of Trust, and the title is believed to be good, but the undersigned will sell and convey only as Substitute Trustee.

If you purchase a property at the foreclosure sale, the entire purchase price is due and payable at the conclusion of the auction in the form of a certified/bank check. No personal checks will be accepted. To this end, you must bring sufficient

NOV 13 '13 AM 11:24

NOV 13 '13 11:04

AFFIDAVIT

STATE OF Tennessee

COUNTY OF Shelby

Erich Mounce being first duly sworn, says that he/she is the applicant named in this application or his/her/its lawful agent, that this project will be completed in accordance with the application, that the applicant has read the directions to this application, the Rules of the Health Services and Development Agency, and T.C.A. § 68-11-1601, *et seq.*, and that the responses to this application or any other questions deemed appropriate by the Health Services and Development Agency are true and complete.

CEO
SIGNATURE/TITLE

Sworn to and subscribed before me this 7th day of November (Month) 2013 (Year) a Notary

Public in and for the County/State of Shelby

ANDREA WILLIAMS
STATE OF TENNESSEE NOTARY PUBLIC
COUNTY OF SHELBY
MY COMM. EXP. JUNE 5, 2017

Andrea Williams
NOTARY PUBLIC

My commission expires June 5th (Month/Day), 2017 (Year)

NOV 13 '13 PM 3:20

LETTER OF INTENT
TENNESSEE HEALTH SERVICES AND DEVELOPMENT AGENCY

The Publication of Intent is to be published in the Commercial Appeal which is a newspaper of general circulation in Shelby County, Tennessee, on or before November 10, 2013 for one day.

==========

This is to provide official notice to the Health Services and Development Agency and all interested parties, in accordance with T.C.A. § 68-11-1601 *et seq.*, and the Rules of the Health Services and Development Agency, that Methodist Healthcare-Memphis Hospitals (a general hospital), owned and managed by Methodist Healthcare-Memphis Hospitals (a not for profit corporation), intends to file an application for a Certificate of Need to establish a comprehensive cancer center, to relocate linear accelerator, positron emission tomography/computed tomography (PET/CT), magnetic resonance imaging (MRI) and computed tomography (CT) services and equipment, to replace the MRI equipment, to acquire an additional linear accelerator and to establish ambulatory operating rooms. The facility will be located at 7945 Wolf River Boulevard, Germantown, TN 38138 and will be operated as an outpatient department of Methodist Healthcare – Memphis Hospitals under the name WEST CANCER CENTER. The project includes a full array of cancer services and programs. The project involves approximately 8,050 square feet of new space and 101,235 of renovated space. This project does not involve inpatient beds or other services for which a certificate of need is required. The estimated project costs are $60,554,193.

The anticipated date of filing the application is on or before November 13, 2013. The contact person for this project is Carol Weidenhoffer, Corporate Director of Planning, Research and Business Development, who may be reached at: Methodist Healthcare, 1407 Union Avenue, Suite 300, Memphis, TN, 38104, 901-516-0679.

Carol Weidenhoffer	11/7/2013	Carol.Weidenhoffer@mlh.org
(Signature)	(Date)	(E-mail Address)

==========

The Letter of Intent must be <u>filed in triplicate</u> and <u>received between the first and the tenth</u> day of the month. If the last day for filing is a Saturday, Sunday or State Holiday, filing must occur on the preceding business day. File this form at the following address:

Health Services and Development Agency
Andrew Jackson Building, 9th Floor
502 Deaderick Street
Nashville, Tennessee 37243

==========

The published Letter of Intent must contain the following statement pursuant to T.C.A. § 68-11-1607(c)(1). (A) Any health care institution wishing to oppose a Certificate of Need application must file a written notice with the Health Services and Development Agency no later than fifteen (15) days before the regularly scheduled Health Services and Development Agency meeting at which the application is originally scheduled; and (B) Any other person wishing to oppose the application must file written objection with the Health Services and Development Agency at or prior to the consideration of the application by the Agency.

==========

State of Tennessee
Health Services and Development Agency
Frost Building, 3rd Floor, 161 Rosa L. Parks Boulevard, Nashville, TN 37243
www.tn.gov/hsda Phone: 615-741-2364/Fax: 615-741-9884

November 19, 2013

Ms. Carol Weidenhoffer
Corporate Director of Planning,
Research and Business Development
Methodist Le Bonheur Healthcare
1407 Union Avenue, Suite 300
Memphis, TN 38104

RE: Certificate of Need Application CN1311-043
Methodist Healthcare Memphis Hospitals – West Cancer Center

Dear Ms. Weidenhoffer:

This will acknowledge our November 13, 20131 receipt of Methodist Healthcare Memphis Hospital's application for a Certificate of Need to establish a comprehensive cancer center. The proposed project will include the following: 1) relocation of a linear accelerator, positron emission tomography/computed tomography (PET/CT), magnetic resonance (MRI) and computed tomography (CT) services and equipment, 2) replacement of MRI equipment, 3) an additional linear accelerator, and 4) the establishment of ambulatory operating rooms. The facility will be located at 7945 Wolf River Boulevard, Germantown (Shelby County), TN 38138.

Several items were found which need clarification or additional discussion. Please review the list of questions below and address them as indicated. The questions have been keyed to the application form for your convenience. I should emphasize that an application cannot be deemed complete and the review cycle begun until all questions have been answered and furnished to this office.

Please submit responses in triplicate by 12:00 PM, Monday, November 25, 2013. If the supplemental information requested in this letter is not submitted by or before this time, then consideration of this application may be delayed into a later review cycle.

---

1. **Section A, (Applicant Profile) Item 1 (Name and Address of Applicant)**

   Your response is noted. All Certificates of Need are site specific. Please provide a revised first page of the application which accurately identifies the address of the building into which the proposed project will be located.

2. **Section A, Applicant Profile, Item 4**

   Please provide a copy of the applicant's corporate charter from the Tennessee Secretary of State's web-site that indicates the Corporation (Not-for-profit) has an active status. The web-site address is **https://tnbear.tn.gov/Ecommerce/FilingSearch.aspx**

3. **Section A, (Applicant Profile) Item 6 (Control of the proposed Site)**

   Please provide referenced Attachment A:6 to demonstrate ownership of the proposed site.

4. **Section A, (Applicant Profile) Item 13**

   The applicant is noted as participating in the Dual Complete (a Special Needs Plan). Please provide additional information regarding this plan and what type of members are enrolled.

5. **Section B, Project Description, Item 1**

   Please define "exurban areas".

   The combined average utilization of nine (9) LINAC units in the service area of 6,596 is noted. However, according to HSDA equipment registry data there appears to be eight (8) LINACs in Shelby County in 2012 excluding St. Jude Children's Hospital. Please clarify.

   The reference to significant racial disparities in cancer rates for Shelby County and surrounding counties is noted. Please cite the source for the following statements:

   - "Research shows that the black population tends to have higher occurrences of cancer as compared to whites, and blacks in the community die disproportionately from all cancer when compared to other races".
   - "Memphis was identified as the city with the largest disparity in breast cancer mortality rates between black and white women".

   The applicant plans to consolidate multiple freestanding ambulatory sites into the proposed integrated comprehensive cancer center. Please clarify what the plan is for the space that will become empty at the former multiple freestanding ambulatory sites if this application is approved.

   It is noted the breast center will be located on the first floor. Currently, what type of services occupies the remaining three stories of the building that is slated to house the cancer center?

   What other cancer services will be available at other Methodist locations?

   Will West clinic Surrender CONs for PET and MRI at the current site?

   Is Methodist surrendering the CON for LINAC at the current site?

The applicant notes the hospital-based unit at Germantown performs more than 11,000 procedures annually as compared to 8,736 which State Health Plan defines as full capacity. The applicant further states this is at 130% capacity. Please apply the same methodology to all LINACS in the combined Methodist system that are located in the proposed service area.

6. **Section B, Project Description, Item 1I.A.**

   There appears to be calculation errors in the Square Footage and Cost Per Square Footage Chart. The new proposed final square footage for new construction of 8,050 sq. ft. appears to be incorrect and the total proposed final square footage of 109,285 appears to be incorrect. Please recalculate and revise if needed.

7. **Section B, Project Description, Item 1I.C.**

   Table 2 which summarizes the moveable equipment is noted. Please add a column to Table 2 that reflects the distance from the old location to the new location.

   The chart notes the MRI 1.5T will be replaced when relocated. Please clarify if the new MRI will be similar with the exact capabilities. If not, please describe any upgrades or differences.

8. **Section C, Need, Item 1.a. (Construction, Renovation, Expansion, and Replacement of Health Care Institutions) Item 3.a**

   Table 8 of the cancer incidence percent increase from 2013 rates, 2018 and 2023 by cancer type by county is noted. However, please also include Tipton County in the table and resubmit a replacement page.

9. **Section C, Need, Item 1.a. (Construction, Renovation, Expansion, and Replacement of Health Care Institutions) Item 3.b**

   Please address item 3.b of the Construction, Renovation, Expansion, and Replacement of Health Institutions Criteria. If the question does not apply, please note N/A.

10. **Section C, Need, Item 1.a. (Megavoltage Radiation Therapy Services) Item 3.C**

    In Table 14 the applicant notes there was one (1) linear accelerator in Desoto County, Mississippi from 2010 to 2012. However, according to a report by the Mississippi Division of Health Planning and Resource Development (May 2013) there may be an additional Linear Accelerator recently approved for Baptist Memorial Hospital –Desoto. Please contact the Mississippi Division of Health Planning and Resource Development and confirm the addition of a linear accelerator to Baptist Memorial Hospital-Desoto (BMH-D).

    In addition, in the Mississippi Division of Health Planning and Resource Development, May 2013 report (http://msdh.ms.gov/msdhsite/index.cfm/29,5416,84,pdf/Baptist%20Memorial%20Hospital%20Desoto.pdf), it is noted that 21.08%, or 68 patients migrate from Shelby County to Baptist Memorial Hospital-Desoto for linear accelerator services. Please discuss how the

possible addition of one linear accelerator to Baptist Memorial Hospital-Desoto's Inventory will impact the proposed procedures by the applicant in Year One and Year Two of the proposed project.

Please clarify if The West Clinic has any ownership interest or management relationships with the Linear Accelerator Service currently available at Baptist Memorial Hospital-Desoto located in Mississippi.

11. **Section C, Need, Item 1.a. (Service Specific Criteria (Megavoltage Radiation Therapy Services) Item 6.e.**

    What are the staffing and quality assurance requirements the applicant states will be met? What is the name of the accrediting authority that maintains oversight of the staffing and quality assurance requirements the applicant states is being met?

12. **Section C, Need, Item 1.a. (Service Specific Criteria (Megavoltage Radiation Therapy Services) Item 8.a.**

    The applicant notes 8.a. is not applicable. Please clarify if there are no medically underserved areas as designated by the United States Health Resources and Services Administration in the proposed service area.

13. **Section C, Need, Item 1.a. (Service Specific Criteria (Megavoltage Radiation Therapy Services) Item 8.b.**

    Please demonstrate that the existing physical plant's condition warrants major renovation or expansion. Referring to other parts of the application is not an adequate response.

14. **Section C. (Need) Item 3.**

    Please provide a map of the entire state of Tennessee designating the applicant's declared service area counties. Please provide distinctive highlighting/ markings to readily differentiate the service area counties from the other non-service area counties.

15. **Section C. (Need) Item 4 (Socio-Demographic Information of the Service Area)**

    Your response to this item is noted. Using population data from the Department of Health, enrollee data from the Bureau of TennCare, and demographic information from the US Census Bureau, please complete the following table and include data for each county in your proposed service area.

Variable	Shelby County	Fayette County	Tipton County	DeSoto County	*Service Area*	*Tennessee*
Current Year (CY), Age 65+						
Projected Year (PY), Age 65+						
Age 65+, % Change						
Age 65+, % Total (PY)						
CY, Total Population						

PY, Total Population						
Total Pop. % Change						
TennCare Enrollees						
TennCare Enrollees as a % of Total Population						
Median Age						
Median Household Income						
Population % Below Poverty Level						

16. Section C. (Need) Item 5.

The applicant notes Baptist Memorial-Tipton Hospital has two unimplemented CONs (CN1211-057A and CN1105-018A) to create a cancer center close to the Memphis hospital campus. Please indicate the distance from the applicant's proposed site to Baptist Memorial-Tipton Hospital's approved site that will create a new cancer center. Also, please clarify if the unimplemented CONs (CN1211-057 and CN1105-018) will add additional linear accelerators to the applicant's proposed service area.

17. Section C. (Economic Feasibility) Item 1. (Project Cost Chart)

The following definition regarding lease cost in Tennessee Health Services and Development Agency Rule 0720-9-.01 (4)(c) states "If the acquisition is by lease, the cost is either the fair market value of the of the lease, or the total amount of the lease payments, whichever is greater."
Please provide a calculation of both the sum of the lease payments over the term of the lease as well as a determination of the fair market value (FMV) of the leased space into which the proposed cancer center will be located.

In the Project Costs Chart, the applicant refers to two separate lists. Please clarify where these lists are located. If necessary, please note the location of the list on the Project Costs Chart and resubmit a revised chart.

18. Section C. (Economic Feasibility) Question 3

Please compare the hospital cost per square foot to the following hospital construction CON approved application for years 2010 through 2012:

Hospital Construction Cost Per Square Foot
Years: 2010-2012

	Renovated Construction	New Construction	Total Construction
1st Quartile	$99.12/sq. ft.	$234.64/sq. ft.	$167.99/sq. ft.
Median	$177.60/sq. ft.	$259.66/sq. ft.	$235.00/sq. ft.
3rd Quartile	$249.00/sq. ft.	$307.80/sq. ft.	$274.63/ sq. ft.

19. Section C. (Economic Feasibility) Question 4 (Projected Data Chart)

Please provide a projected Data Chart for the proposed Cancer Center only.

Please provide a Projected Data Chart for the Proposed Additional Linear Accelerator only.

The Projected Data Chart for Methodist Healthcare-Memphis Hospitals is noted. Please complete the following tables and place the tables on a separate page labeled 46A to be located after the Projected Data Chart for Methodist Healthcare-Memphis Hospitals:

PROJECTED DATA CHART-OTHER OPERATING REVENUE

OTHER OPERATING REVENUE CATEGORIES	Year____	Year___
1.	$_____	$_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
Total Other Operating Revenue	$_____	$_____

PROJECTED DATA CHART-OTHER EXPENSES

OTHER EXPENSES CATEGORIES	Year____	Year___
1.	$_____	$_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
Total Other Expenses	$_____	$_____

20. **Section C. (Economic Feasibility) Question 6.A**

Please compare the hospital Gross Charges per Procedure/Treatment by quartiles for years 2010 through 2012 using the following table:

Gross Charges per Procedure/Treatment
By Quartiles
YEAR = 2012

Equipment Type	1st Quartile	Median	3rd Quartile
CT Scanner	$887.60	$1,735.40	$2,680.89
Linear Accelerator	$849.62	$1,077.79	$1,406.21
Lithotripter	$8,200.00	$12,288.61	$17,237.00
MRI	$1,598.11	$2,129.25	$3,321.60
PET Scanner	$3,667.96	$4,497.71	$6,304.71
Source: Medical Equipment Registry - 6/28/2013			

21. **Section C. (Economic Feasibility) Question 9**

The patient mix during the first full year of operation is noted. The patient payor mix appears to be for Methodist overall. Please provide a table of the Projected Data Mix for Year 2016 specific to the proposed project.

22. Section C, Contribution to Orderly Development, Item 3.

What will be the staffing pattern for the proposed project?

Please provide a comparison of the clinical staff salaries in the proposal to prevailing wage patterns in the service area either through comparison of the applicant's facility with similar previously approved projects within the primary service area, through the Tennessee Department of Labor & Workforce Development publications, or other published sources.

23. Proof of Publication

Please submit a copy of the full page of the newspaper in which the notice of intent appeared with the mast and dateline intact or submit a publication affidavit which is supplied by the newspaper as proof of the publication of the letter of intent.

In accordance with Tennessee Code Annotated, §68-11-1607(c) (5), "...If an application is not deemed complete within sixty (60) days after written notification is given to the applicant by the agency staff that the application is deemed incomplete, the application shall be deemed void." In accordance with Tennessee Code Annotated, §68-11-1607(c) (5), "...If an application is not deemed complete within sixty (60) days after written notification is given to the applicant by the agency staff that the application is deemed incomplete, the application shall be deemed void." **For this application the sixtieth (60th) day after written notification is January 17, 2014. If this application is not deemed complete by this date, the application will be deemed void.** Agency Rule 0720-10-.03(4) (d) (2) indicates that "Failure of the applicant to meet this deadline will result in the application being considered withdrawn and returned to the contact person. Re-submittal of the application must be accomplished in accordance with Rule 0720-10-.03 and requires an additional filing fee." Please note that supplemental information must be submitted timely for the application to be deemed complete prior to the beginning date of the review cycle which the applicant intends to enter, even if that time is less than the sixty (60) days allowed by the statute. The supplemental information must be submitted with the enclosed affidavit, which shall be executed and notarized; please attach the notarized affidavit to the supplemental information.

If all supplemental information is not received and the application officially deemed complete prior to the beginning of the next review cycle, then consideration of the application could be delayed into a later review cycle. The review cycle for each application shall begin on the first day of the month after the application has been deemed complete by the staff of the Health Services and Development Agency.

Any communication regarding projects under consideration by the Health Services and Development Agency shall be in accordance with T.C.A. ∋ 68-11-1607(d):

(1) No communications are permitted with the members of the agency once the Letter of Intent initiating the application process is filed with the agency. Communications between agency members and agency staff shall not be prohibited. Any communication received by an agency member from a person unrelated to the applicant or party opposing the application shall be reported to the Executive Director and a written summary of such communication shall be made part of the certificate of need file.

(2) All communications between the contact person or legal counsel for the applicant and the Executive Director or agency staff after an application is deemed complete and placed in the review cycle are prohibited unless submitted in writing or confirmed in writing and made part of the certificate of need application file. Communications for the purposes of clarification of facts and issues that may arise after an application has been deemed complete and initiated by the Executive Director or agency staff are not prohibited.

Should you have any questions or require additional information, please do not hesitate to contact this office.

Sincerely,

Phillip M. Earhart
HSD Examiner

Enclosure/PME

State of Tennessee
Health Services and Development Agency
Frost Building, 3rd Floor, 161 Rosa L. Parks Boulevard, Nashville, TN 37243
www.tn.gov/hsda Phone: 615-741-2364/Fax: 615-741-9884

November 26, 2013

Ms. Carol Weidenhoffer
Corporate Director of Planning,
Research and Business Development
Methodist Le Bonheur Healthcare
1407 Union Avenue, Suite 300
Memphis, TN 38104

RE: Certificate of Need Application CN1311-043
Methodist Healthcare Memphis Hospitals – West Cancer Center

Dear Ms. Weidenhoffer:

This will acknowledge our November 25, 2013 receipt of Methodist Healthcare Memphis Hospital's supplemental response for a Certificate of Need to establish a comprehensive cancer center. The proposed project will include the following: 1) relocation of a linear accelerator, positron emission tomography/computed tomography (PET/CT), magnetic resonance (MRI) and computed tomography (CT) services and equipment, 2) replacement of MRI equipment, 3) an additional linear accelerator, and 4) the establishment of ambulatory operating rooms. The facility will be located at 7945 Wolf River Boulevard, Germantown (Shelby County), TN 38138.

Several items were found which need clarification or additional discussion. Please review the list of questions below and address them as indicated. The questions have been keyed to the application form for your convenience. I should emphasize that an application cannot be deemed complete and the review cycle begun until all questions have been answered and furnished to this office.

Please submit responses in triplicate by 12:00 PM, Wednesday, November 27, 2013. If the supplemental information requested in this letter is not submitted by or before this time, then consideration of this application may be delayed into a later review cycle.

---

1. **Section C, Need, Item 1.a. (Service Specific Criteria (Megavoltage Radiation Therapy Services) Item 6.e.**

   The American College of Radiology Radiation Oncology Practice Accreditation Program Requirements in Attachment 7 is noted. However, please expand on how the applicant plans to meet the MRT Unit staffing requirements as set forth by this accrediting authority.

In accordance with Tennessee Code Annotated, §68-11-1607(c) (5), "...If an application is not deemed complete within sixty (60) days after written notification is given to the applicant by the agency staff that the application is deemed incomplete, the application shall be deemed void." In accordance with Tennessee Code Annotated, §68-11-1607(c) (5), "...If an application is not deemed complete within sixty (60) days after written notification is given to the applicant by the agency staff that the application is deemed incomplete, the application shall be deemed void." **For this application the sixtieth (60th) day after written notification is January 17, 2014. If this application is not deemed complete by this date, the application will be deemed void.** Agency Rule 0720-10-.03(4) (d) (2) indicates that "Failure of the applicant to meet this deadline will result in the application being considered withdrawn and returned to the contact person. Re-submittal of the application must be accomplished in accordance with Rule 0720-10-.03 and requires an additional filing fee." Please note that supplemental information must be submitted timely for the application to be deemed complete prior to the beginning date of the review cycle which the applicant intends to enter, even if that time is less than the sixty (60) days allowed by the statute. The supplemental information must be submitted with the enclosed affidavit, which shall be executed and notarized; please attach the notarized affidavit to the supplemental information.

If all supplemental information is not received and the application officially deemed complete prior to the beginning of the next review cycle, then consideration of the application could be delayed into a later review cycle. The review cycle for each application shall begin on the first day of the month after the application has been deemed complete by the staff of the Health Services and Development Agency.

Any communication regarding projects under consideration by the Health Services and Development Agency shall be in accordance with T.C.A. ɜ 68-11-1607(d):

(1) No communications are permitted with the members of the agency once the Letter of Intent initiating the application process is filed with the agency. Communications between agency members and agency staff shall not be prohibited. Any communication received by an agency member from a person unrelated to the applicant or party opposing the application shall be reported to the Executive Director and a written summary of such communication shall be made part of the certificate of need file.

(2) All communications between the contact person or legal counsel for the applicant and the Executive Director or agency staff after an application is deemed complete and placed in the review cycle are prohibited unless submitted in writing or confirmed in writing and made part of the certificate of need application file. Communications for the purposes of clarification of facts and issues that may arise after an application has been deemed complete and initiated by the Executive Director or agency staff are not prohibited.

Should you have any questions or require additional information, please do not hesitate to contact this office.

Sincerely,

Phillip M. Earhart
HSD Examiner

Enclosure/PME

SUPPLEMENTAL - #1
-COPY-

Methodist Healthcare Memphis Hospitals – West Cancer Center

CN1311-043

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

TRAUGER & TUKE
ATTORNEYS AT LAW
THE SOUTHERN TURF BUILDING
222 FOURTH AVENUE NORTH
NASHVILLE, TENNESSEE 37219-2117
TELEPHONE (615) 256-8585
TELECOPIER (615) 256-7444

November 25, 2013

VIA HAND DELIVERY

Ms. Melanie Hill
Executive Director
Tennessee Health Services & Development Agency
502 Deaderick Street, 9th Floor
Nashville, TN 37243

RE: Response to Supplemental questions to Methodist Healthcare
Memphis Hospitals West Cancer Center
Certificate of Need – CN1311-043

Dear Ms. Hill:

Enclosed please find a Supplemental Response, in triplicate, to be filed on behalf of my client, Methodist Healthcare. Please date stamp the additional enclosed copy of the Response and return it to me.

Thank you for your assistance.

Very truly yours,

Byron R. Trauger

BRT/kmn

Enclosures

cc: Carol Weidenhoffer

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

METHODIST HEALTHCARE – MEMPHIS HOSPITALS

SUPPLEMENTAL RESPONSE

CN1311-043
THE WEST CANCER CENTER – AN INTEGRATED COMPREHENSIVE CANCER CENTER

MEMPHIS, SHELBY COUNTY

Filed November 2013

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

1. **Section A, (Applicant Profile) Item 1 (Name and Address of Applicant)**

   Your response is noted. All Certificates of Need are site specific. Please provide a revised first page of the application which accurately identifies the address of the building into which the proposed project will be located.

   Please see Attachment 1 for the revised first page with the corrected address for this project. The address originally listed was the address for the Methodist Healthcare–Memphis Hospitals main hospital campus.

2. **Section A, Applicant Profile, Item 4**

   Please provide a copy of the applicant's corporate charter from the Tennessee Secretary of State's web-site that indicates the Corporation (Not-for-profit) has an active status. The web-site address is https://tnbear.tn.gov/Ecommerce/FilingSearch.aspx

   Please see Attachment 2 for the document from the Tennessee Secretary of State's website showing Methodist Healthcare-Memphis Hospitals' active status.

3. **Section A, (Applicant Profile) Item 6 (Control of the proposed Site)**

   Please provide referenced Attachment A:6 to demonstrate ownership of the proposed site.

   Please see Attachment 3 for the Contract to Purchase demonstrating ownership of the proposed site.

4. **Section A, (Applicant Profile) Item 13**

   The applicant is noted as participating in the Dual Complete (a Special Needs Plan). Please provide additional information regarding this plan and what type of members are enrolled.

   The United Healthcare Special Needs plan is "a type of Medicare Advantage plan for people who receive both Medicare and Medicaid (also referred to as "dual eligible")." The plan "combines all the benefits of Original Medicare (Part A and B) with prescription drug coverage (Part D)." "Many plans have $0 to low monthly premium, beyond what you pay for Part B. Depending on the specific plan, benefits may also include care coordination, routine vision and dental coverage, credits to purchase everyday health items like vitamins, first aid supplies, and dental care products, and transportation to your medical appointments." (source: https://www.uhcmedicaresolutions.com/health-plans/special-needs.html)

5. **Section B, Project Description, Item 1**

Please define "exurban areas".

An exurban area is defined by dictionary.com as a small, usually prosperous, community situated beyond the suburbs of a city.

The combined average utilization of nine (9) LINAC units in the service area of 6,596 is noted. However, according to HSDA equipment registry data there appears to be eight (8) LINACs in Shelby County in 2012 excluding St. Jude Children's Hospital. Please clarify.

The service area includes Shelby, Fayette and Tipton counties in Tennessee, DeSoto and Marshall counties in Mississippi and Crittenden County, Arkansas. There are ten LINACs in Shelby County; two of which are St. Jude Children's Hospital's and are excluded from the calculation as noted below. In 2012, the eight LINACs in Shelby County (excluding St. Jude) performed 49,213 procedures for an average per unit of 6,152 which is above the 6,000 threshold.

Yet, there was also one LINAC in DeSoto County in 2012 which is in the service area and was included in the original response. See the excerpt and table below from the originally filed application summarizing the nine units – eight in Shelby and one in DeSoto.

The combined average utilization of existing LINAC units in the service area is 5,527 in 2012. Yet, St. Jude Children's Research Hospital is an internationally recognized pediatric hospital dedicated to research and treatment for children with cancer and other catastrophic diseases. St. Jude is caring for a unique population of patients. Excluding St. Jude's volumes and equipment from the market calculation, the average for LINAC volumes per unit is 6,596 in 2012 which is well above the 6,000 threshold. See the table below for LINAC market utilization.

TABLE 1
METHODIST SERVICE AREA
LINEAR ACCELERATOR EQUIPMENT AND UTILIZATION, 2010-2012

Facility Type	Facility	2010		2011		2012	
		Procs	# of Units	Procs	# of Units	Procs	# of Units
HOSP	Methodist Healthcare	21,287	3	21,049	3	23,756	3
HOSP	Baptist Memorial Hospital-Memphis	10,989	3	11,343	3	11,052	2
ASTC	Baptist Memorial Hospital-Tipton/Germantown	7,365	1	5,270	1	7,610	1
HOSP	Regional Medical Center at Memphis (The Med) [1]	87	1	-	-	-	-
HOSP	St. Francis Hospital – Park	7,508	2	7,576	2	6,795	2
HOSP	St. Jude Children's Research Hospital	5,789	2	4,800	2	1,437	2
HOSP	Baptist Memorial Hospital – DeSoto	7,152	1	7,187	1	10,152	1
Total Procedures		60,177	13	57,225	12	80,802	11
Average Procedures per Unit		4,629		4,769		5,527	
Total Procedures without St. Jude		53,388	11	52,425	10	59,365	9
Average Procedures per Unit without St. Jude		4,944		5,243		6,596	

Source: 2008-10 TN HSDA - State Equipment Registry; and 2009-2012 MS DOH - State Health Plan
[1] The Regional Medical Center at Memphis closed Linear Accelerator Services in 2010

The reference to significant racial disparities in cancer rates for Shelby County and surrounding counties is noted. Please cite the source for the following statements:

- **"Research shows that the black population tends to have higher occurrences of cancer as compared to whites, and blacks in the community die disproportionately from all cancer when compared to other races".**

The racial disparities noted in the application are supported by national and regional cancer incidence and death rates. See the excerpts and tables below from the originally filed application documenting the statistics from the National Cancer Institute – Surveillance, Epidemiology and End Results Program (SEER) and State Profiles data.

The racial disparities in cancer rates for Shelby County and the surrounding communities are significant. Research shows that the black population tends to have higher occurrences of cancer as compared to whites. Given the high incidence of cancer in Shelby County, the differences between mortality rates by race were analyzed. The

blacks in the community die disproportionately from all cancers when compared to other races.

TABLE 2
NATIONAL AGE-ADJUSTED CANCER RATES, 2006-2010

Age at Diagnosis or Death	Age-Adjusted Incidence Rates			Age-Adjusted Death Rates		
	All Races	Whites	Blacks	All Races	Whites	Blacks
All ages	463.0	471.9	**483.6**	176.4	175.8	**210.3**
Under 65	224.2	228.1	**244.2**	56.1	54.8	**76.0**
65 and over	2,113.7	2,157.0	2,138.6	1,008.4	1,012.0	**1,138.9**

Source: National Cancer Institute - Surveillance, Epidemiology and End Results Program (SEER)

TABLE 3
CANCER INCIDENCE AND DEATH RATES, 2006-2010
METHODIST TENNESSEE SERVICE AREA

Region	Annual Incidence Rates			Death Rates		
	All Races	White (including Hispanic)	Black (including Hispanic)	All Races	White (including Hispanic)	Black (including Hispanic)
Shelby County, TN	461.9	448.4	**472.3**	210.3	176.9	**259.3**
Fayette County, TN	472.2	465.5	**495.2**	189.0	168.6	**256.9**
Tipton County, TN	494.4	492.6	473.3	223.9	221.7	**232.3**
Tennessee	469.9	468.8	**472.6**	199.1	194.3	**244.1**
United States	453.7	452.8	**468.5**	176.4	175.8	**210.3**

Source: National Cancer Institute – State Cancer Profiles 2006-2010

In further analyses, it was determined that death rates from breast cancer and lung/bronchus cancer were the highest cancer mortality rates for Shelby County (see tables 4 and 5). Again racial disparity is prevalent and significant for cancer mortality rates. Black women die from breast cancer and black men die from lung cancer at much higher rates than whites in Shelby County for the period measured. Furthermore, in a recent study conducted by Sinai Urban Health Institute, the Metropolitan Chicago Breast Cancer Task Force and Avon Foundation Cancer Crusade, Memphis was identified as the city with the largest disparity in breast cancer mortality rates between black and white women. There is a need for outreach, screening and education in the black communities to eliminate the disparities and reduce the number of deaths.

TABLE 4
ANNUAL BREAST CANCER DEATH RATES BY RACE, 2006-2010
METHODIST TENNESSEE SERVICE AREA

	Breast Cancer (Females)		
Region	**Annual Death Rate per 100,000 All Races**	**Annual Death Rate per 100,000 White**	**Annual Death Rate per 100,000 Black**
Shelby County, TN	**30.0**	21.0	**41.7**
Fayette County, TN	**30.5**	**29.1**	**n/a**
Tipton County, TN	22.4	19.3	n/a
Tennessee	**23.3**	21.6	35.4
United States	22.6	22.1	30.8

Source: National Cancer Institute - State Cancer Profiles, 2006-2010; Death Rates based on Bias-Adjusted Modeled Estimates

TABLE 5
ANNUAL LUNG/BRONCHUS DEATH RATES BY RACE, 2006-2010
METHODIST TENNESSEE SERVICE AREA

	Lung/Bronchus (Females)			Lung/Bronchus (Males)		
Region	**Annual Death Rate per 100,000 All Races**	**Annual Death Rate per 100,000 White**	**Annual Death Rate per 100,000 Black**	**Annual Death Rate per 100,000 All Races**	**Annual Death Rate per 100,000 White**	**Annual Death Rate per 100,000 Black**
Shelby County	**42.4**	**42.3**	**42.3**	**80.0**	**67.0**	**100.8**
Fayette County	**41.8**	**49.7**	n/a	**75.9**	**67.4**	**115.5**
Tipton County	**54.1**	**52.9**	n/a	**97.0**	**100.4**	n/a
Tennessee	**46.6**	**47.3**	**44.0**	**89.5**	**88.7**	**100.8**
United States	39.2	40.4	37.2	63.5	63.2	78.5

Source: National Cancer Institute - State Cancer Profiles, 2006-2010; Annual Death Rates based on Bias-Adjusted Modeled Estimates

The new comprehensive cancer center will, among other programs, provide staff, equipment and resources for an integrated breast cancer program. The Methodist mission ensures access to all community members including the uninsured and underinsured. The ability to evaluate through physician services, diagnose through advanced imaging and treat through infusion, radiation and surgery all in one site, regardless of ability to pay is a must in for the Mid-South.

- **"Memphis was identified as the city with the largest disparity in breast cancer mortality rates between black and white women".**

See Attachment 4 for the breast cancer disparity study conducted by Sinai Urban Health Institute, the Metropolitan Chicago Breast Cancer Task Force and Avon Foundation Cancer Crusade showing Memphis having the largest racial disparity for breast cancer mortality. This study looked at breast cancer disparity between non-Hispanic white

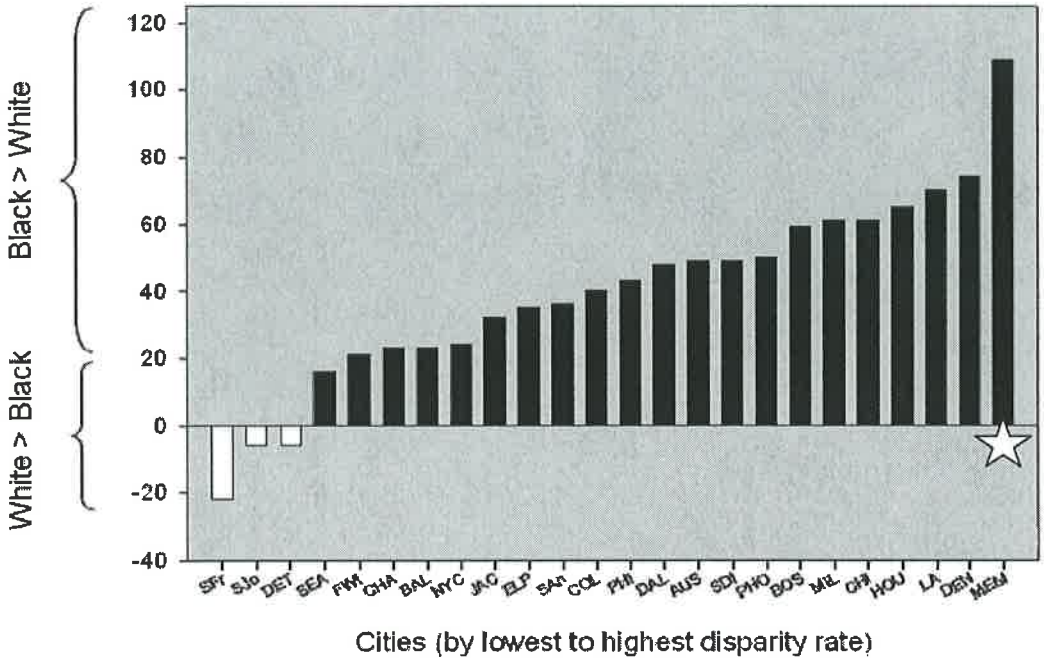
women (NHW) and non-Hispanic black (NHB) women in 25 of the largest US cities. Memphis had the highest noted disparity for the period studied (2005-2007) with a rates ratio of 2.09 as shown in Table 1 of the attached article. Tables from data in the study are shown below in Table 6 and 7 which demonstrate the significance of the disparity in Memphis as compared to other large cities. The rates ratio is the ratio of the age-adjusted mortality rate of NHB to NHW for breast cancer – meaning the mortality rate for NHB women is double that of NHW women in Memphis. This trend continues to plaque Shelby County as shown in Table 4 above.

TABLE 6
AGE-ADJUSTED BREAST CANCER DISPARITY MORTALITY RATES BY RACE AND RATES RATIO, 2005-2007

City	NHB Rate	NHW Rate	Rates Ratio (NHB/NHW)
Memphis	44.6	21.3	2.09
Denver	30.8	17.7	1.74
Los Angeles	46.5	27.4	1.70
Houston	47.3	28.7	1.65
Chicago	37.8	23.4	1.62

Source: Attached Study – "The racial disparity in breast cancer mortality in the 25 largest cities in the United States"

TABLE 7
DISPARITY RATES IN BREAST CANCER MORTALITY RATES BY CITY, 2005-2007



Source: Attached Study – "The racial disparity in breast cancer mortality in the 25 largest cities in the United States"

One of the biggest challenges for the breast cancer outreach program is transportation to so many different sites for care. The development of the integrated comprehensive cancer program will eliminate that challenge. Current breast cancer efforts are focused on the significant racial disparities. With non-Hispanic Black women comprising the majority of our female population over the age of 25, Memphis is uniquely positioned to study and address the significant racial disparity in the breast cancer mortality rates. Collaboration between Methodist, the West Clinic and the Methodist Congregational Health Network (a covenantal relationship among Methodist, over 500 Mid-South congregations and community health organizations) provide additional structures and a broader framework with which to evaluate these disparities. Grant dollars have been procured to establish patient navigators and examine the potential impact of the differences in screening and care pathways on mortality rates of these populations. The proposed integrated comprehensive center is a key initiative in Methodist's plans to reduce the disparity.

The applicant plans to consolidate multiple freestanding ambulatory sites into the proposed integrated comprehensive cancer center. Please clarify what the plan is for the space that will become empty at the former multiple freestanding ambulatory sites if this application is approved.

This project proposes to consolidate four Methodist ambulatory sites of care into one. The proposed site on Wolf River Boulevard already contains the Methodist Breast Central. The other sites are listed below.

1) The Methodist Radiation Oncology Center (less than a mile away from the project site on Germantown Parkway) houses a linear accelerator and CT simulator and provides a full array of radiation therapy services. This site is owned by Methodist. Approximately half of the building houses the Radiation Oncology Center and the other half houses the Methodist Germantown Outpatient Diagnostic Center. The vacated space will be evaluated for future expansion of Methodist's ambulatory presence in the eastern market.

2) The West Clinic on Humphreys Boulevard houses physician clinics, chemotherapy, IV infusion therapy, radiology (including MRI, CT, PET/CT, ultrasound and x-ray), interventional radiology, pharmacy, lab services, pain and palliative care and genetic, nutritional and psychological counseling services. The building is the proposed site for the new Le Bonheur Children's Hospitals' Pediatric Outpatient Center. The CON to establish the pediatric center is being filed simultaneously. Methodist, as good stewards of its resources, reviewed available space in the planning stages of the projects, looked for the most cost effective options and developed plans to redeploy assets versus building any new buildings.

3) The West Clinic's Comprehensive Breast Center (across the street from the project site on Wolf River Boulevard) houses three breast surgeons and provides complete breast care with digital screening and diagnostic mammography, sonography, percutaneous biopsy, genetic counseling, surgical therapy, chemotherapy and clinical research. This site is leased and the lease expires within six months of relocating the services.

It is noted the breast center will be located on the first floor. Currently, what type of services occupies the remaining three stories of the building that is slated to house the cancer center?

The proposed project site was designed for medical offices and multiple tenants. The first floor currently houses the Methodist Breast Centers as noted in addition to LapCorp (a specimen collection and processing service) and University of Tennessee Medical Group (UTMG) and University of Tennessee Methodist Physicians (UTMP) physician offices including medicine: internal medicine and sub-specialties, such as, allergy, endocrinology, nephrology, infectious disease, pulmonology and rheumatology. The second floor houses additional UTMG and UTMP practices including general and minimally invasive surgery, pediatric/adult otolaryngology, head and neck cancer surgery, ophthalmology, pediatric sub-specialties, surgical oncology, plastic surgery, gynecology/reproductive health and urology. The cancer services will relocate within the building upon completion of the West Cancer Center. The pediatric offices will relocate to the Le Bonheur Pediatric Outpatient Center, if approved in the same CON cycle (CN1311-042). The other healthcare providers are aware of the project and have plans upon approval to relocate within the same market.

What other cancer services will be available at other Methodist locations?

Methodist offers a full array of inpatient and outpatient cancer services. The integrated comprehensive model will consolidate multiple sites in the east Shelby market. There are cancer services at the hospitals and strategically placed ambulatory sites in Midtown Memphis and DeSoto County as noted below which cover all quadrants of the service area:

Proposed West Cancer Center:

Physician professional services (medical oncology, gynecology oncology, surgical oncology, breast surgery, radiology), infusion services, radiology (PET/CT/MRI/Ultrasound), breast services (mammography, diagnostic mammography, biopsies, stereotactic biopsies), ambulatory surgery, radiation oncology, transfusion services, genetics, psychology services, outpatient oncology pharmacy, medical oncology and gynecology oncology medical education training services, research and clinical trial services, navigator and social services.

Midtown Center:

Physician professional services (medical oncology, gynecology oncology, surgical oncology, breast surgery, radiology), infusion services, radiology (PET/CT/MRI/Ultrasound), breast services (mammography, diagnostic mammography, biopsies, stereotactic biopsies), genetics, outpatient oncology pharmacy, medical oncology and gynecology oncology medical education training services, research and clinical trial services, navigator and social services.

DeSoto Center:

Physician professional services (medical oncology, gynecology oncology, surgical oncology, breast surgery, radiology), infusion services, radiology (CT/Ultrasound), breast services (mammography, diagnostic mammography, biopsies, stereotactic biopsies), genetics, outpatient oncology pharmacy, medical oncology and gynecology oncology medical education training services, research and clinical trial services, navigator and social services.

Hospital Services:

All adult Methodist Healthcare-Memphis Hospitals (including Methodist University, Methodist South, Methodist North and Methodist Germantown) provide inpatient oncology services (NP / MD Hospitalists), inpatient and outpatient surgical services and outpatient diagnostic and imaging services (MRI / CT). Methodist University and Methodist Germantown provide medical oncology units and medical oncology and gynecology oncology medical education training services. Methodist University also provides transfusion services, bone marrow transplant services and aphaeresis services. Methodist North and Methodist South provide mammography services.

Methodist recently opened the new Methodist Olive Branch Hospital in DeSoto County, Mississippi. The new facility provides inpatient oncology services (MD Hospitalists) and outpatient diagnostic and imaging services (MRI / CT).

Will West clinic Surrender CONs for PET and MRI at the current site?

Yes – the hospital-based PET and MRI services and equipment at West Clinic on Humphreys Boulevard will relocate (and the MRI will be replaced) to the new West Cancer Center, and the CON for the Humphreys Boulevard site will be surrendered.

Is Methodist surrendering the CON for LINAC at the current site?

Yes – the hospital-based LINAC services and equipment at the Methodist Radiation Oncology Center on Germantown Parkway will relocate to the new West Cancer Center, and the CON for the Germantown Parkway site will be surrendered.

The applicant notes the hospital-based unit at Germantown performs more than 11,000 procedures annually as compared to 8,736 which State Health Plan defines as full capacity. The applicant further states this is at 130% capacity. Please apply the same methodology to all LINACS in the combined Methodist system that are located in the proposed service area.

Methodist operates three LINACs in the service area. In 2012, Methodist provided 23,756 procedures which is an average of 7,919 per unit (91% capacity). Based on the forecasts in the application, projected growth in cancer incidence alone will overburden the three units and Methodist will be over full capacity operating at approximately 8,800 procedures per unit. Methodist would not have the capacity to continue outreach efforts to underserved communities and continue to extend high quality cancer services into the secondary markets. Methodist must add capacity to continue its mission.

6. **Section B, Project Description, Item 1I.A.**

   There appears to be calculation errors in the Square Footage and Cost Per Square Footage Chart. The new proposed final square footage for new construction of 8,050 sq. ft. appears to be incorrect and the total proposed final square footage of 109,285 appears to be incorrect. Please recalculate and revise if needed.

   Please see Attachment 5 for the revised Square Footage and Cost per Square Footage Chart as well as revised references on pages 8, 10 and 43 from the original application. The costs for the project were calculated correctly, yet there was a slight typo for new and total square feet. All revised pages and references to square footage are attached.

7. **Section B, Project Description, Item 1I.C.**

   Table 2 which summarizes the moveable equipment is noted. Please add a column to Table 2 that reflects the distance from the old location to the new location.

This project includes the addition of one linear accelerator (and the relocation of one existing linear accelerator). CON approval has previously been granted for all other major moveable equipment at sites owned and operated by Methodist which are located within a four-mile radius of the proposed project site. The approved equipment will continue to serve the same community and meet the demand for services as demonstrated by current utilization. See Table 8 (the new table for this response is 8 versus 2 in the original application) below for a summary of other major moveable equipment for this project. The new table includes a row with the distance as per Google Maps from the old locations to the new location.

TABLE 8
SUMMARY OF METHODIST HOSPITAL-BASED MAJOR MOVEABLE EQUIPMENT

	The West Clinic on Humphreys	**Methodist Radiation Oncology Center**	**New to Market**
Linear Accelerator		Existing to be relocated	New
CT Simulator		Existing to be relocated	
CT (2 units)	Existing to be relocated		
MRI 1.5T	Existing to be replaced and relocated		
PET/CT	Existing to be relocated		
Distance from New Location	**3.8 Miles**	**0.4 Miles**	

The chart notes the MRI 1.5T will be replaced when relocated. Please clarify if the new MRI will be similar with the exact capabilities. If not, please describe any upgrades or differences.

The replacement MRI 1.5T will be similar with exact capabilities.

8. **Section C, Need, Item 1.a. (Construction, Renovation, Expansion, and Replacement of Health Care Institutions) Item 3.a**

   Table 8 of the cancer incidence percent increase from 2013 rates, 2018 and 2023 by cancer type by county is noted. However, please also include Tipton County in the table and resubmit a replacement page.

   Please see Attachment 6 showing the percentage increase from 2012 rates for 2017 and 2022 by cancer type for Shelby, Fayette and Tipton counties in Tennessee and DeSoto County, Mississippi. Also, note the original chart had the incorrect years referenced and this has been corrected in this version.

9. **Section C, Need, Item 1.a. (Construction, Renovation, Expansion, and Replacement of Health Care Institutions) Item 3.b**

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Please address item 3.b of the Construction, Renovation, Expansion, and Replacement of Health Institutions Criteria. If the question does not apply, please note N/A.

3. For renovation or expansions of an existing licensed health care institution:
   b. The applicant should demonstrate that the existing physical plant's condition warrants major renovation and expansion.

The original building was designed for medical offices and multiple tenants. This renovation and addition are required to re-purpose the building for use as a comprehensive cancer center. Renovations and redesign will provide adequate space, improve patient work flows and improve collaboration with oncologists, radiologists, surgeons and patients. New construction is required to accommodate the program.

This project covers the renovation and expansion of the entire building. The square footage needed to consolidate the Methodist affiliated cancer care services into a single site of care is slightly larger than the available space. The expansion will provide an increase of approximately 8,000 square feet for the addition of the radiation oncology center. The diagnostic and treatment services which require a CON are all hospital-based. The other physician, clinical research and administrative offices do not require CON approval. Full renovation and expansion costs are included since costs were not easily segregated due to the shared common space - the open atrium and waiting areas are located throughout the core of the building. The co-mingling of physician offices and hospital-based services was intentional to ensure efficient and effective collaboration and seamless patient flow.

The first floor will house administrative offices for Associates from the West Clinic. Additionally, the breast center, radiology, radiation therapy and phlebotomy hospital-based services will utilize the remainder of this floor. The Methodist Germantown Breast Center is located in this space now. It will be renovated and expanded in place. The other half of the first floor is where the phlebotomy, radiology and radiation therapy departments will be located. The linear accelerator vaults and MRI and CT rooms/equipment will be located mostly in the new space added to this side of the building. Due to risks of exposure to radiation and radioactive materials, modifications in this area will exceed those of normal renovations. Lead shielding will be installed around the perimeter of the rooms for control purposes.

The second floor will house the surgery clinics, sterile processing and physician clinics. The only hospital-based space on the second floor is the surgery center with the in-house central sterile processing unit. There will be two operating rooms which will function as a department of the hospital. Another area accessible from this floor is the contemplation garden on the roof of the first floor addition. This is a unique area currently included on West Clinic's Humphreys' campus – it includes a large bell and labyrinth walking path. The garden is a respite for patients during their battle with cancer. It is also a site for celebration. The West Clinic will relocate their bell and place it in the garden atop the roof. It is a long-standing tradition that holds special meaning for patients and families; patients ring the bell after finishing their treatment plans and overcoming cancer. It is a place for healing.

The third floor will house the remainder of the administrative and clinical research space operated by the West Clinic and the UTHSC as well as pharmacy space operated by the clinics. The hospital-spaced located on this floor includes the lab, additional phlebotomy space and the infusion - or chemotherapy infusion - chairs and beds.

Since this is an existing building with existing services, the coordination and modifications are more complex than normal construction. Methodist plans to minimize disruption to patients and existing services during the renovation. The breast center will continue operations during renovations with easy access from the main door. The majority of the renovations will be on east side of the first floor and on the second and third floors. Partitions will be temporarily installed allowing the renovation area to be sealed off to minimize the noise and debris and ensure the facility is always secure. To maintain continuity of care, the relocation of equipment will be staged in a compact time frame and coordinated with the scheduling staff.

10. Section C, Need, Item 1.a. (Megavoltage Radiation Therapy Services) Item 3.C

In Table 14 the applicant notes there was one (1) linear accelerator in Desoto County, Mississippi from 2010 to 2012. However, according to a report by the Mississippi Division of Health Planning and Resource Development (May 2013) there may be an additional Linear Accelerator recently approved for Baptist Memorial Hospital –Desoto. Please contact the Mississippi Division of Health Planning and Resource Development and confirm the addition of a linear accelerator to Baptist Memorial Hospital-Desoto (BMH-D).

It is confirmed with the Mississippi Division of Health that the additional LINAC was approved on August 29, 2013 for Baptist Memorial Hospital –DeSoto.

In addition, in the Mississippi Division of Health Planning and Resource Development, May 2013 report (http://msdh.ms.gov/msdhsite/index.cfm/29,5416,84,pdf/Baptist%20Memorial%20Hospital%20Desoto.pdf), it is noted that 21.08%, or 68 patients migrate from Shelby County to Baptist Memorial Hospital-Desoto for linear accelerator services. Please discuss how the possible addition of one linear accelerator to Baptist Memorial Hospital-Desoto's Inventory will impact the proposed procedures by the applicant in Year One and Year Two of the proposed project.

The forecasted procedures for the Methodist and the West Cancer Center will not change. The plans to balance the volume per unit and lessen the burden on existing Methodist equipment are still a necessity. Projected LINAC volumes assumed Methodist's current market share of an increasing number of cancer incidence in the service area with nominal outreach in the secondary markets.

Please clarify if The West Clinic has any ownership interest or management relationships with the Linear Accelerator Service currently available at Baptist Memorial Hospital-Desoto located in Mississippi.

The West Clinic has no ownership interest or management relationship with the LINAC services at Baptist Memorial Hospital-DeSoto.

11. **Section C, Need, Item 1.a. (Service Specific Criteria (Megavoltage Radiation Therapy Services) Item 6.e.**

    What are the staffing and quality assurance requirements the applicant states will be met? What is the name of the accrediting authority that maintains oversight of the staffing and quality assurance requirements the applicant states is being met?

    Please see Attachment 7 for the American College of Radiology Radiation Oncology Practice Accreditation Program Requirements. These are the staffing and quality assurance requirements which will be met.

12. **Section C, Need, Item 1.a. (Service Specific Criteria (Megavoltage Radiation Therapy Services) Item 8.a.**

    The applicant notes 8.a. is not applicable. Please clarify if there are no medically underserved areas as designated by the United States Health Resources and Services Administration in the proposed service area.

    While the proposed site of this project is not located in a medically underserved area, there are designated areas in the service area that are deemed underserved by the United States Health Resources and Services Administration.

    The Index of Medical Underserviced (IMU) is a score that "involves four variables - ratio of primary medical care physicians per 1,000 population, infant mortality rate, percentage of the population with incomes below the poverty level, and percentage of the population age 65 or over. The value of each of these variables for the service area is converted to a weighted value, according to established criteria. The four values are summed to obtain the area's IMU score." Service areas with an IMU of 62.0 or less are designated as a medically underserved area. (source: http://www.hrsa.gov/shortage/mua/index.html)

    There are 59 census tracts (geographic regions defined for taking census) in Shelby County that are underserved. These areas are in central, north and south Memphis which is one of many reasons that Methodist maintains a hospital and ambulatory presence in all quadrants of the county. Methodist maintains cancer services in these locations – Methodist University, Methodist North, Methodist South and the Midtown Centers - as described in the response to question #5.

    All of the other counties in the service are all designated as underserved: Fayette County's IMU is 32.80 and Tipton County's is 44.90, DeSoto County's is 47.40, Marshall County's is 26.70, Crittenden County's 34.20.The West Cancer Center will provide integrated comprehensive cancer care to the entire service area.

13. **Section C, Need, Item 1.a. (Service Specific Criteria (Megavoltage Radiation Therapy Services) Item 8.b.**

Please demonstrate that the existing physical plant's condition warrants major renovation or expansion. Referring to other parts of the application is not an adequate response.

The original building was designed for medical offices and multiple tenants. This renovation and addition are required to re-purpose the building for use as a comprehensive cancer center. Renovations and redesign will provide adequate space, improve patient work flows and improve collaboration with oncologists, radiologists, surgeons and patients. New construction is required to accommodate the program.

This project covers the renovation and expansion of the entire building. The square footage needed to consolidate the four ambulatory Methodist sites and services into a single site of care is slightly larger than the available space. The expansion will provide an increase of approximately 8,000 square feet for the addition of the radiation oncology center which will include the radiation therapy vaults for the LINAC units.

Half of first floor will house the radiology and radiation therapy departments. The linear accelerator vaults and MRI and CT rooms/equipment will be located mostly in the new space added to this side of the building. Due to risks of exposure to radiation and radioactive materials, modifications in this area will exceed those of normal renovations. Lead shielding will be installed around the perimeter of the rooms for control purposes.

14. **Section C. (Need) Item 3.**

Please provide a map of the entire state of Tennessee designating the applicant's declared service area counties. Please provide distinctive highlighting/ markings to readily differentiate the service area counties from the other non- service area counties.

Please see Attachment 8 for another Service Area map showing the entire state of Tennessee and designating Shelby, Fayette and Tipton counties in Tennessee, DeSoto and Marshall counties in Mississippi and Crittenden County, AR.

15. **Section C. (Need) Item 4 (Socio-Demographic Information of the Service Area)**

Your response to this item is noted. Using population data from the Department of Health, enrollee data from the Bureau of TennCare, and demographic information from the US Census Bureau, please complete the following table and include data for each county in your proposed service area.

Variable	Shelby County	Fayette County	Tipton County	DeSoto County	*Service Area*	*Tennessee*
Current Year (CY), Age 65+						
Projected Year (PY), Age 65+						
Age 65+, % Change						
Age 65+, % Total (PY)						
CY, Total Population						
PY, Total Population						
Total Pop. % Change						
TennCare Enrollees						
TennCare Enrollees as a % of Total Population						
Median Age						
Median Household Income						
Population % Below Poverty Level						
http://quickfacts.census.gov/qfd/states/47/47047.html						

Please see Attachment 9 for the completed table for the proposed service area including Shelby, Fayette and Tipton counties in Tennessee, DeSoto and Marshall counties in Mississippi and Crittenden County, Arkansas.

16. **Section C. (Need) Item 5.**

The applicant notes Baptist Memorial-Tipton Hospital has two unimplemented CONs (CN1211-057A and CN1105-018A) to create a cancer center close to the Memphis hospital campus. Please indicate the distance from the applicant's proposed site to Baptist Memorial-Tipton Hospital's approved site that will create a new cancer center. Also, please clarify if the unimplemented CONs (CN1211-057 and CN1105-018) will add additional linear accelerators to the applicant's proposed service area.

The proposed Baptist Memorial-Tipton Hospital cancer center is located close to the Baptist Memphis campus in Shelby County. The site is 3.5 miles away per Google Maps from the proposed West Cancer Center. The CONs approved for Baptist's center state their three existing LINACs will be relocated to their new building in the east market. They are not proposing to add any new equipment in the market.

The Methodist LINACs will extend cancer care services to both the inner city and the eastern suburbs. The two existing units at the Methodist University Hospital are almost 16 miles away from the proposed West Cancer Center site in the Memphis Medical Center located in midtown/downtown Memphis. The other existing Methodist unit in

Germantown, a suburb in eastern Shelby County, will relocate to the new site which is less than a half a mile away. The project proposes to add a second LINAC at this site to accommodate existing and projected volumes.

17. Section C. (Economic Feasibility) Item 1. (Project Cost Chart)

The following definition regarding lease cost in Tennessee Health Services and Development Agency Rule 0720-9-.01 (4)(c) states "If the acquisition is by lease, the cost is either the fair market value of the of the lease, or the total amount of the lease payments, whichever is greater."
Please provide a calculation of both the sum of the lease payments over the term of the lease as well as a determination of the fair market value (FMV) of the leased space into which the proposed cancer center will be located.

As noted in question 3 above, the site for the proposed cancer center will be purchased and not leased. The purchase price of the building was on the wrong line of the Project Costs Chart. See Attachment 10 for the revised Project Costs Chart with the building costs moved from line B.1. to line A.3.

In the Project Costs Chart, the applicant refers to two separate lists. Please clarify where these lists are located. If necessary, please note the location of the list on the Project Costs Chart and resubmit a revised chart.

Please see Attachment 10 for the Revised Project Costs Chart as well as the List of Moveable Equipment >$50,000 (which was in the originally filed application as Attachment C: Economic Feasibility (1)(c)) and the list of leased equipment. The PET/CT and 2 CTs are leased. The Project Costs include 5 years of leased expense and maintenance which was greater than the FMV as noted in the attachment.

18. Section C. (Economic Feasibility) Question 3

Please compare the hospital cost per square foot to the following hospital construction CON approved application for years 2010 through 2012:

Hospital Construction Cost Per Square Foot
Years: 2010-2012

	Renovated Construction	New Construction	Total Construction
1st Quartile	$99.12/sq. ft.	$234.64/sq. ft.	$167.99/sq. ft.
Median	$177.60/sq. ft.	$259.66/sq. ft.	$235.00/sq. ft.
3rd Quartile	$249.00/sq. ft.	$307.80/sq. ft.	$274.63/ sq. ft.

As noted in question #6 above the new and total square footage numbers were slightly revised and replacement pages are attached. The revised construction costs per square foot are reasonable and comparable to similar CON projects approved for 2010 – 2012. See Table 9 below for the comparison of construction costs. The renovated are slightly

above and total costs are below the 1st Quartile comparisons. The new construction costs include radiation therapy and radiation vaults which are exceptionally expensive due to the lead shielding and used to reduce the risks of exposure to radiation and radioactive materials.

TABLE 9
CONSTRUCTION COSTS COMPARISON

	Renovated Construction	New Construction	Total Construction
Construction Costs / Square Foot	$109.93	$490.10	$144.88
Construction + Contingency Costs / Square Foot	$120.92	$539.11	$159.37
Comparison	Between 1st Quartile and Median	Above 3rd Quartile	Below 1st Quartile

19. Section C. (Economic Feasibility) Question 4 (Projected Data Chart)

Please provide a projected Data Chart for the proposed Cancer Center only.

Please see Attachment 11 for the Projected Data Chart and Other Operating Revenue and Expense detail for the proposed Cancer Center only.

Please provide a Projected Data Chart for the Proposed Additional Linear Accelerator only.

Please see Attachment 12 for the Projected Data Chart and Other Operating Revenue and Expense detail for the proposed Additional Linear Accelerator only.

The Projected Data Chart for Methodist Healthcare-Memphis Hospitals is noted. Please complete the following tables and place the tables on a separate page labeled 46A to be located after the Projected Data Chart for Methodist Healthcare-Memphis Hospitals:

Please see Attachment 13 for the additional page detailing the Other Operating Revenue and Expense for the Projected Data Chart for Methodist Healthcare-Memphis Hospitals.

PROJECTED DATA CHART-OTHER OPERATING REVENUE
OTHER OPERATING REVENUE CATEGORIES

	Year____	Year___
1.	$_____	$_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
Total Other Operating Revenue	$_____	$_____

PROJECTED DATA CHART-OTHER EXPENSES
OTHER EXPENSES CATEGORIES

	Year____	Year___
1.	$_____	$_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
Total Other Expenses	$_____	$_____

20. **Section C. (Economic Feasibility) Question 6.A**

Please compare the hospital Gross Charges per Procedure/Treatment by quartiles for years 2010 through 2012 using the following table:

Gross Charges per Procedure/Treatment
By Quartiles
YEAR = 2012

Equipment Type	1st Quartile	Median	3rd Quartile
CT Scanner	$887.60	$1,735.40	$2,680.89
Linear Accelerator	$849.62	$1,077.79	$1,406.21
Lithotripter	$8,200.00	$12,288.61	$17,237.00
MRI	$1,598.11	$2,129.25	$3,321.60
PET Scanner	$3,667.96	$4,497.71	$6,304.71
Source: Medical Equipment Registry - 6/28/2013			

Please see the table below summarizing the average charge per procedure for Methodist Healthcare-Memphis Hospitals (using Methodist University Hospital as the example) from the Medical Equipment Registry for 2012 as compared to the Quartiles shown above. This comparison shows the average per procedure which is easier to compare than the charge per CPT listed below.

TABLE 10
METHODIST SERVICE AREA
HOSPITAL-BASED CHARGE COMPARISON, 2012

Facility Type	Facility	Charge per Procedure	Comparison
HOSP	Methodist University Hospital – MRI	$ 3,545	Slightly Above 3rd Quartile
HOSP	Methodist University Hospital – CT	$ 2,437	Between the Median and 3rd Quartile
HOSP	Methodist University Hospital – PET/CT	$ 8,186	Above the 3rd Quartile
HOSP	Methodist University Hospital – LINAC	$ 7,919	Above the 3rd Quartile

Please see Table 12 on the following page which is copied from the originally file application with 2013 charges from Methodist per CPT for comparison. MRI charges are slightly higher than the 3rd Quartile comparison. CT charges are approximately at the 3rd Quartile with a few at the Median. PET/ CT charges are above the 3rd Quartile. LINAC charges are more difficult to compare due to the wide range of treatments performed by the unit. The less resource intensive procedures are well within the 1st Quartile and Median comparisons. The High Dose Radiation Brachytherapy charges are above the 3rd Quartile.

Please also see a copy of the comparison of LINAC charges from the original application for other LINAC units in the Tennessee service area. The data is from average charges per procedure from the State Equipment Registry. Methodist charges are comparable to other Shelby County services.

TABLE 11
METHODIST SERVICE AREA
HOSPITAL-BASED LINAC CHARGE COMPARISON, 2012

Facility Type	Facility	Charge per Procedure
HOSP	Baptist Memorial Hospital-Memphis	$ 5,526
HOSP	Baptist Memorial Hospital-Tipton	$ 7,610
HOSP	St. Francis Hospital	$ 3,398
HOSP	Methodist Healthcare – University Hospital	$ 7,919

TABLE 12
METHODIST CURRENT CHARGE SCHEDULES

Procedure	CPT	Current Rate
MRI		
MRA HEAD WO CONT	70544	$ 3,358
MRA NECK WO CONT	70547	$ 3,358
MRI ABD W/WO CONT	74183	$ 4,572
MRI ABD WO CONT	74181	$ 3,358
MRI BRAIN & STEM W CONT	70552	$ 3,816
MRI BRAIN & STEM W/WO CONT	70553	$ 4,572
MRI BRAIN & STEM WO CONT	70551	$ 3,358
MRI PELVIS W/WO CONT	72197	$ 4,572
MRI SPINE CERV W/WO CONT	72156	$ 4,572
MRI SPINE CERV WO CONT	72141	$ 3,358
MRI SPINE LUMBAR W/WO CONT	72158	$ 4,572
MRI SPINE LUMBAR WO CONT	72148	$ 3,358
MRI SPINE THORACIC W/WO CONT	72157	$ 4,572
MRI SPINE THORACIC WO CONT	72146	$ 3,358
CT		
CT ABD AND PEL W/WO CONTRAST	74178	$ 5,581
CT ABD AND PEL WITH CONTRAST	74177	$ 4,796
CT ABD AND PEL WO CONTRAST	74176	$ 3,464
CT ABD TRIPLE PHASE	74170	$ 2,791
CT ABD W CONT	74160	$ 2,398
CT ANGIO HEAD W/WO CONT W IMAGE POST PRO	70496	$ 2,791
CT ANGIO NECK W/WO CONT W IMAGE POST PRO	70498	$ 2,791
CT BRAIN/HEAD W/WO CONT	70470	$ 2,791
CT BRAIN/HEAD WO CONT	70450	$ 1,733
CT GUIDE ABSCESS DRNG PERCUT W CATH PLAC	75989	$ 1,571
CT GUIDE NDL BX	77012	$ 2,398
CT MAXILLOFACIAL AREA WO CONT	70486	$ 1,733
CT SOFT TISSUE NECK W CONT	70491	$ 2,398
CT SPINE CERV WO CONT	72125	$ 1,733
CT SPINE LUMBAR WO CONT	72131	$ 1,733
CT THORAX W CONT	71260	$ 2,398
CT THORAX WO CONT	71250	$ 1,733
CTA ABD/PELVIS W/WO CONTRAST	74174	$ 3,049

Procedure	CPT	Current Rate
PET		
BRAIN IMAGE PET METABOLIC EVALUATION	78608	$ 7,912
MYOCARDIAL IMAGING PET METABOLOC EVAL	78459	$ 8,008
TUMOR IMAGING PET W/CT SKULL TO MIDTHIGH	78815	$ 8,601
TUMOR IMAGING PET W/CT WHOLE BODY	78816	$ 8,601
UNLISTED NUC MED PROCEDURE PET	78999	$ 1,496
LINAC		
CONTINUING MEDICAL PHYSICS CONSULT W TRM	77336	$ 521
CT GUIDE RADIATION THER FIELD PLACE	77014	$ 845
HDR BASIC DOSIMETRY CALC	77300	$ 521
HDR BRACHYTHERAPY 2-12 CHANNELS	77786	$ 11,400
HDR ISODOSE CALC 12+SOURCES COMPLEX	77328	$ 1,195
MEDICAL RADIATION PHYSICS CONSULT SPEC	77370	$ 1,195
RADIATION DOSIMETRY CALC BASIC	77300	$ 521
RADIATION THERAPY DELIVERY, IMRT	77418	$ 2,507
RADIATION THERAPY DELIVERY,VMAT	77418	$ 2,507
RADIATION TRMT 3+AREAS 11-19MEV	77414	$ 663
RADIATION TRMT 3+AREAS 6-10MEV	77413	$ 663
SPEC TRMT PROC	77470	$ 1,611
STEROSCOPIC XRAY GUIDANCE DELIVERY	77421	$ 469
TELETHER ISODOSE PLAN COMPLEX	77315	$ 1,195
THER RAD PORT FILM/FILMS	77417	$ 373
THER RAD SIMULATION AIDED FIELD 3D	77295	$ 4,654
THER RAD SIMULATION AIDED FIELD COMPLEX	77290	$ 1,195
THER RAD SIMULATION AIDED FIELD SIMP	77280	$ 521
TRMT DEVICE DESIGN & CONSTRUCT COMPLEX	77334	$ 961

21. Section C. (Economic Feasibility) Question 9

The patient mix during the first full year of operation is noted. The patient payor mix appears to be for Methodist overall. Please provide a table of the Projected Data Mix for Year 2016 specific to the proposed project.

TABLE 13
PAYOR MIX, 2016 - WEST CANCER CENTER PROJECT ONLY

Payor	2016 Projected Revenue	% of Total Revenue
Medicare	$ 203,963,694	44%
TennCare/Medicaid	$ 53,034,241	12%
Self Pay	$ 20,769,157	5%
Commercial/Other	$ 183,327,605	40%
Total	$ 461,094,696	100%

22. Section C, Contribution to Orderly Development, Item 3.

What will be the staffing pattern for the proposed project?

Please provide a comparison of the clinical staff salaries in the proposal to prevailing wage patterns in the service area either through comparison of the applicant's facility with similar previously approved projects within the primary service area, through the Tennessee Department of Labor & Workforce Development publications, or other published sources.

Please see Table 14 below for proposed staffing for the project.

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November 25, 2013
11:00am

TABLE 14
METHODIST LE BONHEUR HEALTHCARE CURRENT PREVAILING WAGES AND ANTICIPATED CLINICAL STAFFING PATTERNS, 2016-2017

	West Cancer Center			BLS 2012 Memphis MSA Data *		
Methodist Position Title	**FTE' s 2016**	**FTE' s 2017**	**Mid Hourly 2013**	**Mean Hourly**	**Mean Annual**	**BLS Occupation Title**
Accountant/Financial	5.0	5.0	$23.93	$ 29.30	$ 60,940	Accountants and Auditors
Admin Asst	11.0	11.0	$14.75	$ 20.93	$ 43,540	Executive Secretaries/Admin Assist
Care Support Coordinator	3.0	3.0	$16.24	$ 15.93	$ 33,130	Office/Admin Support Occupations
Chaplain	1.0	1.0	$21.72	$ 22.77	$ 47,370	Clergy
Executives	2.0	2.0	$41.39	$ 82.09	$170,760	Chief Executives
Clinical Coordinator	8.0	8.0	$23.93	$ 25.37	$ 52,770	Healthcare Practitioners/Technical
Clinical Manager	8.0	8.0	$38.83	$ 43.46	$ 90,400	Medical/Health Services Managers
Data Analyst	3.0	3.0	$31.99	$ 38.51	$ 80,110	Computer Systems Analysts
Data Coordinator/Admin	3.0	3.0	$38.83	$ 37.77	$ 78,570	Database Administrators
Data Specialist	1.0	1.0	$17.90	$ 22.81	$ 47,440	Computer User Support Specialists
Registered Dietitian	0.8	0.8	$23.93	$ 24.81	$ 51,600	Dietitians and Nutritionists
Dosimetrist	4.0	4.0	$45.04	$ 33.50	$ 69,690	Radiation Therapist
Executive Director	1.0	1.0	$90.98	$ 45.05	$ 93,690	Management Occupations
Facilities Mgr/Director	3.0	3.0	$35.25	$ 44.72	$ 93,010	Managers, All Other
Health Services Mgrs	8.0	8.0	$45.04	$ 43.46	$ 90,400	Medical/Health Services Managers
HR Generalist / Specialist	2.5	2.5	$26.37	$ 25.52	$ 53,080	Human Resources Specialists
Lab Assistant	3.0	3.0	$13.39	$ 18.50	$ 38,480	Medical/Clinical Laboratory Techs
Licensed Social Worker	1.0	1.0	$26.37	$ 25.22	$ 52,450	Healthcare Social Workers
LPN	4.0	4.0	$17.90	$ 18.70	$ 38,890	Licensed Practical Nurses
Medical Asst/Clerical	26.5	26.5	$13.39	$ 13.94	$ 28,990	Medical Secretary
Medical Lab Tech	2.6	2.6	$21.72	$ 18.50	$ 38,480	Med/Clinical Laboratory Techs
Medical Office Admin	15.0	15.0	$26.37	$ 34.98	$ 72,750	Administrative Services Manager
Medical Tech	5.8	5.8	$29.04	$ 28.37	$ 59,000	Medical Technologists
Nurse Practitioner	9.0	9.0	$44.37	$ 45.54	$ 94,720	Nurse Practitioners
Patient Representative	28.8	28.8	$14.75	$ 13.94	$ 28,990	Medical Secretary
Pharmacist	2.5	2.5	$52.02	$ 58.57	$121,830	Pharmacists
Pharmacy Technician	5.6	5.6	$17.90	$ 14.21	$ 29,550	Pharmacy Technicians
Phlebotomist	8.0	8.0	$13.39	$ 12.77	$ 26,570	Phlebotomists
Physicist / Chief	4.0	4.0	$90.98	$ 66.68	$138,700	Physicist
Psych	1.0	1.0	$35.25	$ 30.50	$ 63,440	Clinical/Counseling Psychologists
Radiology Tech	30.3	30.3	$26.37	$ 25.16	$ 58,470	Radiologic Technologists
Scheduler	8.0	8.0	$14.75	$ 18.91	$ 39,320	Healthcare Support Workers
RN	58.5	58.5	$29.04	$ 29.09	$ 60,500	Registered Nurse
Simulation Therapist	7.0	7.0	$31.99	$ 33.50	$ 69,690	Radiation Therapist
Surgical Tech	3.0	3.0	$17.90	$ 18.15	$ 37,750	Surgical Technologists
Total	287.9	287.9				

* Source: Bureau of Labor Statistics – May 2012 MSA Occupational Employment & Wage Estimates – Memphis

23. Proof of Publication

Please submit a copy of the full page of the newspaper in which the notice of intent appeared with the mast and dateline intact or submit a publication affidavit which is supplied by the newspaper as proof of the publication of the letter of intent.

The full page of the newspaper was submitted with the original application as confirmed with the HSDA office after receipt of the supplemental questions. Please see Attachment 14 for a more legible copy of the notice of intent.

LETTERS OF SUPPORT - Please see Attachment 15 for Letters of Support. Please amend to original application.

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Attachment 1

Revised First Page with Corrected Address

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

1. **Name of Facility, Agency, or Institution**

Methodist Healthcare–Memphis Hospitals dba West Cancer Center
Name

7945 Wolf River Boulevard — Shelby County

Germantown — TN — 38138
City — State — Zip Code

2. **Contact Person Available for Responses to Questions**

Carol Weidenhoffer — Corporate Director of Planning, Research and Business Development
Name — Title

Methodist Le Bonheur Healthcare — Carol.Weidenhoffer@mlh.org
Company Name — E-mail address

1407 Union Avenue, Suite 300 — Memphis — TN — 38104
Street or Route — City — State — Zip Code

Employee — 901-516-0679 — 901-516-0621
Association with Owner — Phone Number — Fax Number

3. **Owner of the Facility, Agency or Institution** See Attachment A:3

Methodist Healthcare–Memphis Hospitals — 901-516-0546
Name — Phone Number

1211 Union Avenue, Suite 700 — Shelby County
Street or Route

Memphis — TN — 38104
City — State — Zip Code

4. **Type of Ownership of Control (Check One)** See Attachment A:4

A. Sole Proprietorship ____
B. Partnership ____
C. Limited Partnership ____
D. Corporation (For Profit) ____
E. Corporation (Not-for-Profit) X
F. Governmental (State of TN or Political Subdivision) ____
G. Joint Venture ____
H. Limited Liability Company ____
I. Other (Specify) ____

PUT ALL ATTACHMENTS AT THE BACK OF THE APPLICATION IN ORDER AND REFERENCE THE APPLICABLE ITEM NUMBER ON ALL ATTACHMENTS.

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Attachment 2

Corporate Charter Document

SUPPLEMENTAL- # 1
November 25, 2013
STATE OF TENNESSEE 11:00am
Tre Hargett, Secretary of State
Division of Business Services
William R. Snodgrass Tower
312 Rosa L. Parks AVE, 6th FL
Nashville, TN 37243-1102

Filing Information

Name: **METHODIST HEALTHCARE MEMPHIS HOSPITALS**

General Information

SOS Control # :	**54694**	Formation Locale:	TENNESSEE
Filing Type:	Corporation Non-Profit - Domestic	Date Formed:	08/01/1922
Filing Date:	08/01/1922 4:30 PM	Fiscal Year Close	12
Status:	Active		
Duration Term:	Perpetual		
Public/Mutual Benefit:	Public		

Registered Agent Address
LYNN FIELD
STE 700
1211 UNION AVE
MEMPHIS, TN 38104-6600

Principal Address
1265 UNION AVE
MEMPHIS, TN 38104-3415

The following document(s) was/were filed in this office on the date(s) indicated below:

Date Filed	Filing Description	Image #
02/25/2013	2012 Annual Report	7155-0374
08/03/2012	Articles of Amendment	7082-1151
02/14/2012	2011 Annual Report	6997-0215
	Principal Address 1 Changed From: 1265 UNION AVENUE To: 1265 UNION AVE	
	Principal Postal Code Changed From: 38104 To: 38104-3415	
	Principal County Changed From: No value To: SHELBY COUNTY	
02/28/2011	2010 Annual Report	6840-1353
09/08/2010	Assumed Name	6768-0997
	New Assumed Name Changed From: No Value To: Methodist University Hospital PET Imaging Center	
05/06/2010	Assumed Name Change	6717-1042
	Assumed Name Cancelled Changed From: No Value To: LEBONHEUR CHILDREN'S MEDICAL CENTER, INC.	
	New Assumed Name Changed From: No Value To: LE BONHEUR CHILDREN'S HOSPITAL	
02/26/2010	2009 Annual Report	6662-1631
02/13/2009	2008 Annual Report	6447-2933
03/20/2008	2007 Annual Report	6254-2134
01/03/2008	Registered Agent Change (by Entity)	6176-1361

Filing Information

Name: **METHODIST HEALTHCARE MEMPHIS HOSPITALS**

	Registered Agent Physical Address Changed	
	Registered Agent Changed	
03/12/2007	2006 Annual Report	5981-1383
04/04/2006	2005 Annual Report	5754-0734
10/05/2005	Assumed Name Renewal	5576-1664
02/08/2005	2004 Annual Report	5352-3165
01/21/2004	2003 Annual Report	5012-2125
03/24/2003	2002 Annual Report	4763-0819
01/25/2002	2001 Annual Report	4403-1263
01/16/2001	2000 Annual Report	4090-0832
08/29/2000	Assumed Name Renewal	3989-0646
01/24/2000	1999 Annual Report	3806-0436
02/12/1998	Assumed Name Renewal	3451-1198
01/28/1998	Articles of Amendment	3441-2199
	Name Changed	
06/20/1997	Notice of Determination	ROLL 3355
10/05/1995	Merger - Survivor	3061-2305
	Merged Control # Changed From: 000054694	
	Merged Control # Changed From: 000077094	
10/05/1995	Assumed Name	3061-2310
01/17/1995	CMS Annual Report Update	2940-1358
	Mail Address Changed	
05/05/1993	Merger - Survivor	2689-0090
	Merged Control # Changed From: 000054694	
	Merged Control # Changed From: 000118757	
03/19/1993	Assumed Name	2664-2176
02/21/1992	CMS Annual Report Update	2382-0803
	Principal Address Changed	
06/16/1990	Administrative Amendment	FYC/REVENUE
	Fiscal Year Close Changed	
02/16/1990	Notice of Determination	ROLL 1647
02/18/1987	Registered Agent Change (by Entity)	668 02594
	Registered Agent Physical Address Changed	
	Registered Agent Changed	
12/04/1985	Administrative Amendment	581 01412

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Filing Information

Name: **METHODIST HEALTHCARE MEMPHIS HOSPITALS**

	Mail Address Changed	
06/18/1985	Articles of Amendment	549 03333
06/23/1982	Articles of Amendment	296 01207
10/07/1981	Articles of Amendment	240 00566
	Name Changed	
	Principal Address Changed	
06/23/1981	Registered Agent Change (by Agent)	216 00043
	Registered Agent Physical Address Changed	
	Registered Agent Changed	
07/26/1978	Registered Agent Change (by Agent)	030 01269
	Registered Agent Physical Address Changed	
	Registered Agent Changed	
08/01/1922	Initial Filing	MA--P0397

Active Assumed Names (if any)	Date	Expires
Methodist University Hospital PET Imaging Center	09/09/2010	09/08/2015
LE BONHEUR CHILDREN'S HOSPITAL	05/06/2010	05/06/2015

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Attachment 3

Contract to Purchase

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

CONTRACT TO PURCHASE REAL ESTATE

THIS CONTRACT TO PURCHASE REAL ESTATE ("Agreement") is made and entered into this 13th day of November, 2013, by and between **UT MEDICAL GROUP, INC.**, a Tennessee not-for-profit corporation ("Seller"), and **METHODIST HEALTHCARE – MEMPHIS HOSPITALS**, a Tennessee not-for-profit corporation ("Buyer").

WITNESSETH:

Whereas, Seller is the owner of real property located in Shelby County, Tennessee, consisting of approximately 9.63 acres of land with improvements thereon located at 7945 Wolf River Blvd., Germantown, Tennessee 38138, hereinafter referred to as the "Property", as more particularly described on Exhibit A attached hereto and incorporated herein (references herein to the "Property", whether collectively or separately shall include any improvements thereon (including without limitation the building ("Building") and parking lot ("Parking Lot") located at the above address), and all easements, rights and privileges appurtenant thereto, together with that certain medical equipment listed and described on Exhibit B hereto ("Equipment")).

Whereas, Seller desires to sell to Buyer and Buyer desires to purchase from Seller the Property; and

Whereas, the parties hereto desire to set forth herein the terms and conditions of the sale.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements contained herein, the parties agree as follows:

1. Sale of Property. Seller hereby covenants and agrees to sell and convey the Property, or cause it to be conveyed, by good and sufficient general warranty deed to Buyer upon and subject to the terms and conditions set forth herein.

a. The purchase price shall be **Twenty-Two Million Five Hundred Thousand and 00/100 Dollars ($22,500,000.00)** (the "Purchase Price"). The Purchase Price shall be payable by wire transfer at Closing (as hereafter defined), of which the Earnest Money (as defined below in Section 1(b)) is a part.

b. Upon full execution and delivery to all parties of this Agreement, Buyer will deposit with Chicago Title Insurance Company ("Title Company") the sum of Five Hundred Thousand Dollars ($500,000.00) to be held as earnest money ("Earnest Money"), subject to the terms and conditions hereinafter set forth. The parties agree to execute an escrow agreement and to provide all information required by the Title Company to set up an escrow account into which the Earnest Money will be deposited. If the sale and purchase is consummated, Buyer shall be given credit for the Earnest Money plus any and all interest accrued thereon at the date of Closing toward the purchase of the Property. Should Buyer, in its sole discretion, during its Review Period (as defined in Section 2 below), determine that the conditions of the Property are not acceptable, then Buyer may terminate this Agreement by notifying Seller promptly but in no event later than the final day of the Review Period of

such unsuitability of the Property, and the Earnest Money plus any and all interest earned thereon shall be returned to Buyer, and this Agreement shall be terminated in all respects without any further rights or obligations of the parties except as otherwise set forth herein. After the Review Period, all Earnest Money shall become non-refundable, except as otherwise set forth in this Agreement or unless Seller remains in breach of any provision of this Agreement following any applicable cure period.

2. Review Period. Buyer shall have the right for a sufficient period of time, not to extend beyond November 29, 2013 ("Review Period") to make such inspections of the Property as Buyer deems reasonable and necessary, including by way of example and not by way of limitation (i) availability of all utilities including water, sewer, gas and electric facilities; (ii) title to the Property and any restrictions, encumbrances or other title matters; (iii) examination and review of a survey, and any related updates; (iv) review of environmental reports in the possession of Seller relating to its acquisition of the Property and construction of the Building and related examination of soil and environmental conditions, if any; (v) review of Seller's summary description of operating expenses and capital expenses, if any, (vi) to investigate and determine the cost of operation of the Property (including, without limitation, taxes, assessments, and other fees and assessments applicable to the Property); and (vii) otherwise inspect the general condition of the Property and its suitability for Buyer's operations thereon.

In order to facilitate Buyer's due diligence review of the Property, Seller has provided or shall provide to Buyer true and correct copies of any of the following information to the extent Seller is in possession of such information: agreements, studies, easements, existing surveys, plans, inspections, specifications and the like affecting or relating to the ownership, use or operation of the Property, including, without limitation, restrictive covenants, conditions and restrictions, design guidelines, leases, easement agreements, environmental studies, structural and other engineering inspections, "as-built" building plans, zoning information, owner's title insurance policies, title reports and underlying documents, documents affecting title to the Property, documentation relating to real estate taxes and assessments, service and maintenance contracts, copies of all third party warranties, all citations, reports and correspondence from and with any governmental agencies.

3. Closing. Closing (the "Closing") of the purchase of the Property shall occur at a mutually convenient time and location in Memphis, Tennessee on or prior to December 2, 2013. In the event this transaction has not closed on or before December 2, 2013, Seller may, at its option, terminate this Agreement by written notice to Buyer. Attorneys for Seller shall be Wyatt, Tarrant & Combs, LLP. Attorneys for Buyer shall be Glankler Brown, PLLC.

On the date of Closing of the sale of the Property, the Closing shall occur as follows, subject to the satisfaction of all of the terms and conditions of this Agreement:

(a) Each party shall deliver to the other party appropriate evidence to establish the authority of such party to enter into and close the transaction contemplated hereby.

(b) Seller shall convey to Buyer marketable fee simple title by general warranty deed, duly executed and in recordable form subject only to Permitted Exceptions (as hereinafter defined).

(c) Seller shall deliver to Buyer a Seller's Affidavit on a standard title company form required to issue a title insurance policy as required herein.

(d) Seller shall deliver to Buyer an affidavit for purposes of Section 1445 of the Internal Revenue Code, if applicable.

(e) Buyer and Seller shall execute and deliver the items required by this Agreement, and Seller shall have obtained, with Buyer's cooperation as needed, any and all required third party consents in connection therewith.

(f) Seller's Board of Directors shall have approved the Closing and reaffirmed the transaction contemplated by this Agreement at a duly authorized and noticed meeting of Seller's Board of Directors, to be held on or before November 15, 2013.

4. Title and Survey. Promptly after the complete execution hereof by Buyer and Seller, Buyer shall obtain an owner's title insurance commitment (the "Commitment") to issue the most recent and appropriate ALTA-Form title insurance policy insuring marketable fee simple title to the Property to Buyer in an amount equal to the Purchase Price, and if not provided by the title company, Seller shall provide Buyer with copies of all of the documents required by said Commitment within ten (10) days after request therefor from Buyer. The Commitment, said policy and the aforesaid mortgagee's policy shall be issued by Chicago Title Insurance Company pursuant to the title certificate of Buyer's counsel. Buyer shall pay the costs of the title search and any related expenses associated with securing issuance of the Commitment.

At the earliest practicable date from the date of the full execution and delivery of this Agreement, Buyer may, at its election, obtain a survey of the Property (the "Survey") certified to Buyer, Seller and Title Company and if obtained Buyer shall deliver to Seller a copy thereof. So long as Seller approves of the Survey and legal description, such legal description shall be attached as Exhibit A to this Agreement.

The Commitment shall contain no liens, easements, encumbrances, tenancies or other exceptions to the title except (i) ad valorem taxes and special assessments for the current year not yet due and payable; (ii) the standard printed exceptions; (iii) covenants, encumbrances, restrictions and easements of record; and (iv) the Current Tenants (as defined in section 7(h)) (collectively, the "Permitted Exceptions"). If the Commitment contains exceptions to the title other than those provided above, which are not acceptable to Buyer, or if the Survey reveals any state or acts unacceptable to Buyer, Buyer shall so notify Seller in writing within five (5) days after receipt of the Commitment and title documents and the Survey, and Seller shall thereafter have ten (10) days from receipt of written notice thereof from Buyer to remove or make provision for the removal of such exceptions to the reasonable satisfaction of Buyer. If Seller is unable or unwilling to remove or to make provision for the removal of such exceptions to the reasonable satisfaction of Buyer within the time specified, Buyer shall have the right to (i) close the transfer as provided herein, subject to any such exceptions, or (ii) rescind this

Agreement and receive a refund of all Earnest Money paid by Buyer as provided herein. If Buyer fails to notify Seller of its objections to any exceptions to title within the time specified, Buyer shall be deemed to have waived all objections to the status of title as shown in the Commitment.

5. Representations and Warranties of Seller. Seller represents and warrants to Buyer as follows:

(a) Seller is the owner in fee simple of the Property and has full and absolute authority to sell the same as set forth herein, and no person or entity other than Buyer has any right or option to acquire the Property;

(b) Seller will not sell or otherwise further encumber the Property during the period from the execution of this Agreement until the Closing Date;

(c) To the best of Seller's knowledge, there is no actual (and to the best of Seller's knowledge, no threatened) full or partial condemnation of the Property, and there are no pending (and Seller has received no notice from any governmental entity notifying it of the plans for any) zoning or land use changes with respect to the Property;

(d) Seller is not a party to any litigation or administrative proceeding affecting the Property or any part thereof or affecting Seller's right to sell the Property or any interest therein or the use thereof, and there is no pending or, to the best of Seller's knowledge, threatened litigation or administrative proceedings affecting the Property or any part thereof or affecting Seller's right to sell the Property or any interest therein or the use thereof. Seller shall give Buyer notice of the institution of any such proceedings, or of its knowledge of any such threatened proceedings, within three (3) days of receipt of the institution or threat of such proceedings, and in any event prior to the Closing;

(e) Neither the Property nor any portion thereof is or will at the time of Closing be subject to a claim of adverse possession and no party other than Seller and the Current Tenants (as defined in Section 7(h)) is (nor shall be at Closing) in possession of the Property.

(f) To the best of Seller's knowledge, the Property complies with all applicable laws, rules, codes, ordinances, and regulations of any duly constituted governmental authority in all material respects. Seller has received no notice from any governmental entity notifying Seller that it is in violation of any applicable governmental, zoning, fire, building, health, or life and safety codes or regulations with regard to the Property.

(g) Seller currently has in effect and has had in effect at all times all reasonable and customary insurance, including without limitation property and casualty, general commercial liability, and flood, and there are no outstanding claims under any such insurance policies. Seller has received no notice from any insurance carrier

canceling any insurance pertaining to any of the Property, or any notice from any insurance carrier or board of fire underwriters requesting the performance of any repairs, alterations, or other work at the Property.

(h) To the best of Seller's knowledge, the Property is zoned for its present use; and there are no zoning restrictions of record, or made applicable to the Property by law or ordinance, restricting the continued use of the Property in the manner in which the same is now being used, and Seller has received no notice of the institution of proceedings which would create such restrictions.

(i) There is not now pending or, to the knowledge of Seller, threatened, nor are there any facts or circumstances to Seller's knowledge that could result in, any action, claim, suit or proceeding (including, but not limited to, condemnation or similar proceedings) before any court or governmental agency or body whatsoever adversely affecting the Property or its operation or which would constitute or establish a cloud on the title to the Property. Seller shall give prompt written notice to Buyer of any such proceeding of which Seller receives prior to Closing.

(j) There are no pending property tax appeals, and Seller has received no notice of any special assessments for public improvements against the Property, nor has Seller any knowledge of any such assessments that are pending or threatened, including, without limitation, those for constructions of sewer and water lines and mains, street lights, streets, sidewalks and curbs.

(k) Any equipment and mechanical systems located on or constituting a part of the Property, including but not limited to the Equipment, heating, air conditioning, plumbing, electrical and fire safety, are in good working order and condition, and have been properly serviced and maintained at all times during Seller's ownership of the Property.

(l) Seller warrants and represents that, to the best of Seller's knowledge: except for medical waste and ordinary cleaning materials, which are used, handled, stored and/or disposed of, as appropriate, in accordance with local, state, and federal laws, rules, and regulations: (i) no hazardous or toxic materials, including without limitation, any asbestos or asbestos containing materials, polychlorinated biphenyls, solid, liquid, gaseous or thermal irritant or contaminant or any substances defined as or included in the definition of "hazardous substances," "hazardous wastes," or "toxic substances" under any applicable federal or state laws or regulations and including materials to be recycled, reconditioned or reclaimed (collectively hereinafter referred to as "Hazardous Material") are or have been manufactured, used, located on, installed in, transported to or from, generated, stored, buried, released, allowed to escape, discovered upon, or disposed of (collectively referred to as "Incident") on, or in a location that has or will adversely affect, the Property; (ii) the Property is in full compliance with requirements of applicable federal, state and local laws, ordinances and

regulations relating to any Hazardous Material (collectively "Hazardous Material Laws"); (iii) the Property is not subject to any federal or state investigation evaluating whether any remedial action is needed to respond to an Incident of any Hazardous Material; (iv) the Property is not subject to any federal, state, or local liens in connection with remedial action needed or taken to respond to any Hazardous Material; (v) the Property is not the subject of claims made or threatened by any third party against Seller or the Property relating to damage, contribution, cost recovery compensation, loss or injury resulting from any Hazardous Material or Hazardous Material Laws; and (vi) no notice, requests, investigation or settlement is proposed, threatened, anticipated or in existence with respect to the presence, suspected presence, or potential presence of any Hazardous Material on or about the Property from any source.

(m) Seller is qualified to transact business in all jurisdictions where it conducts business.

(n) To the best of Seller's knowledge, the information furnished to Buyer pursuant to the provisions of this Agreement is accurate and complete in all material respects, and shall be updated at or prior to Closing so as to be accurate and complete in all material respects as of the Closing Date.

(o) To the best of Seller's knowledge, all other documents either furnished or to be furnished to Buyer by Seller pursuant to this Agreement are, or will be, at their delivery, true, accurate, and complete in all material respects as of the date therein indicated.

(p) Seller has full authority to enter into this Agreement as well as any and all documents, instruments and certificates pertaining to this transaction.

Except for Seller's warranties as set forth in this Agreement and any of the documents executed by Seller at Closing, no warranties or representations are being made by Seller with respect to the Property.

6. Representations of Buyer. Buyer represents and warrants to Seller that the execution hereof does not result in the breach of any legally binding written or oral agreement to which Buyer is bound, and that Buyer has full authority to enter into this Agreement as well as any and all documents, instruments and certificates pertaining to this transaction.

7. Contingencies. This Agreement and the obligations of Buyer and Seller hereunder shall be subject to the satisfaction of each of the following conditions precedent:

(a) All representations and warranties of Seller set forth in Section 5 hereof being true and correct, and Seller having complied with all of the provisions and conditions set forth herein to be complied with by Seller unless otherwise waived by Buyer.

(b) Seller being able to convey marketable fee simple title to the Property to Buyer subject to no exceptions other than the Permitted Exceptions.

(c) There shall be no change in the matters reflected in the Commitment.

(d) If Seller is a party to any litigation or administrative proceeding affecting the Property or any part thereof or that would affect Buyer's use thereof, then Seller shall be responsible therefor and shall either: (i) pay any and all of its expenses relating to such litigation or administrative proceeding (including any costs, expenses, fees (including attorneys' fees and court costs), fines, penalties, claims, judgments, settlements, demands, damages and losses incurred in connection therewith), and shall use its best efforts to conclude the same favorably with respect to the Property and Buyer, and shall indemnify and hold Buyer, its officers, directors, employees and agents, harmless from any and all costs, expenses, fees (including without limitation attorneys' fees and court costs), liabilities, obligations, damages, demands, claims, judgments, settlements and losses incurred by Buyer, its officers, directors, employees or agents, arising therefrom, related thereto or in connection therewith, which indemnity and hold harmless shall survive the expiration or termination of this Agreement; or (ii) terminate this Agreement immediately upon written notice to Buyer, in which case this Agreement would become null and void and of no further effect without further action required of the parties.

(e) Buyer's ability to obtain, in the amount of the Purchase Price, an owner's title insurance policy insuring the Property, without exceptions other than Permitted Exceptions and other exceptions which are usual and customary for commercial real estate transactions in Shelby County, Tennessee.

(f) There has been no material adverse change in the condition of the Property subsequent to the Buyer's completion of the inspection of the Property and all improvements located thereon (including without limitation the Building and the Parking Lot), together with Buyer's receipt of reports thereon satisfactory to Buyer, all as described in Article 2 hereof.

(g) Seller shall procure from the Current Tenants usual and customary estoppel certificates and subordination, non-disturbance and subordination agreements. The following is a list of tenants currently leasing (or subleasing) space within the Building (collectively, the "Current Tenants"):

(i) UT Le Bonheur Pediatric Specialists, Inc., Suites 220 and 250
(ii) Laboratory Corporation of America Holdings, Suite 100
(iii) Henry T. Grizzard, M.D., Suite 240
(iv) UT Methodist Physicians, LLC, Suites 220, 120, 350, 280

(h) On or before the Closing, Buyer's Board of Directors shall have approved this Agreement and the transactions contemplated hereby. Buyer shall give written

notice to Seller and to the Title Company if Buyer's Board of Directors has not approved this Agreement on or before Closing and from and after such notice, this Agreement shall be deemed terminated and the Escrow Money, plus all accrued interest thereon, but less reasonable and documented expenses (not to exceed $25,000.00) incurred by Seller after expiration of the Review Period in preparation for the Closing, shall be returned to Buyer and the parties shall have no further rights or obligations hereunder, except for any rights or obligations specifically identified as surviving termination of this Agreement. Buyer's agreement to move forward with Closing or its failure to timely notify Seller and the Title Company that Buyer's Board of Directors has not approved this Agreement shall constitute and be deemed notice that Buyer's Board of Directors has approved this Agreement.

8. Expenses and Prorations. Upon the Closing of the sale of the Property, the expenses of this transaction and Closing prorations shall be paid as follows:

(a) All ad valorem taxes and special assessments on the Property imposed for the calendar year of Closing shall be prorated as of the date of Closing. However, if Closing shall occur before the tax rate for such year is fixed, the amount of such taxes and special assessments for the immediately preceding calendar year shall be utilized for such proration, and any difference in actual and estimated property taxes for the year of Closing shall be adjusted between the parties upon receipt of written evidence thereof. Seller shall be responsible for and satisfy all taxes and special assessments for all calendar years prior to the calendar year of Closing.

(b) Buyer will pay the fee for the title search in connection with the issuance of the Commitment, and any expenses related to such Commitment. Buyer will pay for the premium for the issuance of the owner's title insurance policy for the Property.

(c) Buyer will pay for the cost of the Survey of the Property.

(d) Buyer will pay for the preparation of the general warranty deed.

(e) Buyer will pay all transfer taxes and recording costs incurred in recording the general warranty deed.

(f) Each party will pay its own attorney's fees.

(g) Each party will pay one-half (1/2) of the escrow fee to the Escrow Agent.

(h) Each party will pay all other costs and fees customarily payable by a buyer or seller in a commercial real estate transaction in Shelby County, Tennessee.

9. Right of Entry. At any time prior to or following the execution of this Agreement, Buyer and its duly authorized representatives shall have the right to enter upon the Property for the purposes of

making engineering or architectural studies, surveys, test borings, soil bearing tests, environmental audits, and other inspections and investigations of the Property as Buyer may deem necessary or advisable; provided that Buyer shall not unreasonably interfere with Seller's and any Current Tenant's use and occupancy of the Property. Buyer shall indemnify and hold Seller harmless from and against any and all claims, costs or expenses arising from or in connection with Buyer's or its representatives' activities upon the Property, their use thereof or entry thereon, which indemnity and hold harmless shall survive the expiration or termination of this Agreement. Buyer hereby agrees to repair any damages caused by Buyer's acts or omissions in connection with its activities upon the Property. The provisions of this paragraph shall survive the termination of this Agreement or the Closing of this transaction.

10. Default. The following provisions shall govern the rights of the parties hereto in the event that the transaction contemplated by this Agreement fails to close or a party otherwise defaults on an obligation provided for post-Closing:

(a) In the event Seller shall fail to close and default, except for a default caused by Buyer's default, then Buyer shall be entitled to compel specific performance by Seller of the terms of this Agreement. Buyer shall have the right to specific performance to compel Seller to transfer the title to the Property by general warranty deed to Buyer with Buyer retaining the right to fully occupy and utilize the Property after the Closing Date, subject, however, to the existing tenancy of Current Tenants. Alternatively, Buyer may terminate this Agreement and this Agreement shall thereafter be null and void and of no further force or effect and Buyer's remedies shall be the return to it of the Earnest Money, plus an amount not to exceed $25,000.00 for its documented and paid (or payable) costs and expenses incurred in pursuing the transaction contemplated by this Agreement (including, without limitation, fees and expenses of attorneys, accountants, engineers, property inspectors, surveyors and any other persons or entities engaged by Buyer in connection herewith) as compensatory damages, and to enforce the indemnification obligations of Seller under Section 7(d) of this Agreement. In all events Buyer waives rights and remedies for consequential, special, speculative and punitive damages against Seller.

(b) In the event Buyer shall fail to close and default, except for default caused by Seller's default, then this Agreement shall thereafter be null and void and of no further force or effect and Seller's only remedy shall be to receive the Earnest Money as liquidated damages and to enforce Buyer's obligations under Section 9 of this Agreement.

11. Risk of Loss. The risk of loss or damage to the Property prior to the Closing of this transaction shall be borne by Seller. If all or any portion of the Property shall be taken by eminent domain or be the subject of condemnation proceedings, or fire or other casualty results in damage to the Property, Seller shall promptly notify Buyer. Buyer will then, within ten (10) days of receiving Seller's notice, elect to either (i) complete the purchase of the Property at the agreed upon Purchase Price, in which event Buyer shall be entitled, in the event of condemnation, to receive all awards paid or payable with respect to such taking or condemnation proceedings, or, in the event of fire or other casualty, to receive all insurance proceeds therefor, or (ii) terminate this Agreement in all respects, and the Escrow

Money, plus all accrued interest thereon, shall be returned to Buyer, and the parties shall have no further rights or obligations hereunder, except for any rights or obligations specifically identified as surviving termination of this Agreement. Seller shall execute and deliver to Buyer on the date of Closing hereunder all documents as may be necessary to effect the full assignment and collection of such awards and proceeds, if Buyer elects to complete the purchase of the Property.

12. Assignment. Buyer shall have no right to assign, transfer or convey its rights hereunder without the prior written consent of Seller; provided, however, that Buyer may, with notice to Seller but without the requirement of Seller's written consent, assign, transfer or convey its rights hereunder to an affiliated entity.

13. Entire Agreement. This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof, and it is understood and agreed that all undertakings and agreements heretofore made between the parties concerning the subject matter hereof are merged herein.

14. Notices. Any notice, request, demand, instruction or other communication hereunder shall be in writing and, except as otherwise provided herein, shall be deemed to have been duly given if delivered in person or sent by first class, certified mail, return receipt requested, postage prepaid, or deposited with a reputable overnight courier providing receipt upon delivery, addressed as follows:

To Buyer at:

Methodist Healthcare – Memphis Hospitals
1211 Union Avenue, Suite 700
Memphis, Tennessee 38104
Attention: President

With a copy to:

Methodist Le Bonheur Healthcare
1211 Union Avenue, Suite 700
Memphis, Tennessee 38104
Attention: Legal Department

To Seller at:

UT Medical Group, Inc.
1407 Union Avenue, Suite 700
Memphis, TN 38104
Attn: Charles M. Key, General Counsel

With a copy to:

Wyatt, Tarrant & Combs, LLP
The Renaissance Center
1715 Aaron Brenner Dr., Suite 800
Memphis, TN 38120
Attn: Jordan E. Reifler and
Richard C. Raines

Change of address may be effected by either party by giving notice thereof as provided herein.

15. Modification. This Agreement may not be changed orally, but may only be changed by an agreement in writing signed by Buyer and Seller.

16. Binding Effect. The provisions of this Agreement shall inure to the benefit of and shall be binding upon the parties hereto and their respective successors and assigns.

17. Time. Time is of the essence of this Agreement. In the event that the time period for any act to be taken or notice to be given hereunder expires on a date which is a Saturday, Sunday or legal

holiday, then such time period shall be extended to the next day which is not a Saturday, Sunday or legal holiday.

18. Headings. The headings contained in this Agreement are for convenience of reference only, and shall not limit the provisions contained herein.

19. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Tennessee.

20. Broker and Commission. Buyer represents and warrants that it is not, and has not been, represented by any broker or agent. Buyer will indemnify and hold Seller harmless from any and all claims for commissions alleged to be due to any broker or agent asserting entitlement to commission by virtue of their representation of Buyer. Seller represents and warrants that it is not, and has not been, represented by any broker or agent. Seller shall indemnify and hold Buyer harmless from any and all claims for commissions or any other remuneration due to any broker or agent asserting entitlement to commission by virtue of their representation of Seller. The provisions of this paragraph shall survive the closing of this transaction.

21. Counterparts; Electronic Transmission. This Agreement may be executed in any number of counterparts, any one or all of which shall constitute the agreement of the parties. Delivery of an executed counterpart of this Agreement may be made by electronic transmission. Any such counterpart or signature page sent by electronic transmission shall be deemed to be a written and signed original for all purposes, and a copy of this Agreement containing a signature page that has been delivered by electronic transmission shall constitute an enforceable original document. As used in this Agreement, the term "electronic transmission" means and refers to any form of communication not directly involving the physical transmission of paper that creates a record that may be retained, retrieved and reviewed by a recipient of the communication, and that may be directly reproduced in paper form by such a recipient through an automated process.

22. Offer and Acceptance. The effective date of this Agreement shall be deemed to be the date that it is timely executed, unaltered by Seller and by Buyer.

23. Attorneys' Fees. In the event of a dispute hereunder, the prevailing party in any litigation shall be entitled to its attorneys' fees, court costs, and other litigation expenses (including those incurred on appeal) from the non-prevailing party.

[*Signature Page Follows*]

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November 25, 2013
11:00am

[Signature Page to Contract to Purchase Real Estate]

IN WITNESS WHEREOF, the parties hereto have executed this Contract to Purchase Real Estate by and through their duly authorized representatives, as of the date first set forth above.

BUYER:

METHODIST HEALTHCARE – MEMPHIS HOSPITALS

By: _____

Name: Gary S Shobe

Title: CEO

SELLER:

UT MEDICAL GROUP, INC.

By: _____
Charles E. Woeppel
Chief Executive Officer

60182037.10

Exhibit A

Legal Description of Property

Lot 7, Phase 1, First Addition, Wolf River Center, as recorded in Plat Book 149 Page 34 in the Shelby County Register's Office.

Exhibit B

Equipment

Toshiba/Aquilion CT Scanner, Serial Number JDA10X2192 ("Scanner"), together with all add-ons, peripheral devices, and related items of personal property necessary for the operation of Scanner, including, without limitation, that certain ceiling-mounted MED-RAD automated contrast injector.

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Attachment 4

Breast Cancer Disparity Study

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Cancer Epidemiology 36 (2012) e147–e151

Contents lists available at SciVerse ScienceDirect

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The racial disparity in breast cancer mortality in the 25 largest cities in the United States☆

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ABSTRACT

Introduction: Although the racial disparity in breast cancer mortality is widely discussed there are no studies that analyze this phenomenon at the city level. *Methods*: We used national death files, abstracting those cases for which the cause was malignant neoplasm of the breast (ICD-10 = C50) for the numerators and American Community Survey data for the denominators. The 25 largest cities in the US were the units of analysis. Non-Hispanic Black:non-Hispanic White rate ratios (RRs) were calculated, along with their confidence intervals, as measures of the racial disparity. Seven ecological (city-level) variables were examined as possible correlates. *Results*: Almost all the NHB rates were greater than almost all the NHW rates. All but 3 of the RRs (range 0.78–2.09; median = 1.44) were >1, 13 of them significantly so. None of the RRs < 1 were significant. From among the 7 potential correlates, only median household income ($r = -0.43$, $p = 0.037$) and a measure of segregation ($r = 0.42$, $r = 0.039$) were significantly related to the RR. *Conclusion*: This is the first study that we have been able to locate which examines city-level racial disparities in breast cancer mortality. The results are of concern for several cities and for the field in general. A strategy for reducing this disparity in Chicago is in place and may serve as a model for other cities wanting to initiate a similar process. Clearly it is time to take action.
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1. Introduction

Although White women are diagnosed with breast cancer more than Black women, Black women die from it at a much higher rate. For example, from 2000 to 2004 the age-adjusted breast cancer incidence rate for non-Hispanic White (NHW) women in the United States was 132.5 (per 100,000 women) compared to 118.3 for non-Hispanic Black (NHB) women, yielding an NHB:NHW rate ratio (RR) of 0.89. In the same years the mortality rates were 25.0 (age-adjusted, per 100,000 women) for NHW women and 33.8 for NHB women (RR = 1.35) [1]. Evidence shows this paradox exists for women both under 50 and over 50 [2].

These national figures are averages across many geographical units throughout the country. In a previous study we documented the nature of the racial disparity in breast cancer mortality in Chicago and found the NHB:NHW RR = 1.98 in 2005 compared with 1.36 in New York City and 1.38 for the United States during this same year [3]. This very large racial disparity in breast cancer mortality in Chicago created a great deal of attention in the media and the breast cancer community. As a result, the Metropolitan Chicago Breast Cancer Task Force was formed. This area-wide organization consists of over 100 individuals and 74 organizations devoted to eliminating the racial disparity in breast cancer through a multifaceted approach [4].

City-level data thus offer the potential to both understand health problems at the local level and to mobilize constituencies for programs or interventions for improvement. Despite this, we are not aware of any reports of breast cancer mortality analyses for cities other than Chicago. With this in mind, this paper presents race-specific breast cancer mortality rates for the 25 largest cities in the United States, measures the racial disparities for each city, analyzes societal (ecological) risk factors that we hypothesize could play a role in breast cancer disparities and discusses the insights and implications of such an analysis.

2. Methods

The 25 most populous cities were determined using 2005 Census data [5]. Deaths where the cause was malignant neoplasm of the breast (ICD-10 = C50) were included in this analysis. Numerator data for 2005–2007 were abstracted from death files maintained by the Centers for Disease Control and Prevention in Atlanta, Georgia. Population-based denominators for the non-Hispanic White (NHW)

☆ There has been no research support for this project for any of the authors.
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population were obtained from the American Community Survey 2005–2007 3-year estimates [6]. Population-based denominators for the non-Hispanic Black (NHB) population were not readily available. We thus estimated the population using an age-specific ratio calculated by dividing the number of non-Hispanic Blacks by total Blacks in the 2000 Census and multiplying the proportion by the number of all Blacks in 2005–2007 for each age group. For each of the three data sources, the census, the ACS and the death files the NHB and NHW classifications are defined by self-identification. Hispanic ethnicity is asked first followed by racial identity and then these two variables are cross-tabulated to obtain the racial categories employed in this analysis. Age-adjusted rates per 100,000 population were calculated based on the year 2000 standard US population and represent a 3-year average (2005–2007). Data for Indianapolis breast cancer deaths were missing and thus this analysis includes 24 (rather than 25) cities.

To measure disparity in breast cancer mortality we calculated the NHB:NHW rate ratio for each of the 24 cities. A rate ratio of 1.00 is interpreted as no disparity between the NHB and NHW rate, while a rate ratio greater than 1.00 means the NHB rate is higher than the NHW rate and a rate ratio less than 1.00 means the NHW rate is higher. A rate ratio was considered to be statistically significant if the 95% confidence interval did not contain 1.00. The confidence interval for the rate ratio was calculated using a Taylor series expansion technique [7]. To examine the association between each risk factor and rate ratio, we utilized the PROC CORR procedure in SAS v 9.1, which calculates the Pearson correlation coefficient.

NHB excess deaths stemming from the NHB:NHW disparity were computed for each city by applying the age-specific NHW breast cancer mortality rates to the age-specific NHB population. These were then totaled and subtracted from the NHB observed breast cancer deaths. The difference is the excess breast cancer mortality due to the disparity.

We determined the coefficient of correlation for seven ecological risk factors measured at the city level (i.e., the city is the unit of analysis) with the breast cancer mortality racial rate ratios for these 24 cities. These included the proportion of the population that was non-Hispanic White, proportion that was non-Hispanic Black, size of the population, median household income, proportion that is below the poverty level, the Gini Index, and the NHB:NHW Index of Dissimilarity (IOD) at the census tract level. The IOD measures the evenness of geographic spread between two groups within an area and is frequently used as a measure of racial segregation. In such cases, the Index estimates the proportion of NHB people that would have to move from one census tract to another in order to generate an even distribution of NHB and NHW people or vice versa (i.e., to achieve full integration). The IOD ranges from 0 (perfect integration) to 1 (perfect segregation) [8,9].

The Gini Index is a measure of relative mean difference that examines the dispersion of inequality in a population. In this instance, the Gini Index is used to measure the inequality in income across the population. The measure, based upon the distribution below and above a Lorenz curve, ranges from 0 to 1 with 0 indicating that everyone in the population has equal income and 1 indicating there is total income inequality [10].

The first six risk factors were obtained from the 2005–2007 ACS study. The IOD was based on Census 2000 data and was obtained from the University of Michigan Population Studies Center [11].

2.1. Statistical analysis

SAS v 9.1 was used for all analyses. SigmaPlot 11.0 was used to create Fig. 1.

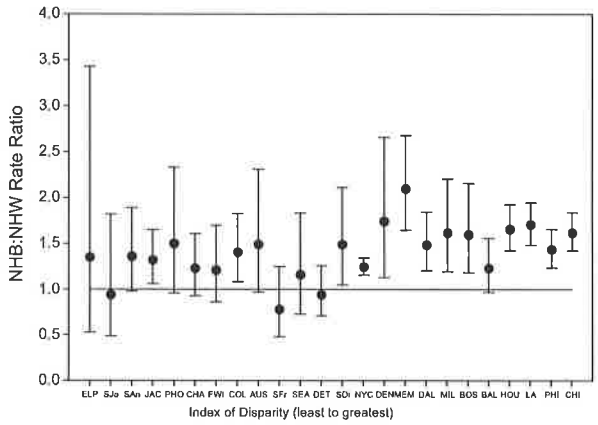

Fig. 1. 3-Year estimates of breast cancer mortality disparity between non-Hispanic Black and non-Hispanic White Women for 24 of the 25 largest cities in the United States, 2005–2007, arranged according to the ascending Index of Disparity.

3. Results

Table 1 presents the age-adjusted breast cancer mortality rates for NHB and NHW women in 2005–2007, and the respective racial rate ratios. The 24 cities are arranged in descending order according to population size. New York, the largest city, had an RR = 1.24 and Denver, the smallest city, had an RR = 1.74. Memphis had the largest RR (2.09) and San Francisco had the smallest (0.78). Those rate ratios that are statistically significant are in bold face in the table. These correspond to the cities in Fig. 1 for which the confidence intervals do not include 1. Note that only three ratios are less than 1 and none significantly so but 13 are significantly greater than 1 and several others are near-significant. As would be expected, there is a significant positive correlation between the NHB rate and the disparity ($r = 0.67$, $p < 0.001$) and a significant negative correlation between the NHW rate and the disparity ($r = -0.53$, $p = 0.008$).

The rate ratio is a function of both the NHW and NHB rates. For example, the RR for Detroit is close to unity because the NHW rate (37.3) is very high among the NHW rates while its NHB rate is about average (for NHB rates) among these cities (35.2). In Memphis the RR is so high (2.09) because the NHB rate is high (44.6) and the NHW rate is low (21.3). The very low RR in San Francisco is due to the NHB rate (19.6), which is the lowest of all the cities. Note that there is a great deal more variation in the NHB rates than the NHW rates. These rates may be compared with the breast cancer mortality goal of Healthy People 2010 of 22.3 [12] and with the U.S. rates presented in Table 1.

There is very substantial variation in these breast cancer mortality rates. The largest of all 48 rates is for NHB people in Houston (47.3) and the smallest is for NHW people in Denver (17.7). Interestingly, the rate for NHB people in San Francisco is almost as small as the NHW rate in Denver but overwhelmingly the rates for NHW women are much lower than the rates for NHB women. In fact, among the 24 cities, only 1 has an NHW rate over 29.0 while 21 have NHB rates above this value. For comparison we note that in 2007 the NHB breast cancer mortality rate for the US overall was 32.2 while it was 23.0 for NHW women [13].

Table 1 also contains the excess annual NHB breast cancer deaths for each city for which the rate ratio was significantly different from 1. The number of such deaths is a function of both the disparity and the NHB population size. Thus, there were 70 such deaths in New York City annually, or 1.3 a week. The number of excess deaths is about the same for Chicago (76), where the disparity is much larger but the population is considerably smaller (Tables 1 and 2).

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Table 1
3-Year estimates of breast cancer mortality disparity between non-Hispanic Black and non-Hispanic White Women for 24 of the 25 largest cities in the United States, 2005–2007.

City, State (largest to smallest)	NHB rate[a]	NHW rate[a]	Rate ratio[*]	95% CI	Annual excess NHB deaths[#]
United States	33.2	23.7	**1.40**	1.38–1.42	1722
New York City, NY	31.2	25.2	**1.24**	1.15–1.34	70
Los Angeles, CA	46.5	27.4	**1.70**	1.48–1.94	43
Chicago, IL	37.8	23.4	**1.61**	1.42–1.83	76
Houston, TX	47.3	28.7	**1.65**	1.42–1.92	49
Philadelphia, PA	35.8	25.1	**1.43**	1.23–1.65	38
Phoenix, AZ	32.9	22.0	1.50	0.96–2.33	
San Antonio, TX	36.8	27.0	1.36	0.98–1.89	
San Diego, CA	36.7	24.7	**1.49**	1.05–2.11	5
Dallas, TX	37.5	25.3	**1.48**	1.20–1.84	18
San Jose, CA	27.2	28.9	0.94	0.49–1.82	
Detroit, MI	35.2	37.3	0.94	0.71–1.26	
Indianapolis, IN	–	–	–	–	
Jacksonville, FL	37.1	28.1	**1.32**	1.06–1.65	10
San Francisco, CA	19.6	25.2	0.78	0.48–1.25	
Columbus, OH	36.6	26.1	**1.40**	1.08–1.82	9
Austin, TX	33.1	22.2	1.49	0.97–2.31	
Memphis, TN	44.6	21.3	**2.09**	1.64–2.67	42
Baltimore, MD	31.6	25.7	1.23	0.97–1.56	
Fort Worth, TX	29.8	24.6	1.21	0.86–1.70	
Charlotte, NC	32.3	26.3	1.23	0.93–1.61	
El Paso, TX	24.9	18.4	1.35	0.53–3.43	
Milwaukee, WI	29.6	18.4	**1.61**	1.19–2.20	12
Seattle, WA	30.0	25.9	1.16	0.73–1.83	
Boston, MA	34.6	21.7	**1.59**	1.18–2.15	10
Denver, CO	30.8	17.7	**1.74**	1.13–2.66	4

[*] Bolded rate ratio denotes it is significantly different from 1.00.
[a] Age-adjusted rate is expressed per 100,000 females using the US 2000 Standard Population.
[#] Excess NHB deaths are only calculated for rate ratios that are significantly different from 1.00.

Table 2 presents the line listing for all the cities and contains the seven hypothesized correlates of the RR. The variability or lack thereof in each of these measures is noteworthy. For example, the median household income varies from a low of $29,100 for Detroit (with one of the lowest RRs, 0.94) to a high of $76,400 for San Jose (also with a low RR = 0.94) and $65,500 for San Francisco (also with a low RR = 0.78). The IOD, which here is used as a measure of racial segregation (1 = complete segregation) varies from a high of 86% for Chicago (RR = 1.61) to a low of 35% for El Paso (RR = 1.35) and 41% for San Jose (RR = 0.94). The Gini Index ranges from a low of 0.43 in San Jose (RR = 0.94) to a high of 0.54 in New York (RR = 1.24). This 0.43 is a comparatively elevated Gini Index [14]. Data are similarly displayed for the other four potential correlates.

We also calculated the bivariate correlations of the RR with each of the predictor variables. These are listed at the bottom of Table 2. Of the seven hypothesized risk factors only median household

Table 2
Correlates of the rate ratios for 24 of the 25 largest cities in the United States, 2005–2007.

City, State (largest to smallest)	NHB:NHW BC mortality rate ratio	Population size	% NHW	% NHB	Median household income	% Below poverty level	Index of disparity	Gini Index
New York City, NY	1.24	8,246,310	35.1	23.7	47,581	19	0.629	0.535
Los Angeles, CA	1.70	3,770,590	29.3	9.7	46,292	19	0.732	0.524
Chicago, IL	1.61	2,740,224	30.9	34.7	44,473	21	0.857	0.509
Houston, TX	1.65	2,034,749	28.0	24.0	40,285	21	0.718	0.519
Philadelphia, PA	1.43	1,454,382	39.4	43.1	34,767	24	0.771	0.487
Phoenix, AZ	1.50	1,440,018	48.1	5.2	47,223	17	0.511	0.461
San Antonio, TX	1.36	1,267,984	29.3	6.3	42,217	18	0.490	0.460
San Diego, CA	1.49	1,264,263	48.2	6.7	60,185	13	0.623	0.458
Dallas, TX	1.48	1,187,603	30.6	23.2	40,147	21	0.665	0.533
San Jose, CA	0.94	898,901	31.7	3.1	76,354	10	0.410	0.433
Detroit, MI	0.94	837,711	8.4	82.5	29,109	32	0.603	0.473
Jacksonville, FL	1.32	797,966	58.7	29.9	47,381	13	0.510	0.442
San Francisco, CA	0.78	757,604	44.7	6.7	65,519	12	0.594	0.508
Columbus, OH	1.40	724,095	63.3	26.1	42,031	20	0.585	0.436
Austin, TX	1.49	725,306	49.9	8.3	48,227	18	0.589	0.483
Memphis, TN	2.09	649,443	30.2	62.3	35,181	24	0.652	0.501
Baltimore, MD	1.23	639,493	30.4	63.6	36,304	20	0.715	0.490
Fort Worth, TX	1.21	635,612	44.1	18.0	44,804	17	0.584	0.460
Charlotte, NC	1.23	649,578	50.3	33.2	51,050	12	0.571	0.488
El Paso, TX	1.35	592,627	15.0	2.6	34,626	27	0.347	0.477
Milwaukee, WI	1.61	584,007	40.9	38.4	35,233	24	0.698	0.436
Seattle, WA	1.16	565,809	67.9	7.5	56,319	13	0.602	0.495
Boston, MA	1.59	600,980	50.0	22.2	48,729	20	0.711	0.530
Denver, CO	1.74	576,842	50.5	9.7	43,748	18	0.646	0.504
Correlation Coefficient[*]		0.04	0.02	0.07	**−0.43**	0.29	**0.42**	0.25

[*] Correlations between the rate ratio and the 7 ecological variables. Bolded coefficients are statistically significant ($p < 0.05$).

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income ($r = -0.43$, $p = 0.037$) and the IOD ($r = 0.42$, $p = 0.039$) were significantly correlated with the RR.

Fig. 1 displays the rate ratios along the y-axis and the ascending Index of Disparity along the x-axis. As can be seen there is a slightly upward trend in the data suggesting a moderate relationship between these two variables, as is consistent with the $r = 0.42$ noted above.

4. Discussion

As far as we are able to determine, this is the first publication that has looked at city-level NHB:NHW breast cancer mortality disparities. Several insights emerge as a result of this analysis. We examined seven ecological variables as potential correlates of the rate ratio. It should be mentioned that the correlates were single measures at the city level, and not specific to each race within a city. Thus, a single indicator of income may conceal the degree of disparity between races within a city, with the exception of the segregation index. It is also important to emphasize that we are seeking correlates of the disparity and not simply of the rates. We emphasize this point since several of the variables we considered have been found to be predictors of *health* but few, to our knowledge, have been examined as predictors of *health disparities*, though there are some important exceptions [15,16]. In this sense, this analysis makes a unique contribution.

Only two of these seven variables were significantly related to the rate ratio: the median household income (negatively) and the Index of Dissimilarity (positively), a measure of segregation. MHHI was lowest for Detroit ($29,100) and highest for San Jose ($76,400) and then San Francisco ($65,500). Notably, these three had the three lowest RRs, all less than 1.00. Poverty has, of course, frequently been found to be a risk factor for bad health [17,18]. Since Black people are more often poor it may be that poverty on a city level would exacerbate racial disparities although we have not been able to locate any studies of this topic.

The IOD indicates (in this usage) what proportion of NHB people would have to move to another census tract in order to achieve perfect integration with NHW people, or vice versa. This proportion is 86% for Chicago, 77% in Philadelphia and only 35% in El Paso. The reason the IOD is so small in the latter is likely because there are very few non-Hispanic Whites and non-Hispanic Blacks living there. In their classic study of segregation in the United States Massey and Denton found that large cities had an average IOD of 77% in 1980 [19]. Segregation has been linked to poor health for Black people, summarized by several reviews [20,21], and to disparities in health by a prominent analysis of the literature [22].

Notably, the Gini Index was not a significant predictor of the RR. This may represent reality or it may be a function of the fact that this index varies so little across the 24 cities, with a low of 0.43 in San Jose and a high of 0.54 in New York. Some studies have found significant relationships between economic inequality and health [10,23] but others have not [24]. A recent review summarizes this literature [25]. There are several measures of income inequality that could be used for such an analysis but in general they have been found to be highly correlated with one another [26] and the Gini Index is the most commonly employed measure [23]. Once again, we are not aware of any studies that have examined the impact of economic inequality in a geographical unit on racial disparities in that unit.

This disparity, like so many others, is literally a matter of life and death, generating annual NHB excess mortality of 42 in Memphis, 76 in Chicago and 1722 in the United States (Table 1).

4.1. The utility of such an analysis

The racial disparity in breast cancer mortality is widely discussed but geographic variation has generally been left out of this discussion, although there are notable exceptions [24,27]. It certainly would be possible to analyze disparities at other levels (e.g., state, zip code, metropolitan area or rural area) and each would have its advantages. For example, smaller scale analysis can reduce the confounding factors due to different geographic areas and larger scale analyses would cover greater geography. In this case we employed city-level disparities because it had not been done before, because many people identify at that level, and because important actions (interventions) are possible at the city-level, as discussed below in great detail, using Chicago as a case-study.

Since geographic analysis has by and large been omitted so have ecologic variables like the ones included in this analysis. This would seem like an important gap in the literature. For example, in the analysis presented here racial residential segregation (the IOD) is strongly correlated with the breast cancer mortality disparity. In a paper recently published by our group we presented a map of Chicago which indicated the 25 communities (out of 77) with the highest breast cancer mortality rates. They were almost all ($n = 24$) communities that were predominantly Black. We superimposed on this map those communities in which hospitals with American College of Surgeons approved cancer programs were located. There was virtually no overlap, suggesting a disconnect between communities most in need and those where services were geographically located, a disconnect defined by race [4]. Thus, what has been disclosed by the analysis in the current report is vividly illustrated by our map of Chicago. We wonder whether other cities are experiencing the same phenomenon, given the IOD findings here.

Consistent with this analysis is a call for further research guided by several of these findings. For example, cities with smaller disparities (e.g., San Francisco and Detroit) and those with larger disparities (e.g., Memphis and Denver) should look into these anomalous results. They may want to implement analyses of the determinants of these mortality rates involving individual level factors and how they vary by city. These may include incidence rates, proportions attending regular mammographic screening, proportions with health insurance, stage at diagnosis, breast cancer awareness, etc. Among the kinds of questions we can ask here are why the NHW rate is so high in Detroit and why the NHB rate is so low in San Francisco.

In cities in which the RR is particularly high or where individual rates are high, city-wide efforts are surely merited to attempt to reduce the racial disparity in breast cancer mortality. How "high" this RR should be in order to take action is of course subjective but one might use the RR for the US = 1.38 in 2005 [3] or 1.40 in 2007 [13] as an example or refer to Table 1 for other possibilities. For individual rates, the US rate or NHW rate for that location may be used as a gauge to identify what is 'high'. The Task Force mobilization in the Chicago metropolitan area has thus far drawn a great deal of attention, funding and energy [4] and it would likely be helpful to generate efforts in similarly situated cities. Such organizing will hopefully improve equity in breast cancer outcomes. For example, the Task Force organized a demonstration of 500 people demanding increased funding for the Illinois Breast and Cervical Cancer Program which pays for mammograms, pap smears and treatment of these cancers for poor women [28].

Furthermore, the Task Force helped the passage of legislation to increase the Illinois Medicaid reimbursement rate for mammography to the Medicare rate, which represents a tripling of the reimbursement rate (Public Law 95-1045). The State of Illinois also decided to require health care providers, as a condition of receiving that increase, to submit mammography screening quality data to the Chicago Breast Cancer Quality Consortium. The Consortium is a project of the Task Force charged with bringing together health care providers to identify deficits

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and engage in quality improvement interventions relating to breast cancer screening, diagnosis and treatment.

As a final observation here it should be mentioned that some breast cancers in NHB women may be of a more aggressive type (e.g., higher proportion of triple negatives) for which survival is poorer; but at the same time, the low RRs in some cities such as Baltimore or New York compared to that in other cities point to the fact that even if biological differences in tumor aggressiveness are present, they would not account for between cities differences. This would leave structural (e.g., racism and poverty) and access to care issues (e.g., early detection and treatment) as likely explanations [3,4].

4.2. Methodological considerations

This paper gains strength from the data sources employed. With respect to the national death certificate files that were employed, we have searched the literature and there is overwhelming agreement that the files are generally complete [13]. It is further likely that breast cancer mortality would be one of the least ambiguous death codes, as opposed to heart disease and diabetes, for example [13]. The numerators, drawn from the American Community Survey, are similarly robust, based as they are upon sample sizes in the millions [29].

Despite the fact that we have analyzed three-year average rates from the 24 largest cities in the United States, even these will vary over time and it could be that the next three years of data would produce some noticeably different figures. Thus, the data presented here should be seen as an exemplar of a process rather than a fixed set of rates.

Second, we have only dealt with non-Hispanic Black and non-Hispanic White women in this analysis. Clearly rates for other groups need to be analyzed as well. This begins to involve small numbers for some racial groups, like Native Americans, which would require a different strategy for analysis (e.g., perhaps using 5 or even 10 year averages). In addition, vital records data reveal very low breast cancer mortality rates for Hispanic women [13]. Since mammography rates are lower for this group [30] and other studies reveal less than optimal treatment for Hispanic women [31], the explanation of these low mortality rates almost certainly stems from the fact that many Mexicans return home when they become chronically ill, thus not generating a US death certificate with a diagnosis of breast cancer (sometimes referred to as the "salmon hypothesis") [32,33].

5. Conclusion

National and state breast cancer mortality rates are informative. Yet rates for smaller geographies are necessary to identify disparities at the local level and help facilitate community engagement and organizing for improved health [34]. An ideal local level for breast cancer analysis may be the city since smaller units will have too few events for stable calculations. For the reasons noted above, we recommend that such municipalities compute these rates and rate ratios and open a discussion about disparities in breast cancer mortality in their communities. There is much to be gained and little to lose by doing this.

Conflict of interest statement

None of the three authors have any financial and personal relationships with other people or organizations that could inappropriately influence (bias) our work.

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Attachment 5

Revised Square Footage Chart and Other Revised Pages

(Please replace original pages with those attached)

Provide a detailed narrative of the project by addressing the following items as they relate to the proposal.

A. Describe the construction, modification and/or renovation of the facility (exclusive of major medical equipment covered by T.C.A. § 68-11-1601 et seq.) including square footage, major operational areas, room configuration, etc.

1. Overview of the Project

This project is for the establishment of an integrated comprehensive cancer center. The key attribute of such a center is the ability to cohesively coordinate and integrate all aspects of state-of-the-art cancer care. These aspects include clinical research, collaborative patient care, education, prevention dissemination and community outreach programs.

The new location is an existing, freestanding three-story building located on Wolf River Boulevard near the Germantown Parkway intersection in Germantown, Tennessee. The building currently houses the Methodist Germantown Breast Center. The building will be owned by Methodist Healthcare-Memphis Hospitals. The proposed project is an integrated comprehensive cancer center that will consolidate multiple freestanding ambulatory sites – all of which are located within a 4-mile radius of the project site. The center will be named the West Cancer Center and will house both hospital-based services operated by Methodist, as well as physician, clinical research and administrative offices owned by the West Clinic and the UTHSC.

Just to clarify the entities that will be housed in this building - Methodist, the West Clinic and the UTHSC entered into an affiliation agreement in 2011 to transform cancer care in the Mid-South. The West Clinic is the region's premier cancer practice and is a nationally-recognized leader in cancer research. The West Clinic currently has over 30 physicians in multidisciplinary specialties and multiple locations in Tennessee, Mississippi and Arkansas providing services to include medical oncology/hematology, gynecologic oncology, blood cell transplants, diagnostic and interventional radiology, metabolic bone disease/endocrinology, clinical psychology, pain and palliative care, radiation oncology, comprehensive breast center, nutritional counseling, ACORN research and the WINGS Cancer Foundation. As part of the affiliation, the UTHSC moved its Oncology Fellowship Program to the West Clinic and was provided funding to enhance cancer research, care programs and innovation. Together, the three organizations are advancing efforts to provide leading-edge treatment, extensive clinical trials and cutting-edge research in the fight against cancer.

This project covers the renovation and expansion of the entire building. The expansion will provide an increase of approximately 8,000 square feet for the addition of the radiation oncology center. The diagnostic and treatment services which require a Certificate of Need (CON) are all hospital-based. The other physician, clinical research and administrative offices do not require CON approval. Full renovation and expansion costs are included since costs were not easily segregated due to the shared common space - the open atrium and waiting areas are located throughout the core of the building. The co-mingling of physician offices and hospital-based services was intentional to ensure efficient and effective collaboration and seamless patient flow (See Attachment B:IV. for the floor plans).

Renovations and redesign will provide adequate space, improve patient work flows and improve collaboration with oncologists, radiologists, surgeons and patients. The project will not add any new services to Methodist's service lines. The objective is to maintain the applicant's current scope of services without disrupting continuity of care while meeting patient care needs more completely and efficiently. If granted CON approval, the services will be consolidated, integrated and scheduled to open at the new site in August 2015. The projections in this application use calendar years 2016 and 2017 as the project's first two full years of operation

2. Detailed Description of the Project

Methodist will renovate 101,235 SF of the existing space and construct 10,250 SF of new space. The newly constructed space is on the southeast corner of the building and will house portions of the radiology and radiation therapy departments. As noted on the plot plan (See Attachment B:III (A) for the Plot Plan), a

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project. Provide the location of the unit/service within the existing facility along with current square footage, where, if any, the unit/service will relocate temporarily during construction and renovation, and then the location of the unit/service with proposed square footage. The total cost per square foot should provide a breakout between new construction and renovation cost per square foot. Other facility projects need only complete Parts B.-E. Please also discuss and justify the cost per square foot for this project.

Please also discuss and justify the cost per square foot for this project.

The costs of the project are reasonable and comparable to similar CON projects approved throughout the service area over the last few years. This project has an estimated cost per square foot of approximately $145 per square foot ($16,152,175 / 111,485 sf) or $159 ($17,767,393 / 111,485 sf) with construction contingency. See the cost per square foot comparison in Table 1 below.

TABLE 1

COST PER SQUARE FOOT COMPARISON WITH APPROVED PROJECTS

CON Name	Date Filed	Cost per Square Foot
Methodist University PET Renovation & Relocation	Nov-11	$ 244
Campbell Clinic Surgery Center Construction & Renovation	Aug-12	$ 244
The Regional Medical Center – The Med Hospital Construction & Renovation	Aug-12	$ 225
Baptist Memorial Women's Hospital ED Construction & Renovation	Dec-12	$ 238
Baptist Memorial Tipton Hospital Establish Cancer Center (Relocation)	Dec-12	$ 250

If the project involves none of the above, describe the development of the proposal.
Not applicable.

B. Identify the number and type of beds increased, decreased, converted, relocated, designated, and/or redistributed by this application. Describe the reasons for change in bed allocations and describe the impact the bed change will have on the existing services.
Not applicable.

SQUARE FOOTAGE AND COST PER SQUARE FOOTAGE CHART

A. Unit / Department	Existing Location	Existing SF	Temporary Location	Proposed Final Location	Proposed Final Square Footage			Proposed Final Cost/ SF		
					Renovated	New	Total	Renovated	New	Total
HOSPITAL-BASED										
FIRST FLOOR										
Diagnostic Phlebotomy	Off-site	275		1st Floor	340		340	$75		$25,500
Imaging	Off-site	7,065		1st Floor	6,365	3,320	9,685	$250	$410	$2,952,450
Radiation Therapy	Off-site	5,416		1st Floor	3,640	4,530	8,170	$250	$410	$2,767,300
Radiation Therapy Vaults	Off-site	910		1st Floor		2,200	2,200		$800	$1,760,000
Consolidated Women's Diagnostic and Breast Center	On & Off-site	20,700		1st Floor	13,675		13,675	$90		$1,230,750
SECOND FLOOR										
Ambulatory Surgery Center	N/A	N/A		2nd Floor	8,600		8,600	$210		$1,806,000
Wings Library/Other Administrative Area	N/A	N/A		2nd Floor	1,595		1,595	$65		$103,675
THIRD FLOOR										
Phlebotomy/Laboratory	Off-site	1,501		3rd Floor	2,900		2,900	$85		$246,500
Outpatient Infusion	Off-site	6,736		3rd Floor	14,100		14,100	$75		$1,057,500
OTHER										
Sitework	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	$483,000
HVAC for Surgery	N/A	N/A		Roof	N/A	N/A	N/A	N/A	N/A	$250,000
Emergency Power System	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	$90,000
Medical Gas System	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	$98,000
NON-HOSPITAL BASED										
FIRST FLOOR										
Lobby/Atrium Refurbishment	N/A	N/A		1st Floor	6,800		6,800			$306,000
Facilities/Administrative Area	Off-site	N/A		1st Floor	3,000	200	3,200			$240,000
SECOND FLOOR										
Lobby/Toilet Refurbishment	N/A	7,580		2nd Floor	5,250		5,250			$288,750
Clinics	Off-site	7,580		2nd Floor	17,220		17,220			$1,291,500
THIRD FLOOR										
Atrium/Public Toilet Refurbishment	N/A	N/A		3rd Floor	5,250		5,250			$288,750
Pharmacy	N/A	1,475		3rd Floor	1,800		1,800			$171,000
Administration/Finance/MD Offices/Research	N/A	N/A		3rd Floor	10,700		10,700			$695,500

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A. Unit / Department	Existing Location	Existing SF	Temporary Location	Proposed Final Location	Proposed Final Square Footage			Proposed Final Cost/ SF		
					Renovated	New	Total	Renovated	New	Total
B. Total GSF		59,238			101,235	10,250	111,485			$16,152,175
Total Construction cost / SF										$145
Construction cost escalation (10% contingency)										$1,615,218
Total Construction costs with escalation		59,238			101,235	10,250	111,485			$17,767,393
Total Construction cost with escalation / SF										$159

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2. **Identify the funding sources for this project.**

   Please check the applicable item(s) below and briefly summarize how the project will be financed. ***(Documentation for the type of funding MUST be inserted at the end of the application, in the correct alpha/numeric order and identified as Attachment C, Economic Feasibility-2.)***

	A. Commercial loan—Letter from lending institution or guarantor stating favorable initial contact, proposed loan amount, expected interest rates, anticipated term of the loan, and any restrictions or conditions;
	B. Tax-exempt bonds—Copy of preliminary resolution or a letter from the issuing authority stating favorable initial contact and a conditional agreement from an underwriter or investment banker to proceed with the issuance;
	C. General obligation bonds—Copy of resolution from issuing authority or minutes from the appropriate meeting.
	D. Grants--Notification of intent form for grant application or notice of grant award; or
X	**E. Cash Reserves--Appropriate documentation from Chief Financial Officer.**
	F. Other—Identify and document funding from all other sources.
	Methodist Healthcare is prepared to fund the project cost with cash reserves. See the attached letter from the Chief Financial Officer. Attachment C: Economic Feasibility (2)

3. **Discuss and document the reasonableness of the proposed project costs. If applicable, compare the cost per square foot of construction to similar projects recently approved by the Health Services and Development Agency.**
4. The costs of the project are reasonable and comparable to similar CON projects approved throughout the service area over the last few years. This project has an estimated cost per square foot of approximately $145 per square foot ($16,152,175 / 111,485 sf) or $159 ($17,767,393 / 111,485 sf) with construction contingency. See the cost per square foot comparison in Table 1 below.

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Attachment 6

Percentage Change in Cancer Incidence by Cancer Type in Service Area

(Please replace original page with attached)

Oncologists have always played the key role in cancer care, and no matter what, the success of a multidisciplinary program depends on the skills and competencies of the supporting care team. The West Clinic is the region's premier provider of cancer care and is a nationally-recognized leader in cancer research. Over the past 33 years West Clinic has built an expert team dedicated to excellence and compassionate care. The West Clinic currently has over 30 physicians in multidisciplinary specialties and multiple locations in Tennessee, Mississippi and Arkansas providing services to include medical oncology/hematology, gynecologic oncology, blood cell transplants, breast surgery, diagnostic and interventional radiology, metabolic bone disease/endocrinology, clinical psychology, pain and palliative care, radiation oncology, comprehensive breast center, nutritional counseling, ACORN research and the WINGS Cancer Foundation. The multi-disciplinary team includes pharmacists, nurses, clinical technicians, social workers and patient care coordinators/navigators. The full care team is committed to working collaboratively to ensure a seamless treatment program.

The specific mission of the applicant with regard to cancer is to develop the Mid-South's first truly integrated cancer program. The development of integrated comprehensive cancer care program will reduce the disparity between national cancer mortality rates and those of Shelby County. Such a program will allow for Methodist to prepare for the anticipated increase in cancer as the population ages. There are double digit growth rates for the Methodist service area in the next decade.

TABLE 8
CANCER INCIDENCE PERCENTAGE INCREASE FROM 2012 RATES, 2017 and 2022
BY CANCER TYPE BY COUNTY

	Shelby		Fayette		Tipton		DeSoto	
Cancer Type	**2017**	**2022**	**2017**	**2022**	**2017**	**2022**	**2017**	**2022**
Brain and Nervous System	9%	18%	6%	11%	7%	14%	12%	25%
Breast	9%	17%	6%	10%	8%	15%	14%	27%
GI	12%	24%	9%	16%	11%	22%	17%	34%
Gynecologic	9%	17%	6%	10%	9%	15%	14%	27%
Head and Neck	11%	22%	7%	12%	10%	18%	16%	32%
Hematological	11%	23%	9%	16%	11%	21%	15%	32%
Lung	15%	30%	11%	20%	14%	27%	19%	40%
Melanoma	9%	19%	7%	12%	9%	16%	14%	28%
Urological	15%	28%	10%	16%	13%	23%	19%	38%

Source: Advisory Board – Cancer Incidence Forecaster

The only course of action is to simultaneously prepare for the increase in incidence and work to decrease incidence rates, mortality rates and racial disparities in cancer care by developing, managing and investing in an integrated comprehensive cancer care program.

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Attachment 7

ACR Accreditation Program Requirements

Radiation Oncology Practice Accreditation Program Requirements

Introduction

The radiation oncology practice accreditation program provides radiation oncologists with third party, impartial peer review and evaluation of patient care. The facility's personnel, equipment, treatment planning and treatment records, as well as patient safety policies, quality control/quality assessment activities are assessed. Recommendations for improvement are based on nationally recognized guidelines, including ACR and ASTRO guidelines and technical standards, and the American Association of Physics in Medicine (AAPM) Task Group reports.

The ACR Committee for Radiation Oncology Practice Accreditation directs the program. The accreditation process, designed to promote quality and be educational in nature, includes an on-site survey performed by board certified radiation oncologists and board certified medical physicists.

Application for Accreditation

Each facility applying for accreditation must submit an application through the secure website, https://ropa.acr.org. The application consists of submission of facility treatment and equipment information, staffing levels and qualifications, and physics Quality Assurance/Quality Control documentation. If deficiencies are noted or missing items identified, the facility will be contacted so that any missing items can be submitted before the site survey is scheduled. When the application is complete, the date (s) of the survey will be confirmed. At this time, the facility will receive a notice to submit cases (Census Data Form) from which 10 (or more) will be selected for review during the site visit.

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Case Review

When your survey date is confirmed, you will receive an e mail asking you to submit cases of ***definitively treated*** patients who have ***recently completed treatment*** at your facility and have had at least ***one follow up visit***. Please submit your cases ***no later than 30 days prior*** to the survey date. During the on-site survey, 10 cases will be reviewed. For multi-site surveys, 10 cases will be reviewed at the main site and at least 3-4 cases at each satellite. For multi-site surveys, you only need to submit 2-3 cases from each disease site for each satellite. To ensure that all physicians in the practice are reviewed, physician initials must be included with patient ID numbers. A minimum of 2 cases per physician will be reviewed. ID numbers, not patient names, must be submitted for 5 breast, 5 prostate, 5 head and neck, 5 lung and 5 "generic" disease sites (colo-rectal, seminoma, brain, Hodgkin's disease, cervix, etc) on the census data sheets provided. If you do not have 5 cases from a disease site (such as head and neck), you may submit additional generic cases. In addition, cases selected should include all treatment modalities offered at your facilities, such as IMRT, prostate seed implant, stereotactic radiosurgery, etc. For all cases, patient records including simulation information, DRRs, port films (hard copies if appropriate), and CT planning documentation must be available for the surveyors. If your facility has electronic images and/or medical records, you will need to provide electronic access to this information. Since the data collection on site is performed using a web-based process, the surveyors will need **internet access.** We request that you provide a minimum of 2 computers with 4 monitors so that the surveyors can review your electronic records as well as access the internet for data entry purposes. We also ask that you provide staff members (dosimetrist, physicist) to give a brief orientation to your electronic medical records/digital imaging systems and to be available throughout the day to provide assistance as needed. A member of the ACR staff will contact you prior to the survey for details such as parking, directions to site, day of survey agenda, etc.

On-Site Survey

The on-site survey is conducted over one business day (for a single facility). Multi-site surveys will require more days, based on the number of sites, geographic locations and practice patterns. During the visit, the surveyors will tour the facility, verify the information submitted in the facility's application, conduct an interview with the Chief/Medical Director of Radiation Oncology, the chief physicist, department administrator/chief therapist, dosimetrist, nurse and other key personnel; and collect information about the facility's patient treatment policies and procedures, safety initiatives and review the selected cases.

The radiation oncologist and medical physicist review charts and complete a set of questions developed by the Committee for Radiation Oncology Practice Accreditation. Chart reviews include components such as complete and signed prescriptions, consent forms, pathology reports, history and physical, physician management during treatment and follow up, appropriateness of treatment, simulation/treatment planning and dosimetry activities. At the end of the day, the surveyors will again meet with the group for a brief "exit" interview. This is primarily to clarify any issues prior to their departure; the team will not be providing their recommendations at this time since that is a Committee decision made following review of the results of the survey. For multi-site surveys, the exit interview time and place will be determined with ACR and facility staff.

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A comprehensive review of the facility's physics program will be included as part of the application process and verified during the on-site survey. The Radiation Oncology Physicist is responsible for the design and implementation of the physics quality management program. The following areas will require documentation submitted with the application:

- Documentation of compliance with AAPM TG-40, TG 142, TG-51
- Documentation of treatment planning system quality assurance program TG- 53
- Independent Verification of Output of each beam

In addition, during the on-site survey, the qualified medical physicist's documentation of the following will be reviewed:

- Procedures for instrument calibration and periodic instrument constancy checks
- Procedures to verify the manufacturer's specifications and to establish baseline performance values for radiation therapy equipment
- Quality management program for radiation therapy equipment, simulators, treatment planning systems, and monitor unit calculation algorithms
- Monitor units calculation procedures and protocols
- Physics chart check protocol for reviewing treatment delivery
- Procedures for checking the integrity of mechanical and electrical patient care devices
- Radiation protection program as it pertains to radiation oncology
- Calculations related to patient dosimetry and/or physics measurements when such needs arise or per clinician's requests.

Random On-Site Surveys

In order to verify that accredited facilities maintain consistent quality during the three–year accreditation period, on-site surveys may also be performed at any time during the accreditation period. These surveys provide an excellent opportunity for a positive educational exchange with experts in the field, as well as providing validation of continued compliance with ACR guidelines and standards. These surveys will be conducted by radiation oncologists and medical physicists from the Radiation Oncology Practice Accreditation Program. Any facility chosen for a random on-site survey will be notified in advance. There is no additional cost to the facility for the random survey.

Multiple Sites

A practice that has multiple sites may be eligible for a single survey, with a limited case review from each additional site. The criteria to determine eligibility include but are not limited to:

- The physician group has a single medical director
- The physicist group has a single director
- Physicians' peer review includes all the practice sites
- All practice sites utilize uniform treatment methods
- All practice sites have uniform chart organization and forms
- Geographic accessibility **(within one hour drive from main site)**

If the practice does not meet the criteria, a full survey will be required for each site.

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Personnel Qualifications

Radiation Oncologist

- Certification in Radiology by the American Board of Radiology (ABR) of a physician who confines his/her professional practice to radiation oncology or certification in Radiation Oncology or Therapeutic Radiology by the ABR, the American Osteopathic Board of Radiology, the Royal College of Physicians and Surgeons of Canada, or the Collège des Médecins du Québec may be considered proof of adequate physician qualifications.

OR

- Satisfactory completion of a radiation oncology residency program approved by the American Council of Graduate Medicine Education (ACGME), the Royal College of Physicians and Surgeons of Canada (RCPSC), the Collège des Médecins du Québec, or the American Osteopathic Association (AOA).

Qualified Medical Physicist

The ACR strongly recommends that the individual be certified in the appropriate subfield (s) by the American Board of Radiology (ABR), the Canadian College of Physics in Medicine, or by the American Board of Medical Physics (ABMP). The appropriate subfield of medical physics for this guideline is Therapeutic Medical Physics. (Previous medical physics certification categories including Radiological Physics and Therapeutic Radiological Physics are also acceptable.)

Radiation Therapists and Simulation Staff

Radiation therapists and simulation staff should fulfill state licensing requirements, and treating radiation therapists should have American Registry of Radiologic Technologists (ARRT) certification in radiation therapy. Simulation staff should have ARRT certification in either radiation therapy or diagnostic imaging.

Dosimetrist

Certification by the Medical Dosimetrist Certification Board is recommended.

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Staffing Levels*

In the final report, the facility's staffing levels for radiation oncologists, physicists, radiation therapists and dosimetrists are compared to the accredited facility averages and averages for the facility's stratum as defined in the following table. The table allows facilities to identify personnel and equipment utilization issues. Staffing recommendations may be part of the final report; however, variations from these levels generally do not result in withholding of accreditation unless inadequate staffing levels result in non-compliance with ACR Practice Guidelines and Technical Standards and/or compromise patient safety.

The strata are defined as:

Academic/CCC Comprehensive Cancer Center or main teaching hospital of a medical school

H1 Hospital based; 600 or more patients

H2 Hospital based; 201-599 patients

H3 Hospital based; 200 or fewer patients

F1 Freestanding; 600 or more patients

F2 Freestanding; 201-599 patients

F3 Freestanding; 200 or fewer patients

	ALL ACCREDITED FACILITIES	ACADEMIC / CCC	H1	H2	H3	F1	F2	F3
New patients/ radiation oncologist	205	156	278	215	140	203	238	160
New patients/ Physicist	265	174	273	257	246	277	321	256
New patients/ FTE dosimetrist	273	265	346	275	196	318	301	211
New patients/ FTE therapist	74	65	90	73	56	70	81	75
FTE therapist/ Rx machine	3.1	4.1	3.6	3.1	2.6	3.4	3.1	2.2
New patients/ Rx machines	215	222	305	222	133	236	245	143

**While it may be instructive to compare staffing data to the facility's stratum and to the national average for accredited facilities, note that this data is incomplete in some important aspects. The data does not account for the staff's other duties (e.g. simulation for therapists) nor is the data scaled for complexity or the proportion of different pathologies treated in any given clinic. Each facility should, when comparing their staffing data to stratum and national averages, consider their patient population, range and complexity of services provided, and any staff duties outside of the core duties assumed in this data table.*

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Continuous Quality Improvement (CQI)

The Medical Director of Radiation Oncology will be responsible for the institution and ongoing supervision of the continuous quality improvement program. Elements of the program include:

- Chart review is required and should include cases in which there is a variation from prescription of greater than 10% of intended total dose, new modalities or techniques, and charts in which an incident report is filed
- Morbidity and mortality review
- Review of internal outcome studies which include radiation oncology patients
- Focus studies (Facility Practice Improvement)
- Individual physician/physicist peer review
- Patient satisfaction surveys
- New patient conferences
- Port film/image review
- Chart rounds

Frequent Deficiencies

The following are recommendations that are ***frequently*** included in the final report and must be addressed before a facility will be granted accreditation. Please note that other serious deficiencies, ***not*** seen frequently and therefore not listed, may also require corrective action and documentation prior to granting of accreditation.

- The treatment prescriptions should include: volume (site) to be treated, description of ports (i.e., AP, PA, lateral, etc.), radiation modality, dose per fraction, number of fractions per day, number of fractions per week, total number of fractions, total tumor dose and prescription point or isodose.

- Port verification films/images should be taken at the beginning of therapy, with field changes, and at least every other 5-10 treatments. All images should be labeled with the patient's name, date taken, field size, and direction of the beam as well as the reviewing radiation oncologist's initial/signature and date. IMRT - confirmation of patient positioning should be performed initially and then periodically, at least weekly, throughout the course of the patient's treatment.

- At the completion of treatment, the qualified medical physicist shall review the entire chart to affirm the fulfillment of the initial and/or revised prescription dose. The review should be documented by the physicist, initialed/signed and dated **no later than one week** after the end of treatment.

- Each patient chart should contain a documented, comprehensive history and physical examination performed by the radiation oncologist, including a comprehensive history of the present illness, past medical history, review of systems, review of imaging studies and laboratory data, histopathology diagnosis and recommendations for treatment.

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- The department should have a documented, formal treatment planning system quality assurance plan, including the periodic confirmation of the treatment planning system consistency.

- Patients should be evaluated by the radiation oncologist at least weekly. Weekly exams should be thoroughly documented in the patient chart.

- A radiation oncologist should be available for direct care and quality review on a daily basis. The radiation oncologist, facility, and support staff should be available to initiate urgent treatment within a medically appropriate response time on a 24-hour basis or refer to a facility that is available to treat on a 24-hour basis. When unavailable, the radiation oncologist is responsible for arranging appropriate coverage. A radiation oncologist's availability should be consistent with state and federal requirements.

- At the completion of treatment, a follow-up plan should be documented in the patient chart, and patients should be seen by the radiation oncologist at regular, on-going intervals. Follow-up notes should be documented in the patient record.

- Complete documentation should be included in the patient record when brachytherapy is performed. Written directives documented for each procedure should include the treatment site, isotope, number of sources and the planned dose to designated points. After brachytherapy is completed, a written summary of treatment delivery should include: total dose of brachytherapy and external beam therapy, time of source insertion and removal and documentation of a radiation safety survey of the patient and room.

- Documentation of delivered doses to volumes of target and non-target tissues, in the form of dose volume histograms and representative cross-sectional isodose treatment diagrams, should be maintained in the patient's written or electronic record.

- Physician peer review activities should be formalized and documented.

- Formal Quality Assurance & Improvement program should include: chart rounds, new patient rounds, and morbidity and mortality conferences.

- IMRT QA should be documented and approved prior to initiation of treatment.

- The responsibilities of the radiation oncologist shall be clearly defined and should include the following:
  Define the goals and requirements of the treatment plan, including the specific dose constraints for the target(s) and nearby critical structure(s).

Final Report

The report is issued to the radiation oncologist who requested the survey. The Committee issues a final report after the on-site survey. The report is generally sent within 8-12 weeks following the on-site survey. The report is based on the findings of the surveyors, as well as information provided in the initial application and verified by the surveyors. The accreditation report includes:

- Comparison of facility/staffing data with the accredited facilities data.

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- Evaluation of facility's compliance with guidelines and standards from application information and review by surveyors.
- Surveyor comments on individual case reviews.
- Specific recommendations for improvement.

Accreditation Status

The term of accreditation is three years. Facilities that are not granted accreditation will either be:

- Deferred with 90 days to submit a Corrective Action Plan. After the Corrective Action Plan is approved by the Committee, the facility may be required to perform a self audit (measures for self audit will be selected by the Committee) and submit the results no later than 6 months after receipt of response to corrective action. Following Committee approval of the self-audit, the facility may be granted a 3 year accreditation. The Committee may request a re-survey if Corrective Action Plan is approved. Additional fees may be applied such as On-Site Surveyors' expenses including travel and lodging.
- Denied with 90 days to submit a Corrective Action Plan. After the Corrective Action Plan is approved by the Committee, the facility will be required to participate in a follow up survey (6-9 months after receipt of response to corrective action). A re-application fee of $5,000 must be submitted with the survey agreement. The surveyors will complete a report of their findings which will be reviewed by the Committee. Following Committee approval of this report, the facility may be granted a 3 year accreditation.

Marketing Your Accreditation

Once accreditation has been achieved, the facility will receive a marketing package (link to documents is included in your final report) to assist in promoting this success within the community. In addition, all sites fully accredited (and those under review) will be listed by program and state on the ACR Web site at www.acr-org.

The marketing tools include:

- Camera-ready ad
- Press release
- Certificate suitable for framing
- Certification mark provided in decal and electronic format

Application for Renewal

The application process for sites applying for renewal is essentially the same as for new sites, however, a facility's previous recommendations will be carefully reviewed to ensure that recommendations for improvement have been implemented. In order to maintain accreditation, it is recommended that facilities begin the application process nine months prior to the expiration date of their accreditation.

Appeal Mechanism

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An appeal process is available to a radiation oncology facility that disagrees with the accreditation report. To appeal, the chief of radiation oncology submits a written request to the Chairman of the Committee on Radiation Oncology Practice Accreditation within thirty days of receipt of the accreditation report.

Survey Fees

Survey fee for the main facility is $9,500.00; $3,000.00 for each additional site. **Fees are non-refundable and subject to change without notice**. If a facility is denied accreditation and required to participate in a follow up survey, a fee of $5000 must be submitted prior to scheduling the site visit. Checks should be made payable to The American College of Radiology.

Effective on August 5, 2013: Any requested change in the survey date by the facility or cancellation of a scheduled survey after ACR has invested funds in the survey (such as travel funds) must be reimbursed by the facility in addition to the survey fee.

Practice Guidelines and Technical Standards

We highly recommend that you become familiar with the ACR Practice Guidelines and Technical Standards. These serve as the foundation for each of our accreditation programs and may be accessed by both ACR members and non-members through our Web site at www.acr.org.

R-O PEER™

R-O PEER offers radiation oncologists the opportunity to fulfill Part IV, Evaluation of Performance in Practice for Maintenance of Certification (MOC), for the American Board of Radiology (ABR) through the Radiation Oncology Practice Accreditation Program. R-O PEER™, the ACR's Practice Quality Improvement (PQI) program is offered as part of the Radiation Oncology Practice Accreditation Program. Following the survey, a final report will be issued to each participating radiation oncologist. If any corrective action measures are identified, the final report will request additional documentation that demonstrates that these have been appropriately addressed. When this documentation is submitted and reviewed, a certificate of satisfactory completion of the PQI project will be issued.

For information on R-O PEER and to access the application, visit the ACR web site at http://www.acr.org/Quality-Safety/Accreditation/RO

For Additional Information

Contact the ACR Radiation Oncology Practice Accreditation Program office in Reston, Virginia at 800-770-0145 or rad-onc-accred@acr.org.

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APPENDIX A

The following list of references is by no means complete, but it may be used as a starting point to assist you with your application and survey process:

American College of Radiology Practice Guidelines and Technical Standards, Reston, VA
http://www.acr.org/Quality-Safety/Standards-Guidelines/Practice-Guidelines-by-Modality/Radiation-Oncology

http://www.acr.org/Quality-Safety/Standards-Guidelines/Technical-Standards-by-Modality

American Association of Physicists in Medicine, (AAPM). Comprehensive QA for Radiation Oncology: Report of AAPM Radiation Therapy Committee Task Group 40, 1994.

American Association of Physicists in Medicine, (AAPM). Task Group 142 Report, Quality Assurance of Medical Accelerators, 2009.

American Association of Physicists in Medicine, (AAPM). Protocol for clinical reference dosimetry of high-energy photon and electron beams. Report of AAPM Radiation Therapy Task Group 51, 1999.

American Association of Physicists in Medicine, (AAPM). Quality Assurance for Clinical Radiotherapy Treatment Planning Report of AAPM Radiation Therapy Committee Task Group 53, 1998.

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SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Attachment 8

Service Area Map

SUPPLEMENTAL- # 1
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Methodist Service Area

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Attachment 9

Demographic Chart for Service Area

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Demographic Chart - Methodist Service Area

	Shelby County	Fayette County	Tipton County	DeSoto County	Marshall County	Crittenden County	*Service Area*	*Tennessee*
Current Year (CY), Age 65+	106,233	6,298	7,495	18,606	5,039	5,839	149,510	939,436
Projected Year (PY), Age 65+	129,053	7,417	8,898	22,475	5,674	6,573	180,090	1,104,190
Age 65+, % Change	21%	18%	19%	21%	13%	13%	20%	18%
Age 65+, % Total (PY)	13%	19%	14%	13%	16%	13%	14%	17%
CY, Total Population	943,588	38,617	61,519	167,335	36,340	50,052	1,297,451	6,469,063
PY, Total Population	971,931	39,169	62,561	175,657	35,335	49,201	1,333,854	6,678,670
Total Pop. % Change	3%	1%	2%	5%	-3%	-2%	3%	3%
TennCare Enrollees	227,649	5,604	11,511	---	---	---	244,764	1,193,721
TennCare Enrollees as a % of Total Population	24%	15%	19%	---	---	---	19%	18%
Median Age	35.1	42.3	36.9	35.7	38.4	34.4	35.5	38.6
Median Household Income	$ 46,102	$ 57,437	$ 50,869	$ 59,734	$ 33,279	$ 35,264	---	$ 43,989
Population % Below Poverty Level	20.1%	11.7%	15.3%	9.5%	24.2%	27.9%	---	16.9%

Sources: Truven Healthcare Analytics- Market Expert (Claritas/Census Data) 2013 and 2018, Bureau of TennCare Enrollment Data 2013 and Census Bureau Quick Facts

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Attachment 10

Revised Project Costs, Moveable Equipment Listing >$50,000 and Other Leased Equipment

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PROJECT COSTS CHART

A. Construction and equipment acquired by purchase:

1.	Architectural and Engineering Fees	$1,465,054
2.	Legal, Administrative (Excluding CON Filing Fee), Consultant Fees	10,000
3.	Acquisition of Site	22,500,000
4.	Preparation of Site	
5.	Construction Costs	16,152,175
6.	Contingency Fund	1,615,218
7.	Fixed Equipment (Not included in Construction Contract)	
8.	Moveable Equipment (List all equipment over $50,000 – attached)	13,515,708
9.	Other (Specify) IT Communications	710,000

B. Acquisition by gift, donation, or lease:

1.	Facility (inclusive of building and land)	
2.	Building only	
3.	Land only	
4.	Equipment (Specify) See equipment list attached	4,541,038
5.	Other (Specify)	

C. Financing Costs and Fees:

1.	Interim Financing	
2.	Underwriting Costs	
3.	Reserve for One Year's Debt Service	
4.	Other (Specify)	

D.	Estimated Project Cost (A+B+C)	60,509,193
E.	CON Filing Fee	45,000
F.	Total Estimated Project Cost (D+E) **TOTAL**	60,554,193

MOVEABLE EQUIPMENT LIST > $50,000

ITEM DESCRIPTION	TOTAL
LINAC	$1,916,102
MRI 1.5T	$1,838,810
High Does Rate Unit	$220.000
Anesthesia Machine	$120,000
Sterilizer	$100,000
Washer	$100,000
Operating Room Lights	$95,000
Operating Room Table	$55,000

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Equipment Cost - Leased Costs versus FMV

		Lease	Replacement FMV
PET/CT			
Annual Lease and Maintenance	$	2,191,901	
Replacement Cost and Maintenance			$ 1,824,113
Subtotal	**$**	**2,191,901**	$ 1,824,113
CT - 2 Somatom Definition AS CTs			
Annual Lease and Maintenance		$2,349,137	
Replacement Cost and Maintenance			$ 1,820,156
Subtotal	**$**	**2,349,137**	$ 1,820,156
Leased Equipment/Maintenance (Project Costs B.4.)	**$**	**4,541,038**	$ 3,644,269

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Attachment 11

Projected Data Chart for West Cancer Center Only and Other Operating Details

SUPPLEMENTAL- # 1
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Projected Data Chart
West Cancer Center Project Only

Give information for the (2) years following the completion of this proposal.
The fiscal year begins in January.

	Year 1 2016	Year 2 2017
A. Utilization Data (specific unit of measure)		
Patient Visits	132,888	136,471
B. Revenue from Services to Patients		
1. Inpatient Services		
2. Outpatient Services	$ 461,094,696	$ 469,186,909
3. Emergency Services		
4. Other Operating Revenue (Specify) see attached	$ 2,679,479	$ 2,706,274
Gross Operating Revenue	**$ 463,774,175**	**$ 471,893,183**
C. Deductions for Operating Revenue		
1. Contractual Adjustments	$ 328,541,894	$ 334,615,753
2. Provision for Charity Care	$ 8,604,418	$ 8,602,076
3. Provisions for Bad Debt	$ 8,674,712	$ 8,672,351
Total Deductions	**$ 345,821,023**	**$ 351,890,181**
Net Operating Revenue	**$ 117,953,152**	**$ 120,003,002**
D. Operating Expenses		
1. Salaries and Wages	$ 16,174,425	$ 16,578,847
2. Physician's Salaries and Wages	$ 170,456	$ 174,656
3. Supplies	$ 35,112,408	$ 35,814,656
4. Taxes	$ 84,245	$ 85,012
5. Depreciation	$ 3,970,000	$ 3,970,000
6. Rent	$ 1,719,491	$ 1,725,611
7. Interest, other than capital	$ -	$ -
8. Management Fees:		
a. Fees to Affiliates	$ 636,753	$ 629,946
b. Fees to Non-Affiliates	$ 1,485,758	$ 1,469,873
9. Other Expenses (Specify) see attached	$ 53,015,486	$ 54,259,701
Total Operating Expenses	**$ 112,369,022**	**$ 114,708,302**
E. Other Revenue (Expenses) -- Net (Specify)	$ -	$ -
NET OPERATING INCOME (LOSS)	**$ 5,584,130**	**$ 5,294,700**
F. Capital Expenditures		
1. Retirement of Principal		
2. Interest	$ -	$ -
Total Capital Expenditures	**$ -**	**$ -**
NET OPERATING INCOME (LOSS) LESS CAPITAL EXPENDITURES	**$ 5,584,130**	**$ 5,294,700**

SUPPLEMENTAL- # 1
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Projected Data Chart- Other Operating Revenue
West Cancer Center Project Only

		Year 1 2016	Year 2 2017
1.	Cafeteria	$ 209	$ 207
2.	Drugs	$ 412,878	$ 417,974
3.	Gift Shop	$ 16,248	$ 16,273
4.	Telephone	$ 1,764	$ 1,756
5.	Vending	$ 19,338	$ 19,498
6.	Shared Svc	$ 16,531	$ 16,772
7.	Tuition/Student Fees	$ 18,553	$ 18,695
8.	Office Rentals	$ 283,727	$ 285,279
9.	Parking	$ -	$ -
10.	340b Program	$ 517,954	$ 515,631
11.	HealthSouth	$ 64,500	$ 64,341
12.	Trauma Fund	$ 30,938	$ 30,799
13.	Rental Income	$ 13,763	$ 13,838
14.	Transp (ground & fixed wing)	$ 65,742	$ 66,102
15.	Gamma Knife	$ 4,586	$ 4,565
16.	Grants	$ 41,127	$ 41,343
17.	Other	$ 1,171,623	$ 1,193,203
Total Other Operating Revenue		**$ 2,679,479**	**$ 2,706,274**

SUPPLEMENTAL- # 1
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Projected Data Chart- Other Expenses
West Cancer Center Project Only

		Year 1 2016	Year 2 2017
1.	Benefits	$ 12,698,594	$ 13,062,473
2.	Repairs	$ 2,547,877	$ 2,597,480
3.	Professional Fees	$ 5,906,448	$ 6,010,748
4.	Contract Service	$ 7,683,328	$ 7,823,950
5.	Auditing Fees	$ 26,802	$ 27,324
6.	Consulting Fees	$ 219,198	$ 223,465
7.	Legal Fees	$ 17,379	$ 17,718
8.	Other-Accounting & Legal	$ 10,179	$ 10,377
9.	Advertising	$ 58,119	$ 59,250
10.	Dues	$ 142,388	$ 145,160
11.	Travel	$ 153,510	$ 156,499
12.	Utilities	$ 1,739,236	$ 1,773,095
13.	Insurance	$ 1,969,049	$ 2,007,383
14.	Tansfers Reagents	$ (8,725)	$ (8,894)
15.	Tansfers Laundry	$ 442,185	$ 448,179
16.	Transfer Print Shop	$ 88,933	$ 90,665
17.	Transfer Telephone	$ 117,739	$ 120,031
18.	Transfers Transcription	$ 490,073	$ 499,976
19.	Trans Cost Maint	$ 53,778	$ 54,825
20.	Trans Cost Univ/Other Fac	$ (2,287)	$ (2,331)
21.	Other Transfers	$ (6,372)	$ (6,496)
22.	Books	$ 17,523	$ 17,864
23.	Other Bus Events	$ 29,999	$ 30,583
24.	Assoc Recruitment	$ 32,933	$ 33,575
25.'	Phys Recruitment	$ 429,925	$ 425,756
26.	Credit Card Fees	$ 60,937	$ 62,123
27.	Bank Svc Charges	$ 15,943	$ 16,253
28	Contributions	$ 38,448	$ 39,196
29.	UT Payments Oncol	$ 1,635,714	$ 1,648,687
30.	DP Software	$ 27,818	$ 28,360
31.	License and Accred Fees	$ 76,396	$ 76,527
32.	Postage	$ 20,691	$ 21,094
33.	Freight	$ 193,187	$ 196,948
34.	Telephone incl network cable	$ 160,998	$ 164,132
35.	Procurement Card	$ 40,744	$ 41,537
36.	Purchase Discounts	$ (5,575)	$ (5,684)
37.	Hosp Funding	$ 65,003	$ 64,969
38.	Other	$ 29,592	$ 30,166
39.	Mionority Interest	$ 154,616	$ 160,085
40.	Corporate Allocation	$ 13,329,651	$ 13,707,608
41.	Physician Margin Allocation	$ 2,313,511	$ 2,389,045
Total Other Expenses		**$ 53,015,486**	**$ 54,259,701**

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Attachment 12

Projected Data Chart for LINAC Only and Other Operating Details

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Projected Data Chart
West Cancer Cetner LINAC Project Only

Give information for the (2) years following the completion of this proposal.
The fiscal year begins in January.

	Year 1 2016	Year 2 2017
A. Utilization Data (specific unit of measure)		
Procedures	14,221	15,430
B. Revenue from Services to Patients		
1. Inpatient Services		
2. Outpatient Services	$ 55,270,727	$ 56,240,729
3. Emergency Services		
4. Other Operating Revenue (Specify) see attached	$ 2,690	$ 2,717
Gross Operating Revenue	**$ 55,273,417**	**$ 56,243,445**
C. Deductions for Operating Revenue		
1. Contractual Adjustments	$ 39,381,823	$ 40,109,887
2. Provision for Charity Care	$ 1,031,399	$ 1,031,118
3. Provisions for Bad Debt	$ 1,039,825	$ 1,039,542
Total Deductions	**$ 41,453,046**	**$ 42,180,547**
Net Operating Revenue	**$ 13,820,371**	**$ 14,062,898**
D. Operating Expenses		
1. Salaries and Wages	$ 1,753,890	$ 1,797,744
2. Physician's Salaries and Wages	$ 18,484	$ 18,939
3. Supplies	$ 150,398	$ 153,406
4. Taxes	$ 4,701	$ 4,747
5. Depreciation	$ -	$ -
6. Rent	$ 95,947	$ 96,360
7. Interest, other than capital	$ -	$ -
8. Management Fees:		
a. Fees to Affiliates	$ 35,530	$ 35,177
b. Fees to Non-Affiliates	$ 82,904	$ 82,079
9. Other Expenses (Specify) see attached	$ 4,087,926	$ 4,153,153
Total Operating Expenses	**$ 6,229,780**	**$ 6,341,606**
E. Other Revenue (Expenses) -- Net (Specify)	$ -	$ -
NET OPERATING INCOME (LOSS)	**$ 7,590,592**	**$ 7,721,292**
F. Capital Expenditures		
1. Retirement of Principal		
2. Interest	$ -	$ -
Total Capital Expenditures	**$ -**	**$ -**
NET OPERATING INCOME (LOSS) LESS CAPITAL EXPENDITURES	**$ 7,590,592**	**$ 7,721,292**

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Projected Data Chart- Other Operating Revenue
West Cancer Center LINAC Project Only

		Year 1 2016	Year 2 2017
1.	Cafeteria	$ 0	$ 0
2.	Drugs	$ 414	$ 420
3.	Gift Shop	$ 16	$ 16
4.	Telephone	$ 2	$ 2
5.	Vending	$ 19	$ 20
6.	Shared Svc	$ 17	$ 17
7.	Tuition/Student Fees	$ 19	$ 19
8.	Office Rentals	$ 285	$ 286
9.	Parking	$ -	$ -
10.	340b Program	$ 520	$ 518
11.	HealthSouth	$ 65	$ 65
12.	Trauma Fund	$ 31	$ 31
13.	Rental Income	$ 14	$ 14
14.	Transp (ground & fixed wing)	$ 66	$ 66
15.	Gamma Knife	$ 5	$ 5
16.	Grants	$ 41	$ 42
17.	Other	$ 1,176	$ 1,198
Total Other Operating Revenue		**$ 2,690**	**$ 2,717**

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Projected Data Chart- Other Expenses
West Cancer Center LINAC Project Only

		Year 1 2016	Year 2 2017
1.	Benefits	$ 979,165	$ 999,830
2.	Repairs	$ 196,462	$ 198,817
3.	Professional Fees	$ 455,435	$ 460,076
4.	Contract Service	$ 592,447	$ 598,862
5.	Auditing Fees	$ 2,067	$ 2,091
6.	Consulting Fees	$ 16,902	$ 17,104
7.	Legal Fees	$ 1,340	$ 1,356
8.	Other-Accounting & Legal	$ 785	$ 794
9.	Advertising	$ 4,481	$ 4,535
10.	Dues	$ 10,979	$ 11,111
11.	Travel	$ 11,837	$ 11,979
12.	Utilities	$ 134,109	$ 135,717
13.	Insurance	$ 151,830	$ 153,649
14.	Tansfers Reagents	$ (673)	$ (681)
15.	Tansfers Laundry	$ 34,096	$ 34,305
16.	Transfer Print Shop	$ 6,857	$ 6,940
17.	Transfer Telephone	$ 9,079	$ 9,187
18.	Transfers Transcription	$ 37,789	$ 38,269
19.	Trans Cost Maint	$ 4,147	$ 4,196
20.	Trans Cost Univ/Other Fac	$ (176)	$ (178)
21.	Other Transfers	$ (491)	$ (497)
22.	Books	$ 1,351	$ 1,367
23.	Other Bus Events	$ 2,313	$ 2,341
24.	Assoc Recruitment	$ 2,539	$ 2,570
25.'	Phys Recruitment	$ 33,151	$ 32,588
26.	Credit Card Fees	$ 4,699	$ 4,755
27.	Bank Svc Charges	$ 1,229	$ 1,244
28	Contributions	$ 2,965	$ 3,000
29.	UT Payments Oncol	$ 126,127	$ 126,194
30.	DP Software	$ 2,145	$ 2,171
31.	License and Accred Fees	$ 5,891	$ 5,858
32.	Postage	$ 1,595	$ 1,615
33.	Freight	$ 14,896	$ 15,075
34.	Telephone incl network cable	$ 12,414	$ 12,563
35.	Procurement Card	$ 3,142	$ 3,179
36.	Purchase Discounts	$ (430)	$ (435)
37.	Hosp Funding	$ 5,012	$ 4,973
38.	Other	$ 2,282	$ 2,309
39.	Mionority Interest	$ 11,922	$ 12,253
40.	Corporate Allocation	$ 1,027,824	$ 1,049,210
41.	Physician Margin Allocation	$ 178,390	$ 182,863
Total Other Expenses		**$ 4,087,925**	**$ 4,153,154**

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Attachment 13

Replacement Page for Other Operating Details
Methodist Healthcare-Memphis Hospitals

(Please insert into original application)

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Projected Data Chart- Other Operating Revenue
Methodist Healthcare-Memphs Hospitals

		Year 1 2016	Year 2 2017
		(in thousands)	
1.	Cafeteria	$ 4	$ 4
2.	Drugs	$ 7,917	$ 8,051
3.	Gift Shop	$ 312	$ 313
4.	Telephone	$ 34	$ 34
5.	Vending	$ 371	$ 376
6.	Shared Svc	$ 317	$ 323
7.	Tuition/Student Fees	$ 356	$ 360
8.	Office Rentals	$ 5,441	$ 5,495
9.	Parking	$ -	$ -
10.	340b Program	$ 9,932	$ 9,932
11.	HealthSouth	$ 1,237	$ 1,239
12.	Trauma Fund	$ 593	$ 593
13.	Rental Income	$ 264	$ 267
14.	Transp (ground & fixed wing)	$ 1,261	$ 1,273
15.	Gamma Knife	$ 88	$ 88
16.	Grants	$ 789	$ 796
17.	Other	$ 22,467	$ 22,984
Total Other Operating Revenue		**$ 51,382**	**$ 52,129**

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Projected Data Chart- Other Expenses
Methodist Healthcare-Memphs Hospitals

		Year 1 2016	Year 2 2017
		(in thousands)	
1.	Benefits	$ 125,027	$ 128,677
2.	Repairs	$ 25,086	$ 25,587
3.	Professional Fees	$ 58,153	$ 59,211
4.	Contract Service	$ 75,648	$ 77,073
5.	Auditing Fees	$ 264	$ 269
6.	Consulting Fees	$ 2,158	$ 2,201
7.	Legal Fees	$ 171	$ 175
8.	Other-Accounting & Legal	$ 100	$ 102
9.	Advertising	$ 572	$ 584
10.	Dues	$ 1,402	$ 1,430
11.	Travel	$ 1,511	$ 1,542
12.	Utilities	$ 17,124	$ 17,467
13.	Insurance	$ 19,387	$ 19,774
14.	Tansfers Reagents	$ (86)	$ (88)
15.	Tansfers Laundry	$ 4,354	$ 4,415
16.	Transfer Print Shop	$ 876	$ 893
17.	Transfer Telephone	$ 1,159	$ 1,182
18.	Transfers Transcription	$ 4,825	$ 4,925
19.	Trans Cost Maint	$ 529	$ 540
20.	Trans Cost Univ/Other Fac	$ (23)	$ (23)
21.	Other Transfers	$ (63)	$ (64)
22.	Books	$ 173	$ 176
23.	Other Bus Events	$ 295	$ 301
24.	Assoc Recruitment	$ 324	$ 331
25.'	Phys Recruitment	$ 4,233	$ 4,194
26.	Credit Card Fees	$ 600	$ 612
27.	Bank Svc Charges	$ 157	$ 160
28	Contributions	$ 379	$ 386
29.	UT Payments Oncol	$ 16,105	$ 16,241
30.	DP Software	$ 274	$ 279
31.	License and Accred Fees	$ 752	$ 754
32.	Postage	$ 204	$ 208
33.	Freight	$ 1,902	$ 1,940
34.	Telephone incl network cable	$ 1,585	$ 1,617
35.	Procurement Card	$ 401	$ 409
36.	Purchase Discounts	$ (55)	$ (56)
37.	Hosp Funding	$ 640	$ 640
38.	Other	$ 291	$ 297
39.	Mionority Interest	$ 1,522	$ 1,577
40.	Corporate Allocation	$ 131,240	$ 135,032
41.	Physician Margin Allocation	$ 22,778	$ 23,534
Total Other Expenses		**$ 521,977**	**$ 534,506**

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Attachment 14

Copy of Notice of Intent and Publication Affidavit

SUBSTITUTE TRUSTEE'S

NOTIFICATION OF INTENT TO APPLY FOR A CERTIFICATE OF NEED

This is to provide official notice to the Health Services and Development Agency and all interested parties, in accordance with T.C.A. § 68-11-1601 et seq., and the Rules of the Health Services and Development Agency, that Methodist Healthcare-Memphis Hospitals (a general hospital), owned and managed by Methodist Healthcare-Memphis Hospitals (a not for profit corporation), intends to file an application for a Certificate of Need to establish a comprehensive cancer center, to relocate linear accelerator, positron emission tomography/computed tomography (PET/CT), magnetic resonance imaging (MRI) and computed tomography (CT) services and equipment, to replace the MRI equipment, to acquire an additional linear accelerator and to establish ambulatory operating rooms. The facility will be located at 7945 Wolf River Boulevard, Germantown, TN 38138 and will be operated as an outpatient department of Methodist Healthcare – Memphis Hospitals under the name WEST CANCER CENTER. The project includes a full array of cancer services and programs. The project involves approximately 8,050 square feet of new space and 101,235 of renovated space. This project does not involve inpatient beds or other services for which a certificate of need is required. The estimated project costs are $60,554,193.

The anticipated date of filing the application is on or before November 13, 2013. The contact person for this project is Carol Weidenhoffer, Corporate Director of Planning, Research and Business Development, who may be reached at: Methodist Healthcare, 1407 Union Avenue, Suite 300, Memphis, TN, 38104, 901-516-0679.

Upon written request by interested parties, a local Fact-Finding public hearing shall be conducted. Written requests for hearing should be sent to:

Health Services and Development Agency
Andrew Jackson Building, 9th Floor
502 Deaderick Street
Nashville, Tennessee 37243

Pursuant to T.C.A. § 68-11-1607(c)(1). (A) Any health care institution wishing to oppose a Certificate of Need application must file a written notice with the Health Services and Development Agency no later than fifteen (15) days before the regularly scheduled Health Services and Development Agency meeting at which the application is originally scheduled; and (B) Any other person wishing to oppose the application must file written objection with the Health Services and Development Agency at or prior to the consideration of the application by the Agency.

scription of the property

attempt to collect a debt and place certain without further publication, upon announcement at the time and place for the sale set forth above. W&A No. 1286 109175

DATED November 5, 2013
WILSON & ASSOCIATES P.L.L.C.,
Successor-Trustee
1521 Merrill Drive,
Suite D-220
Little Rock, Arkansas 72211
(501) 219-9388
W&A No.-1286 109175
FHA No. 482-2871082
CAST-November 8, 2013
November 15, 2013
November 22, 2013
FOR SALE INFORMATION, VISIT WWW.MYFIR.COM and WWW.REALTYTRAC.COM

SUBSTITUTE TRUSTEE'S SALE

Sale at public auction will be on December 16, 2013 at 10:00AM local time, at the north door, Tipton County Courthouse, Covington, Tennessee pursuant to Deed of Trust executed by Courtney D. Wilburn, single woman, to Robert L. Crawford, Trustee, as trustee for Mortgage Electronic Registration Systems, Inc. ("MERS"), solely as nominee for Evolve Bank & Trust on August 26, 2011 at Record Book 1526, Page 639, Instrument No. 160429; conducted by Shapiro & Kirsch, LLP having been appointed Substitute or Successor Trustee, all of record in the Tipton County Register's Office. Default has occurred in the performance of the covenants, terms, and conditions of said Deed of Trust and the entire indebtedness has been declared due and payable.

Party Entitled to Enforce the Debt: Wells Fargo Bank, NA, its successors and assigns

The following real estate located in Tipton County, Tennessee, will be sold to the highest call bidder:

Described property located at Tipton County, Tennessee, to wit:

Lot 122, Williamsburg Estates, Section E, as shown on Plat of record in Plat Cabinet E, Slide 85, in the Register's Office of Tipton County, Tennessee, to which plat reference is hereby made for a more particular description of said property.

Being the same property conveyed to Susan Wells by Warranty Deed of record at Book 1296, Pages 300-301, dated August 18, 2006, filed August 30, 2006, in the Register's Office of Tipton County, Tennessee.

Being the same property

Trust, said property being real estate situated in Weakley County, Tennessee, and being more particularly described as follows:

Situated in the Seventh (7th) Civil District in the County of Weakly, in the State of Tennessee, and described as follows:

Tract 1

Lot Number 21 in the Gene Crawford Subdivision of the City of Dresden, Tennessee, a plat of which is of record in Plat Book 2, Page 8 ROWCT, to which reference is hereby made for a more complete description.

Tract 2

Lot Number 22 in the Gene Crawford Subdivision of the City of Dresden, Tennessee, a plat of which is of record in Plat Book 2, Page 8 ROWCT, to which reference is hereby made for a more complete description.

ALSO KNOWN AS: 9030 Highway 22, Dresden, Tennessee 38225

This sale is subject to all matters shown on any applicable recorded plat; any unpaid taxes; any restrictive covenants, easements, or setback lines that may be applicable; any statutory rights of redemption of any governmental agency, state or federal; any prior liens or encumbrances as well as any priority created by a fixture filing; and to any matter that an accurate survey of the premises might disclose. In addition, the following parties may claim an interest in the above-referenced property: David A. Campbell; Joann Campbell; First State Bank; David A. Campbell; Joann Campbell

The sale held pursuant to this Notice may be rescinded at the Successor Trustee's option at any time. The right is reserved to adjourn the day of the sale to another day, time, and place certain without further publication, upon announcement at the time and place for the sale set forth above. W&A No. 1286 234685

DATED October 29, 2013
WILSON & ASSOCIATES P.L.L.C.,
Successor-Trustee
1521 Merrill Drive,
Suite D-220
Little Rock, Arkansas 72211
(501) 219-9388
FHA No. 482-4192026
W&A No. 1286 234685
CAST- November 8, 2013
November 15, 2013
November 22, 2013

DSaleNoticeTN-Shellie_sw-

Marie Gurley, an unmarried person, to Wesley D. Turner, Trustee, on May 7, 2004 at Book D226, Page 414 all of record in the Fayette County Register's Office.

Party entitled to enforce security interest: Wells Fargo Bank, N.A., as Trustee , for the certificate holders of the Asset-Backed Pass-Through Certificates, Series 2004-WCW1. Its successors and assigns

The following real estate located in Fayette County, Tennessee, will be sold to the highest call bidder subject to all unpaid taxes, prior liens and encumbrances of record:

Description of Lot 45, Proposed Phase III, Timberlane Subdivision in Civil District Number Six, Fayette County, Tennessee.

Street Address: 211 Walnut Bend Road, Arlington, Tennessee 38002

Parcel Number: 039-108.00

Current Owner(s) of Property: Helen Marie Gurley, unmarried

The street address of the above described property is believed to be 211 Walnut Bend Road, Arlington, Tennessee 38002, but such address is not part of the legal description of the property sold herein and in the event of any discrepancy, the legal description referenced herein shall control.

SALE IS SUBJECT TO TENANT(S) RIGHTS IN POSSESSION.

SUBJECT TO A 1998 Fleetwood MANUFACTURED HOME, SERIAL NUMBER MSFLW35A40273 and MSFLW35B40273. IS BELIEVED TO BE PERMANENTLY AFFIXED TO THE REAL PROPERTY. IT SHALL BE THE RESPONSIBILITY OF THE PURCHASER TO UNDERTAKE ANY AND ALL LEGAL STEPS NECESSARY TO OBTAIN THE TITLE TO SAID MOBILE HOME.

All right of equity of redemption, statutory and otherwise, and homestead are expressly waived in said Deed of Trust, and the title is believed to be good, but the undersigned will sell and convey only as Substitute Trustee.

If you purchase a property at the foreclosure sale, the entire purchase price is due and payable at the conclusion of the auction in the form of a certified/bank check. No personal checks will be accepted. To this end, you must bring sufficient

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

Attachment 15

Letters of Support

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

City of Memphis
TENNESSEE

A C WHARTON, JR.
MAYOR

November 7, 2013

Ms. Melanie Hill
Health Services and Development Agency
Andrew Jackson Building, 9th Floor
502 Deaderick Street
Nashville, Tennessee 37243

Dear Ms. Hill:

As the Mayor of the City of Memphis, I support the CON request of the West Cancer Center in partnership with the University of Tennessee Health Science Center, The West Clinic and Methodist Healthcare.

Memphis, Shelby County has cancer incidence and mortality rates higher than national averages particularly in breast, colon/rectal and prostate cancers. Even more significant, African Americans die disproportionately (at rates 1.5 times higher) from cancer in Shelby County when compared to Caucasians. Our city has a population of approximately 1 million people which is projected to grow and age as the baby boomers reach retirement. In direct proportion, sadly the anticipated number of cancer patients in the community is expected to grow with the aging population.

Methodist Le Bonheur Healthcare, The West Clinic and the University of Tennessee Health Science Center (UTHSC) entered into a partnership in January 2012 to transform cancer care in the Mid-South. The resources of each partner will significantly help cancer patients in our community beginning with this improved capital collaboration among specialties to provide seamless care and allow cancer patients to receive services at one site of care thereby eliminating transportation challenges. Thus, please accept this letter as my wholehearted support of the Certificate of Need (CON) request to consolidate existing services from multiple sites into one existing building in order to increase efficiencies and integration.

Sincerely,

A C Wharton, Jr.
Mayor

Suite 700 • 125 N. Main Street • Memphis, Tennessee 38103-2078 • (901) 576-6000 • FAX (901) 576-6018

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

3400 Players Club Parkway, Suite 140
Memphis, TN 38125
(901) 748-4128

November 8, 2013

Melanie Hill
Health Services Development Agency
Andrew Jackson Building, 9th Floor
502 Deaderick Street
Nashville, TN 37243

Dear Ms. Hill:

Cigna is pleased to support Methodist LeBonheur Healthcare, the West Cancer Center and the University of Tennessee Health Science Center's proposal to consolidate sites of service within the Memphis area. With the higher incidence of cancer amongst the citizens of Memphis, the need to streamline cancer care and improve cost management, the consolidation proposal meets numerous objectives:

- Consolidates existing services in multiple locations into one existing building; keeping costs down while increasing efficiencies and integration.
- Eliminates the fractionization of cancer care, allowing patients to receive services at one site of care instead of traveling back and forth to multiple locations.
- Improves patients and families' ability to navigate the complex cancer care system utilizing an integrated and coordinated care journey.
- Helps to reduce disparities in care that are caused in part by transportation challenges of multiple appointments in multiple locations.
- Improves collaboration amongst multiple specialties and provides seamless care delivery.
- Integrated care delivery for cancer services will enhance collaboration with payers for innovative reimbursement and value based models such as episodes of care, bundled payments and an oncology medical home.

Cigna supports this effort in order to achieve all of these valuable and important objectives. Please contact me if you have any questions or if I may be of further assistance.

Sincerely,

Chuck Utterback

Chuck Utterback
Director of Contracting

"Cigna" is a registered service mark, and ," the "Tree of Life" logo is a service mark, of Cigna Intellectual Property, Inc., licensed for use by Cigna Corporation and its operating subsidiaries. All products and services are provided exclusively by such operating subsidiaries and not by Cigna Corporation. Such operating subsidiaries include Connecticut General Life Insurance Company (CGLIC), Cigna Health and Life Insurance Company (CHLIC), and HMO or service company subsidiaries of Cigna Health Corporation and Cigna Dental Health, Inc

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

of Tennessee
plans for better health. plans for a better life.™

1 Cameron Hill Circle
Chattanooga, TN 37402

bcbst.com

Bill Gracey
President & Chief Executive Officer
1 Cameron Hill Circle
Chattanooga, Tennessee 37402

November 15, 2013

Ms. Melanie Hill
Executive Director
Health Services and Development Agency
Andrew Jackson Building, 9th Floor
502 Deaderick Street
Nashville, Tennessee 37243

Re: The West Cancer Center Certificate of Need Application

Dear Ms. Hill,

This letter is submitted in support of the West Cancer Center Certificate of Need application which has been filed with your agency.

As the state's largest health insurance company, BlueCross BlueShield of Tennessee believes strongly in the need for our state's health care community to be equipped and organized to meet the changing health care needs of the people we serve. This includes supporting innovative, clinically proven models of care which improve quality and outcomes and help reign in the cost of care. The proposed West Cancer Center will be a critical component in ensuring quality of care, improved outcomes and cost containment for cancer patients in the region.

The West Cancer Center will provide access to multidisciplinary clinics for cancer care patients and will offer specialized medical, surgical, diagnostic and radiation programs in a patient's own community. Doing so means patients will be able to receive services at one site of care instead of traveling between disconnected, separate facilities during diagnosis and treatment.

Integrating sites of service for imaging, chemotherapy, surgery and other therapies and counseling will also improve patients' and families' ability to navigate the complex health care delivery system. This approach helps reduce disparities in care that can result from transportation and other coordination challenges that are associated with multiple locations of care. Importantly, this consolidation of services into a single site also improves collaboration among multi-specialty health care professionals and provides seamless delivery of care to the patient. Doing so will help keep costs lower while increasing efficiencies and further integrating services, all of which benefit the patient.

All of these improvements are consistent with what we see happening across the industry: increased collaboration that improves the quality of care and clinical outcomes, reduces costs, and improves the patient experience.

Shelby County already experiences cancer incidence and mortality rates that are higher than national averages, particularly in breast, colon/rectal and prostate cancers. And these rates are projected to increase with the aging population. Even more significantly, African Americans die disproportionately from cancer in Shelby County when compared to Caucasians.

For these reasons, and because the West Cancer Center will bring improved care delivery, increased efficiency, better health outcomes and reduced costs, I strongly encourage the Agency and its members to approve this application.

Thank you for your consideration of this application and for your service to our state's health care community.

Sincerely,

Bill Gracey
President & CEO

SUPPLEMENTAL- # 1
November 25, 2013
11:00am

AFFIDAVIT

STATE OF TENNESSEE

COUNTY OF Shelby

NAME OF FACILITY: Methodist Healthcare-Memphis Hospitals West cancer center

I, Erich Mounce, after first being duly sworn, state under oath that I am the applicant named in this Certificate of Need application or the lawful agent thereof, that I have reviewed all of the supplemental information submitted herewith, and that it is true, accurate, and complete.

Signature/Title

Sworn to and subscribed before me, a Notary Public, this the 19th day of November, 2013, witness my hand at office in the County of Shelby, State of Tennessee.

ANDREA WILLIAMS STATE OF TENNESSEE NOTARY PUBLIC COUNTY OF SHELBY MY COMM. EXPIRES JUNE 5th 2017

NOTARY PUBLIC

My commission expires June 5th, 2017.

HF-0043

Revised 7/02

ORIGINAL-SUPPLEMENTAL-2

Memphis Hosp. West Cancer Ctr.

CN1311-043

TRAUGER & TUKE
ATTORNEYS AT LAW
THE SOUTHERN TURF BUILDING
222 FOURTH AVENUE NORTH
NASHVILLE, TENNESSEE 37219-2117
TELEPHONE (615) 256-8585
TELECOPIER (615) 256-7444

SUPPLEMENTAL- # 2
November 27, 2013
11:35am

November 27, 2013

VIA HAND DELIVERY

Ms. Melanie Hill
Executive Director
State of Tennessee
Health Services & Development Agency
502 Deaderick Street, 9th Floor
Nashville, TN 37243

RE: Response to Supplemental Questions #2 to Methodist Healthcare – Memphis Hospitals West Cancer Center Certificate of Need – CN1311-043

Dear Ms. Hill,

Enclosed please find a Supplemental Response #2, in triplicate, to be filed on behalf of my client Methodist Healthcare - Memphis Hospitals West Cancer Center. Please date stamp the additional enclosed copy of the Response and return it to me.

Thank you for your assistance.

Very truly yours,

Byron R. Trauger kmn

Byron R. Trauger

BRT:kmn

Enclosures

Cc: Carol Weidenhoffer (via email)

SUPPLEMENTAL- # 2
November 27, 2013
11:35am

NOV 27 '13 AM 11:30

AFFIDAVIT

STATE OF TENNESSEE

COUNTY OF Shelby

NAME OF FACILITY: Methodist Healthcare-Memphis Hospitals West Cancer Center

I, Erich Mounce, after first being duly sworn, state under oath that I am the applicant named in this Certificate of Need application or the lawful agent thereof, that I have reviewed all of the supplemental information submitted herewith, and that it is true, accurate, and complete.

[signature] / CEO
Signature/Title

Sworn to and subscribed before me, a Notary Public, this the 26th day of November, 2013, witness my hand at office in the County of Shelby, State of Tennessee.

[signature]
NOTARY PUBLIC

My commission expires June 5, 2017.

JULIE E. ROSENTHAL
STATE OF TENNESSEE NOTARY PUBLIC
COUNTY OF SHELBY
MY COMM. EXP. JUNE 05, 2017

HF-0043

Revised 7/02

SUPPLEMENTAL- # 2
November 27, 2013
11:35am

METHODIST HEALTHCARE – MEMPHIS HOSPITALS

SUPPLEMENTAL RESPONSE #2

CN1311-043
THE WEST CANCER CENTER – AN INTEGRATED COMPREHENSIVE CANCER CENTER

MEMPHIS, SHELBY COUNTY

Filed November 2013

SUPPLEMENTAL- # 2
November 27, 2013
11:35am

1. **Section C, Need, Item 1.a. (Service Specific Criteria (Megavoltage Radiation Therapy Services) Item 6.e.**

   The American College of Radiology Radiation Oncology Practice Accreditation Program Requirements in Attachment 7 is noted. However, please expand on how the applicant plans to meet the MRT Unit staffing requirements as set forth by this accrediting authority.

   Based on the attached ACR Requirements – see page 5 of the guidelines. The West Cancer Center will be an F1. ACR does not look at the billing of services to determine whether a site is Hospital-based or Freestanding. It is literally whether the center is on a hospital campus or not and the proposed center will be Freestanding with more than 600 new patients. So the F1 Standard applies.

   West Cancer Center is already working towards meeting the goals for the existing center. Methodist will add the following FTEs and with such will meet the ACR staffing requirements at this site
   :
   1) We have hired a new Radiation Oncologist and he starts January 1, 2014.
   2) We are hiring a masters level physicist and will increase the number of physicists to 4.0 FTEs by 2016.
   3) We meet the dosimetrist goals now and will with projected volumes.
   4) We have hired an additional therapist and will be at 7.0 FTEs by 2016 to meet the goals.
   5) The additional therapist referenced in #4 above will meet this goal.
   6) We currently exceed this metric for new patients per machine. This is one reason we are requesting a new machine. The second machine will align the center with this benchmark.

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Attachment 1

ACR Accreditation Program Requirements

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Radiation Oncology Practice Accreditation Program Requirements

Introduction

The radiation oncology practice accreditation program provides radiation oncologists with third party, impartial peer review and evaluation of patient care. The facility's personnel, equipment, treatment planning and treatment records, as well as patient safety policies, quality control/quality assessment activities are assessed. Recommendations for improvement are based on nationally recognized guidelines, including ACR and ASTRO guidelines and technical standards, and the American Association of Physics in Medicine (AAPM) Task Group reports.

The ACR Committee for Radiation Oncology Practice Accreditation directs the program. The accreditation process, designed to promote quality and be educational in nature, includes an on-site survey performed by board certified radiation oncologists and board certified medical physicists.

Application for Accreditation

Each facility applying for accreditation must submit an application through the secure website, https://ropa.acr.org. The application consists of submission of facility treatment and equipment information, staffing levels and qualifications, and physics Quality Assurance/Quality Control documentation. If deficiencies are noted or missing items identified, the facility will be contacted so that any missing items can be submitted before the site survey is scheduled. When the application is complete, the date (s) of the survey will be confirmed. At this time, the facility will receive a notice to submit cases (Census Data Form) from which 10 (or more) will be selected for review during the site visit.

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Case Review

When your survey date is confirmed, you will receive an e mail asking you to submit cases of ***definitively treated*** patients who have ***recently completed treatment*** at your facility and have had at least ***one follow up visit***. Please submit your cases ***no later than 30 days prior*** to the survey date. During the on-site survey, 10 cases will be reviewed. For multi-site surveys, 10 cases will be reviewed at the main site and at least 3-4 cases at each satellite. For multi-site surveys, you only need to submit 2-3 cases from each disease site for each satellite. To ensure that all physicians in the practice are reviewed, physician initials must be included with patient ID numbers. A minimum of 2 cases per physician will be reviewed. ID numbers, not patient names, must be submitted for 5 breast, 5 prostate, 5 head and neck, 5 lung and 5 "generic" disease sites (colo-rectal, seminoma, brain, Hodgkin's disease, cervix, etc) on the census data sheets provided. If you do not have 5 cases from a disease site (such as head and neck), you may submit additional generic cases. In addition, cases selected should include all treatment modalities offered at your facilities, such as IMRT, prostate seed implant, stereotactic radiosurgery, etc. For all cases, patient records including simulation information, DRRs, port films (hard copies if appropriate), and CT planning documentation must be available for the surveyors. If your facility has electronic images and/or medical records, you will need to provide electronic access to this information. Since the data collection on site is performed using a web-based process, the surveyors will need **internet access.** We request that you provide a minimum of 2 computers with 4 monitors so that the surveyors can review your electronic records as well as access the internet for data entry purposes. We also ask that you provide staff members (dosimetrist, physicist) to give a brief orientation to your electronic medical records/digital imaging systems and to be available throughout the day to provide assistance as needed. A member of the ACR staff will contact you prior to the survey for details such as parking, directions to site, day of survey agenda, etc.

On-Site Survey

The on-site survey is conducted over one business day (for a single facility). Multi-site surveys will require more days, based on the number of sites, geographic locations and practice patterns. During the visit, the surveyors will tour the facility, verify the information submitted in the facility's application, conduct an interview with the Chief/Medical Director of Radiation Oncology, the chief physicist, department administrator/chief therapist, dosimetrist, nurse and other key personnel; and collect information about the facility's patient treatment policies and procedures, safety initiatives and review the selected cases.

The radiation oncologist and medical physicist review charts and complete a set of questions developed by the Committee for Radiation Oncology Practice Accreditation. Chart reviews include components such as complete and signed prescriptions, consent forms, pathology reports, history and physical, physician management during treatment and follow up, appropriateness of treatment, simulation/treatment planning and dosimetry activities. At the end of the day, the surveyors will again meet with the group for a brief "exit" interview. This is primarily to clarify any issues prior to their departure; the team will not be providing their recommendations at this time since that is a Committee decision made following review of the results of the survey. For multi-site surveys, the exit interview time and place will be determined with ACR and facility staff.

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A comprehensive review of the facility's physics program will be included as part of the application process and verified during the on-site survey. The Radiation Oncology Physicist is responsible for the design and implementation of the physics quality management program. The following areas will require documentation submitted with the application:

- Documentation of compliance with AAPM TG-40, TG 142, TG-51
- Documentation of treatment planning system quality assurance program TG- 53
- Independent Verification of Output of each beam

In addition, during the on-site survey, the qualified medical physicist's documentation of the following will be reviewed:

- Procedures for instrument calibration and periodic instrument constancy checks
- Procedures to verify the manufacturer's specifications and to establish baseline performance values for radiation therapy equipment
- Quality management program for radiation therapy equipment, simulators, treatment planning systems, and monitor unit calculation algorithms
- Monitor units calculation procedures and protocols
- Physics chart check protocol for reviewing treatment delivery
- Procedures for checking the integrity of mechanical and electrical patient care devices
- Radiation protection program as it pertains to radiation oncology
- Calculations related to patient dosimetry and/or physics measurements when such needs arise or per clinician's requests.

Random On-Site Surveys

In order to verify that accredited facilities maintain consistent quality during the three–year accreditation period, on-site surveys may also be performed at any time during the accreditation period. These surveys provide an excellent opportunity for a positive educational exchange with experts in the field, as well as providing validation of continued compliance with ACR guidelines and standards. These surveys will be conducted by radiation oncologists and medical physicists from the Radiation Oncology Practice Accreditation Program. Any facility chosen for a random on-site survey will be notified in advance. There is no additional cost to the facility for the random survey.

Multiple Sites

A practice that has multiple sites may be eligible for a single survey, with a limited case review from each additional site. The criteria to determine eligibility include but are not limited to:

- The physician group has a single medical director
- The physicist group has a single director
- Physicians' peer review includes all the practice sites
- All practice sites utilize uniform treatment methods
- All practice sites have uniform chart organization and forms
- Geographic accessibility **(within one hour drive from main site)**

If the practice does not meet the criteria, a full survey will be required for each site.

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Personnel Qualifications

Radiation Oncologist

- Certification in Radiology by the American Board of Radiology (ABR) of a physician who confines his/her professional practice to radiation oncology or certification in Radiation Oncology or Therapeutic Radiology by the ABR, the American Osteopathic Board of Radiology, the Royal College of Physicians and Surgeons of Canada, or the Collège des Médecins du Québec may be considered proof of adequate physician qualifications.

OR

- Satisfactory completion of a radiation oncology residency program approved by the American Council of Graduate Medicine Education (ACGME), the Royal College of Physicians and Surgeons of Canada (RCPSC), the Collège des Médecins du Québec, or the American Osteopathic Association (AOA).

Qualified Medical Physicist

The ACR strongly recommends that the individual be certified in the appropriate subfield (s) by the American Board of Radiology (ABR), the Canadian College of Physics in Medicine, or by the American Board of Medical Physics (ABMP). The appropriate subfield of medical physics for this guideline is Therapeutic Medical Physics. (Previous medical physics certification categories including Radiological Physics and Therapeutic Radiological Physics are also acceptable.)

Radiation Therapists and Simulation Staff

Radiation therapists and simulation staff should fulfill state licensing requirements, and treating radiation therapists should have American Registry of Radiologic Technologists (ARRT) certification in radiation therapy. Simulation staff should have ARRT certification in either radiation therapy or diagnostic imaging.

Dosimetrist

Certification by the Medical Dosimetrist Certification Board is recommended.

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Staffing Levels*

In the final report, the facility's staffing levels for radiation oncologists, physicists, radiation therapists and dosimetrists are compared to the accredited facility averages and averages for the facility's stratum as defined in the following table. The table allows facilities to identify personnel and equipment utilization issues. Staffing recommendations may be part of the final report; however, variations from these levels generally do not result in withholding of accreditation unless inadequate staffing levels result in non-compliance with ACR Practice Guidelines and Technical Standards and/or compromise patient safety.

The strata are defined as:

Academic/CCC Comprehensive Cancer Center or main teaching hospital of a medical school

H1 Hospital based; 600 or more patients

H2 Hospital based; 201-599 patients

H3 Hospital based; 200 or fewer patients

F1 Freestanding; 600 or more patients

F2 Freestanding; 201-599 patients

F3 Freestanding; 200 or fewer patients

	ALL ACCREDITED FACILITIES	ACADEMIC / CCC	H1	H2	H3	F1	F2	F3
New patients/ radiation oncologist	205	156	278	215	140	203	238	160
New patients/ Physicist	265	174	273	257	246	277	321	256
New patients/ FTE dosimetrist	273	265	346	275	196	318	301	211
New patients/ FTE therapist	74	65	90	73	56	70	81	75
FTE therapist/ Rx machine	3.1	4.1	3.6	3.1	2.6	3.4	3.1	2.2
New patients/ Rx machines	215	222	305	222	133	236	245	143

**While it may be instructive to compare staffing data to the facility's stratum and to the national average for accredited facilities, note that this data is incomplete in some important aspects. The data does not account for the staff's other duties (e.g. simulation for therapists) nor is the data scaled for complexity or the proportion of different pathologies treated in any given clinic. Each facility should, when comparing their staffing data to stratum and national averages, consider their patient population, range and complexity of services provided, and any staff duties outside of the core duties assumed in this data table.*

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Continuous Quality Improvement (CQI)

The Medical Director of Radiation Oncology will be responsible for the institution and ongoing supervision of the continuous quality improvement program. Elements of the program include:

- Chart review is required and should include cases in which there is a variation from prescription of greater than 10% of intended total dose, new modalities or techniques, and charts in which an incident report is filed
- Morbidity and mortality review
- Review of internal outcome studies which include radiation oncology patients
- Focus studies (Facility Practice Improvement)
- Individual physician/physicist peer review
- Patient satisfaction surveys
- New patient conferences
- Port film/image review
- Chart rounds

Frequent Deficiencies

The following are recommendations that are ***frequently*** included in the final report and must be addressed before a facility will be granted accreditation. Please note that other serious deficiencies, ***not*** seen frequently and therefore not listed, may also require corrective action and documentation prior to granting of accreditation.

- The treatment prescriptions should include: volume (site) to be treated, description of ports (i.e., AP, PA, lateral, etc.), radiation modality, dose per fraction, number of fractions per day, number of fractions per week, total number of fractions, total tumor dose and prescription point or isodose.

- Port verification films/images should be taken at the beginning of therapy, with field changes, and at least every other 5-10 treatments. All images should be labeled with the patient's name, date taken, field size, and direction of the beam as well as the reviewing radiation oncologist's initial/signature and date. IMRT - confirmation of patient positioning should be performed initially and then periodically, at least weekly, throughout the course of the patient's treatment.

- At the completion of treatment, the qualified medical physicist shall review the entire chart to affirm the fulfillment of the initial and/or revised prescription dose. The review should be documented by the physicist, initialed/signed and dated **no later than one week** after the end of treatment.

- Each patient chart should contain a documented, comprehensive history and physical examination performed by the radiation oncologist, including a comprehensive history of the present illness, past medical history, review of systems, review of imaging studies and laboratory data, histopathology diagnosis and recommendations for treatment.

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- The department should have a documented, formal treatment planning system quality assurance plan, including the periodic confirmation of the treatment planning system consistency.

- Patients should be evaluated by the radiation oncologist at least weekly. Weekly exams should be thoroughly documented in the patient chart.

- A radiation oncologist should be available for direct care and quality review on a daily basis. The radiation oncologist, facility, and support staff should be available to initiate urgent treatment within a medically appropriate response time on a 24-hour basis or refer to a facility that is available to treat on a 24-hour basis. When unavailable, the radiation oncologist is responsible for arranging appropriate coverage. A radiation oncologist's availability should be consistent with state and federal requirements.

- At the completion of treatment, a follow-up plan should be documented in the patient chart, and patients should be seen by the radiation oncologist at regular, on-going intervals. Follow-up notes should be documented in the patient record.

- Complete documentation should be included in the patient record when brachytherapy is performed. Written directives documented for each procedure should include the treatment site, isotope, number of sources and the planned dose to designated points. After brachytherapy is completed, a written summary of treatment delivery should include: total dose of brachytherapy and external beam therapy, time of source insertion and removal and documentation of a radiation safety survey of the patient and room.

- Documentation of delivered doses to volumes of target and non-target tissues, in the form of dose volume histograms and representative cross-sectional isodose treatment diagrams, should be maintained in the patient's written or electronic record.

- Physician peer review activities should be formalized and documented.

- Formal Quality Assurance & Improvement program should include: chart rounds, new patient rounds, and morbidity and mortality conferences.

- IMRT QA should be documented and approved prior to initiation of treatment.

- The responsibilities of the radiation oncologist shall be clearly defined and should include the following:
  Define the goals and requirements of the treatment plan, including the specific dose constraints for the target(s) and nearby critical structure(s).

Final Report

The report is issued to the radiation oncologist who requested the survey. The Committee issues a final report after the on-site survey. The report is generally sent within 8-12 weeks following the on-site survey. The report is based on the findings of the surveyors, as well as information provided in the initial application and verified by the surveyors. The accreditation report includes:

- Comparison of facility/staffing data with the accredited facilities data.

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- Evaluation of facility's compliance with guidelines and standards from application information and review by surveyors.
- Surveyor comments on individual case reviews.
- Specific recommendations for improvement.

Accreditation Status

The term of accreditation is three years. Facilities that are not granted accreditation will either be:

- Deferred with 90 days to submit a Corrective Action Plan. After the Corrective Action Plan is approved by the Committee, the facility may be required to perform a self audit (measures for self audit will be selected by the Committee) and submit the results no later than 6 months after receipt of response to corrective action. Following Committee approval of the self-audit, the facility may be granted a 3 year accreditation. The Committee may request a re-survey if Corrective Action Plan is approved. Additional fees may be applied such as On-Site Surveyors' expenses including travel and lodging.

- Denied with 90 days to submit a Corrective Action Plan. After the Corrective Action Plan is approved by the Committee, the facility will be required to participate in a follow up survey (6-9 months after receipt of response to corrective action). A re-application fee of $5,000 must be submitted with the survey agreement. The surveyors will complete a report of their findings which will be reviewed by the Committee. Following Committee approval of this report, the facility may be granted a 3 year accreditation.

Marketing Your Accreditation

Once accreditation has been achieved, the facility will receive a marketing package (link to documents is included in your final report) to assist in promoting this success within the community. In addition, all sites fully accredited (and those under review) will be listed by program and state on the ACR Web site at www.acr-org.

The marketing tools include:

- Camera-ready ad
- Press release
- Certificate suitable for framing
- Certification mark provided in decal and electronic format

Application for Renewal

The application process for sites applying for renewal is essentially the same as for new sites, however, a facility's previous recommendations will be carefully reviewed to ensure that recommendations for improvement have been implemented. In order to maintain accreditation, it is recommended that facilities begin the application process nine months prior to the expiration date of their accreditation.

Appeal Mechanism

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An appeal process is available to a radiation oncology facility that disagrees with the accreditation report. To appeal, the chief of radiation oncology submits a written request to the Chairman of the Committee on Radiation Oncology Practice Accreditation within thirty days of receipt of the accreditation report.

Survey Fees

Survey fee for the main facility is $9,500.00; $3,000.00 for each additional site. **Fees are non-refundable and subject to change without notice**. If a facility is denied accreditation and required to participate in a follow up survey, a fee of $5000 must be submitted prior to scheduling the site visit. Checks should be made payable to The American College of Radiology.

Effective on August 5, 2013: Any requested change in the survey date by the facility or cancellation of a scheduled survey after ACR has invested funds in the survey (such as travel funds) must be reimbursed by the facility in addition to the survey fee.

Practice Guidelines and Technical Standards

We highly recommend that you become familiar with the ACR Practice Guidelines and Technical Standards. These serve as the foundation for each of our accreditation programs and may be accessed by both ACR members and non-members through our Web site at www.acr.org.

R-O PEER™

R-O PEER offers radiation oncologists the opportunity to fulfill Part IV, Evaluation of Performance in Practice for Maintenance of Certification (MOC), for the American Board of Radiology (ABR) through the Radiation Oncology Practice Accreditation Program. R-O PEER™, the ACR's Practice Quality Improvement (PQI) program is offered as part of the Radiation Oncology Practice Accreditation Program. Following the survey, a final report will be issued to each participating radiation oncologist. If any corrective action measures are identified, the final report will request additional documentation that demonstrates that these have been appropriately addressed. When this documentation is submitted and reviewed, a certificate of satisfactory completion of the PQI project will be issued.

For information on R-O PEER and to access the application, visit the ACR web site at http://www.acr.org/Quality-Safety/Accreditation/RO

For Additional Information

Contact the ACR Radiation Oncology Practice Accreditation Program office in Reston, Virginia at 800-770-0145 or rad-onc-accred@acr.org.

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APPENDIX A

The following list of references is by no means complete, but it may be used as a starting point to assist you with your application and survey process:

American College of Radiology Practice Guidelines and Technical Standards, Reston, VA
http://www.acr.org/Quality-Safety/Standards-Guidelines/Practice-Guidelines-by-Modality/Radiation-Oncology

http://www.acr.org/Quality-Safety/Standards-Guidelines/Technical-Standards-by-Modality

American Association of Physicists in Medicine, (AAPM). Comprehensive QA for Radiation Oncology: Report of AAPM Radiation Therapy Committee Task Group 40, 1994.

American Association of Physicists in Medicine, (AAPM). Task Group 142 Report, Quality Assurance of Medical Accelerators, 2009.

American Association of Physicists in Medicine, (AAPM). Protocol for clinical reference dosimetry of high-energy photon and electron beams. Report of AAPM Radiation Therapy Task Group 51, 1999.

American Association of Physicists in Medicine, (AAPM). Quality Assurance for Clinical Radiotherapy Treatment Planning Report of AAPM Radiation Therapy Committee Task Group 53, 1998.

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