



VANDERBILT-INGRAM CANCER CENTER

# Assessing and Enhancing Cancer Prevention, Treatment, and Survivorship In Rural Populations

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# PRESENTATION OVERVIEW

- Vanderbilt Ingram Cancer Center (VICC)
  - Rural Cancer Needs Assessment
    - Key Findings
  - Rural Health Provider Network
1. Rural Cancer Needs Assessment
  2. Expanding Rural Health Cancer Control Capacity: Focus on Cancer Survivorship
  3. Enhancing Cancer Care of Rural Dwellers Through Telehealth and Engagement (ENCORE)

# VICC MISSION

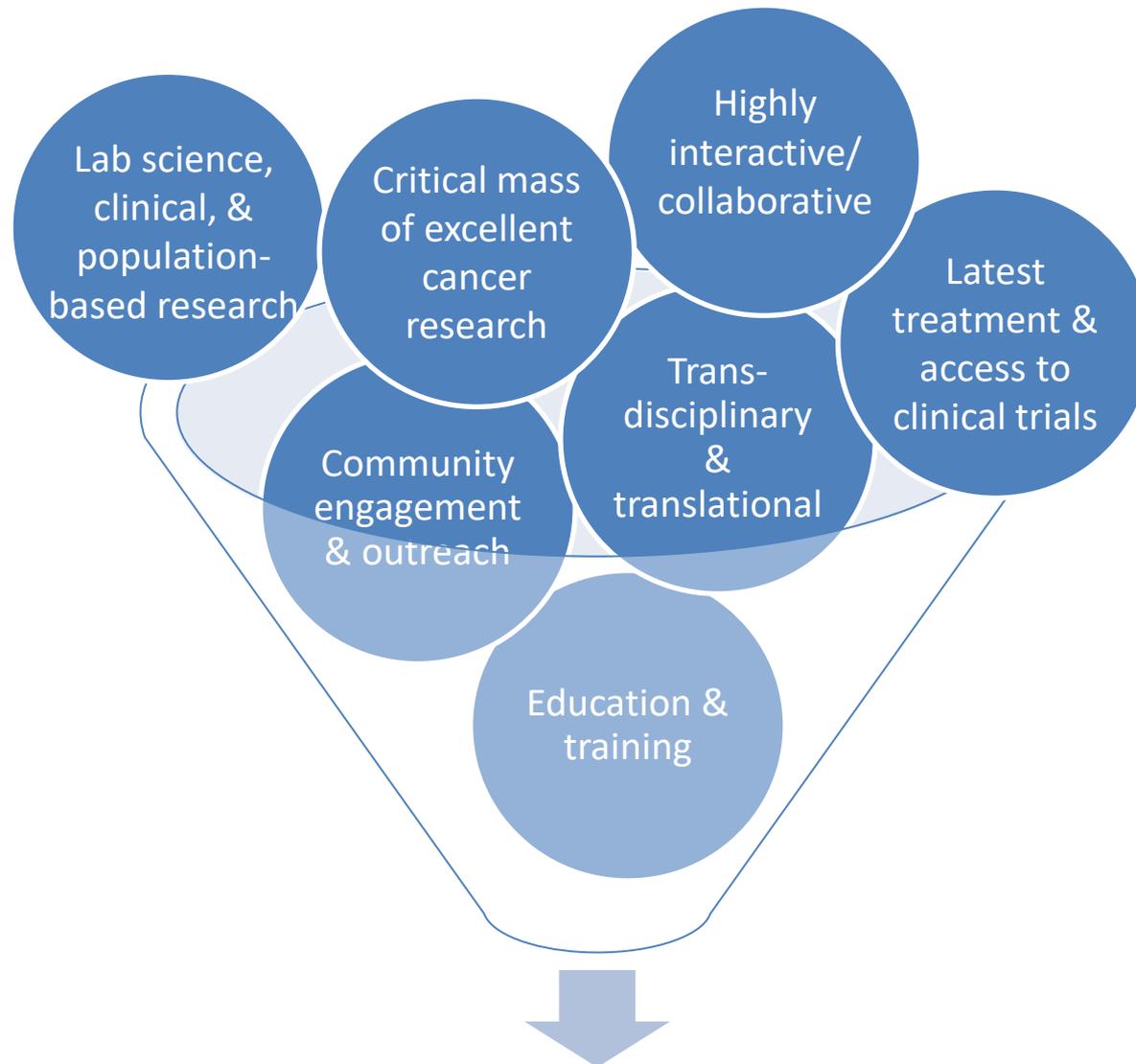
*To alleviate cancer death and suffering through pioneering research; innovative patient-centered care; and evidence-based prevention, education and community initiatives*

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- **Only NCI Comprehensive Cancer Center Serving Adults and Children in TN**
- **NCI-Designated Cancer Center for 23 Years**
- **#1 in US in Stem Cell Transplant Outcomes (2017 & 2018)**
- **>28,000 Unique Patients/Year from 44 States**



# WHAT DOES IT MEAN TO BE NCI DESIGNATED?



**Development of more effective approaches to prevention, diagnosis, and treatment of cancer**

# INNOVATIVE RESEARCH & PATIENT CARE



Using patient's immune system to fight cancer



Protecting the heart during cancer treatment



Using ultrasound to treat prostate cancer

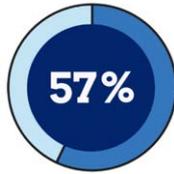


Developing new drug therapies

# VICC CATCHMENT AREA

**123**

Counties



Rural  
Counties

**7.9**

Million

**25%**

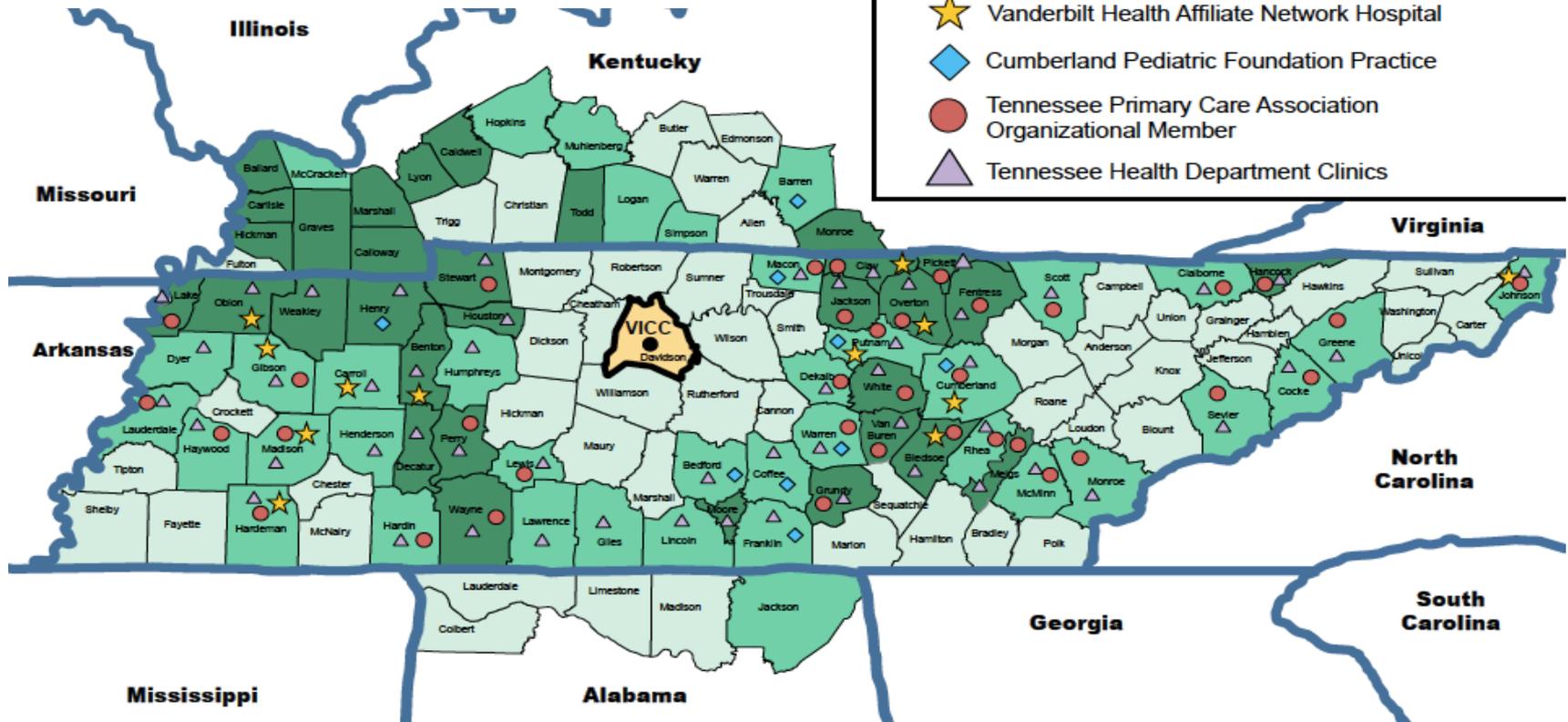
Population

## Rural-Urban Continuum Codes (RUCC) Classification

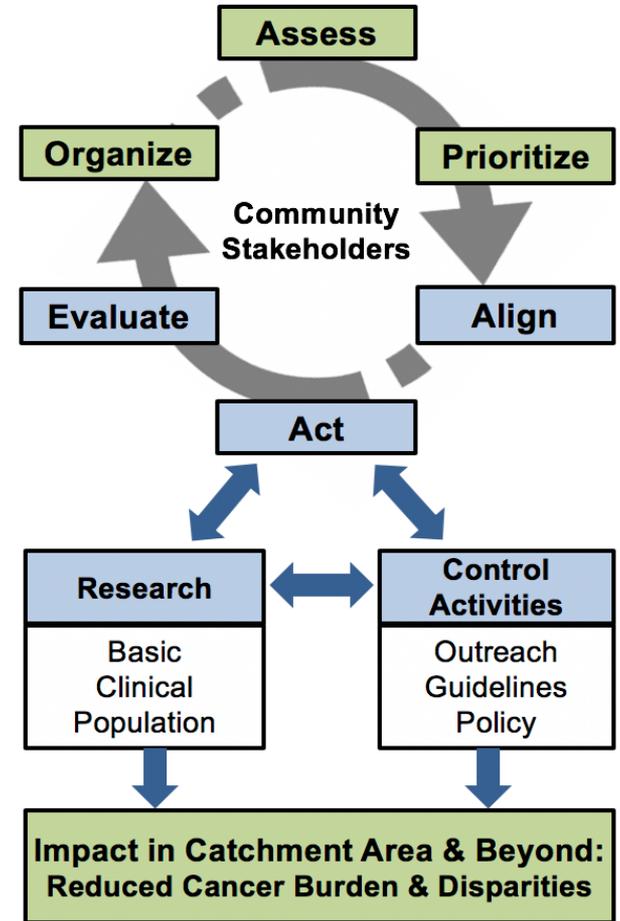
- RUCC Classification 1, 2 and 3
- RUCC Classification 4, 5 and 6
- RUCC Classification 7, 8 and 9

## Network Partnership Categories

- Vanderbilt Health Affiliate Network Hospital
- Cumberland Pediatric Foundation Practice
- Tennessee Primary Care Association Organizational Member
- Tennessee Health Department Clinics



# VICC COMMUNITY OUTREACH & ENGAGEMENT



# Our Team

## Principal Investigators

Debra Friedman, MD  
Leader, Cancer Health Outcomes  
and Control Program

## Co-Investigators

Ben Ho Park, MD, PhD  
Associate Director, Precision Medicine  
Leader, Breast Cancer Program

Anne Washburn, MPH  
Associate Director,  
Community Relations and Affiliations

Phillip Lammers MD  
Director of Clinical Research  
Baptist Health Care

Cynthia Powell, MD  
Vanderbilt Health Affiliated Network  
Medical Director

Jaleesa Moore, PhD  
Cancer Epidemiologist

Tuya Pal, MD  
Associate Director, Cancer Health  
Disparities

Pamela Hull, PhD  
Associate Director, Community  
Outreach & Engagement

Claudia Barajas  
Manager, Community Engagement

Rebecca Selove, PhD, MPH  
TSU, Implementation Scientist

Tatsuki Koyama, PhD  
Biostatistician

## Tumor Board Oncology Panel

Nancy Davis, MD: Genitourinary  
Christine Lovly, MD, PhD: Lung  
Kristen Ciombor, MD: Gastrointestinal  
Marta Ann Crispens, MD: Gynecological  
Ben Ho Park, MD, PhD: Breast





# RURAL CANCER NEEDS ASSESSMENT

# Expanding Opportunities and Building Capacity to Bring Cancer Prevention and Control Efforts to Rural Dwellers

- Multi-level cancer care needs assessment in 70 rural counties of the VICC catchment area
- Establish network of rural healthcare providers

Cancer Prevention

Cancer Screening

Cancer Treatment,  
Care Delivery, and  
Follow-up

Quality of Life:  
Survivorship  
Through End of Life

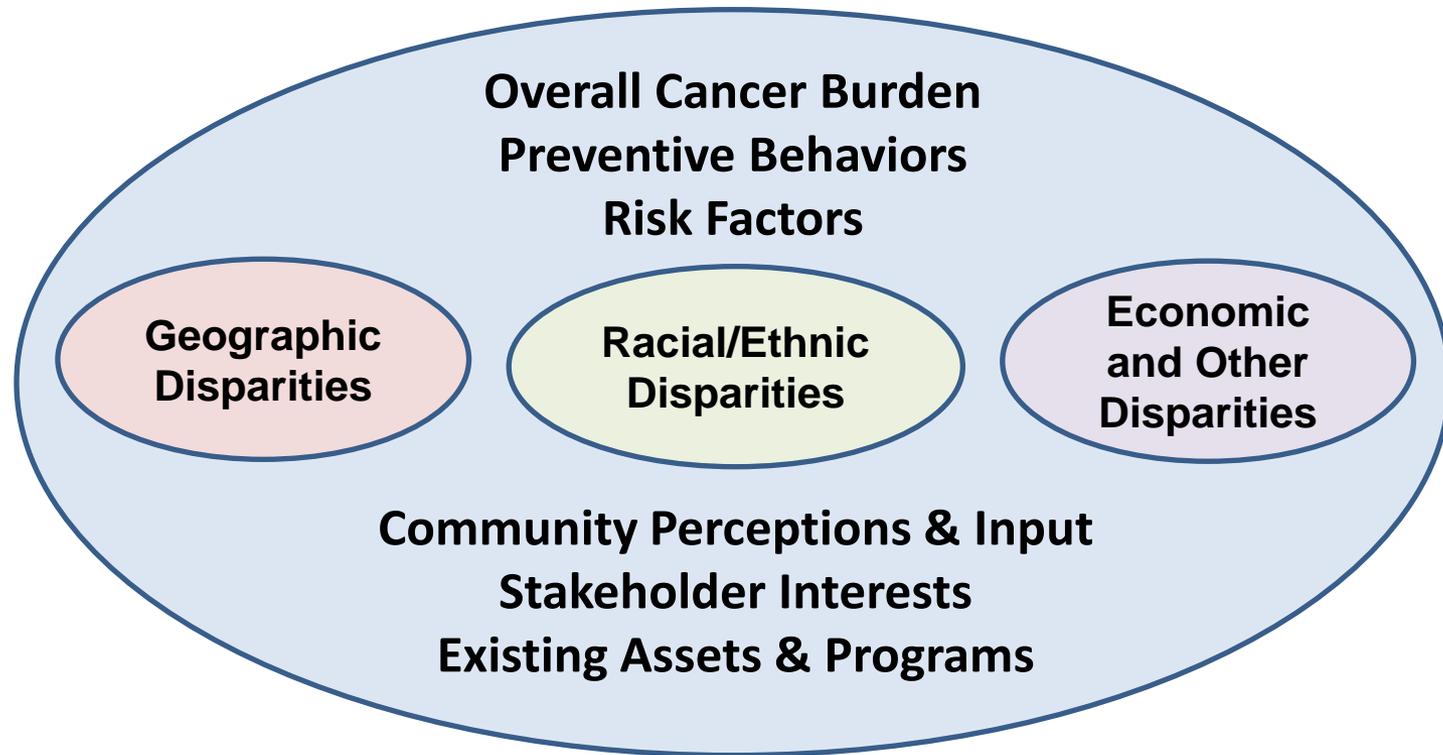
# RURAL CANCER PROVIDER NETWORK

Goal: To develop a network of primary care and oncology providers to foster collaborative research and practice initiatives to improve cancer prevention, early detection and care delivery

- Inaugural Meeting February 2020 (with Zoom access)
- Email and listserv blasts
- Identify cancer health priorities
- Identify services for telehealth
- Identify topics for CME



# MULTI-PRONGED NEEDS ASSESSMENT



**Existing data:**  
Cancer burden  
Risk factors  
Prevention  
Disparities

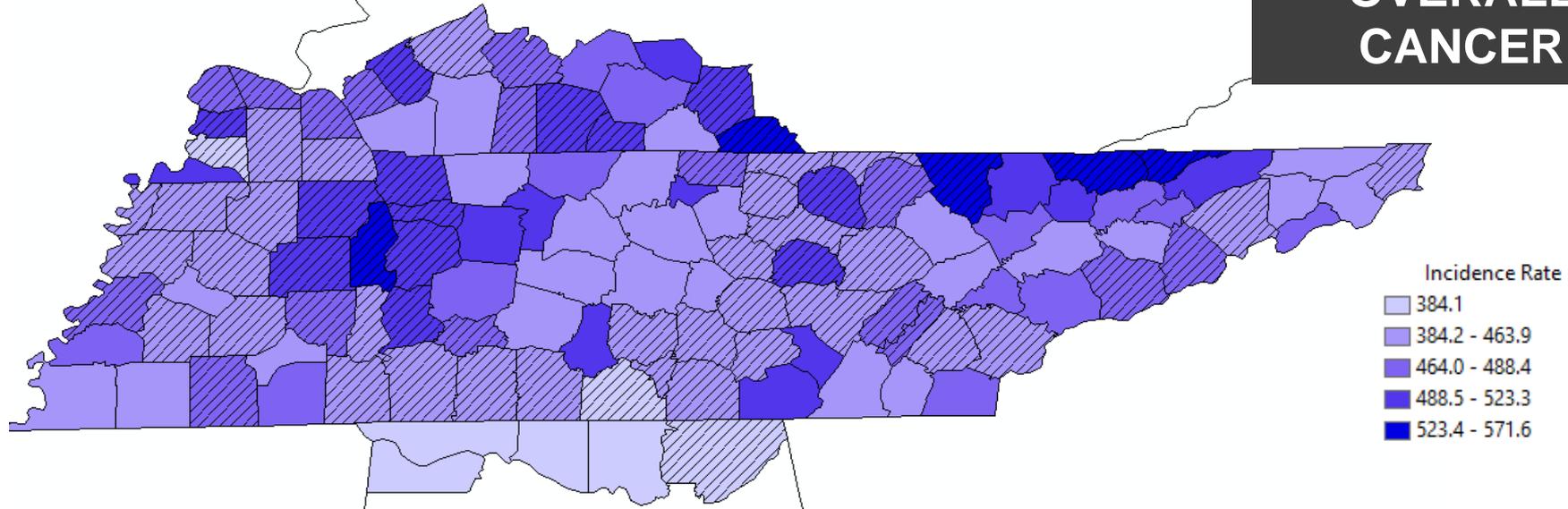
**Gather Information:**  
Focus Groups, Surveys  
Key Informant Interviews  
CHNAs  
Rural Health Councils

Input from CABs  
and Partners

Internal Review of  
Research Capacity

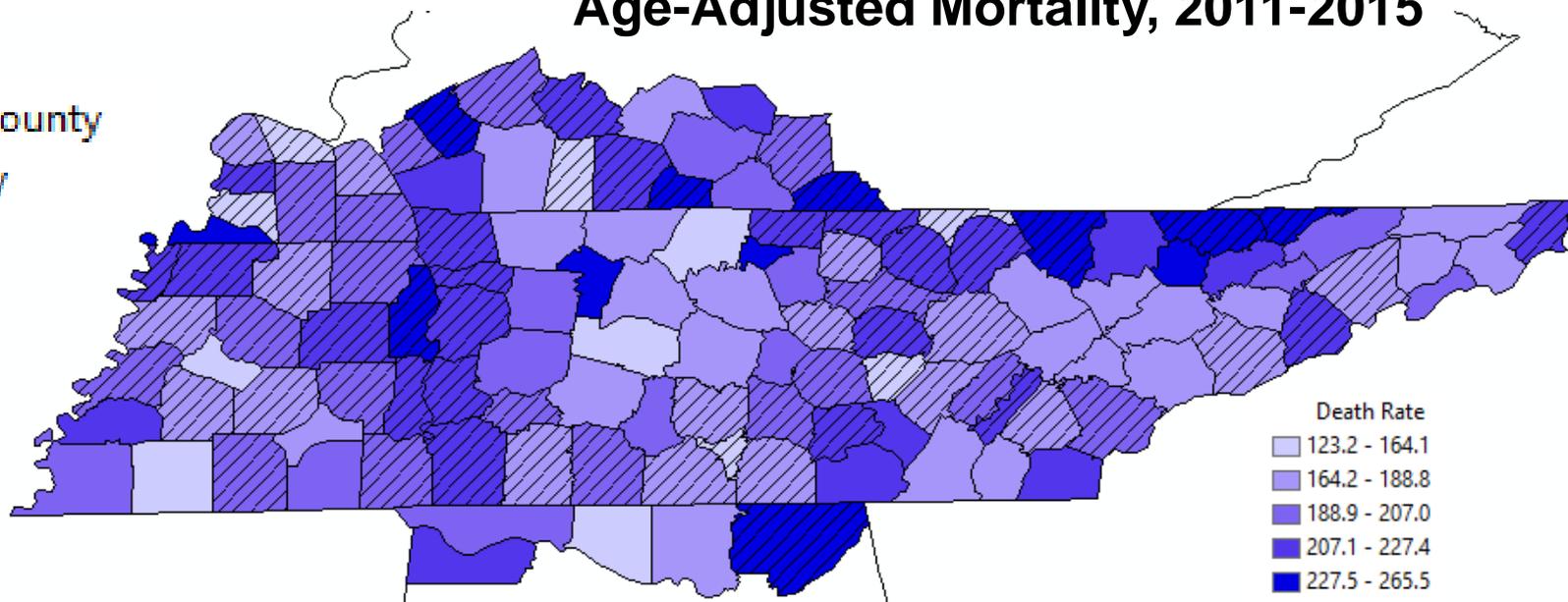
# Age-Adjusted Incidence, 2011-2015

## OVERALL CANCER



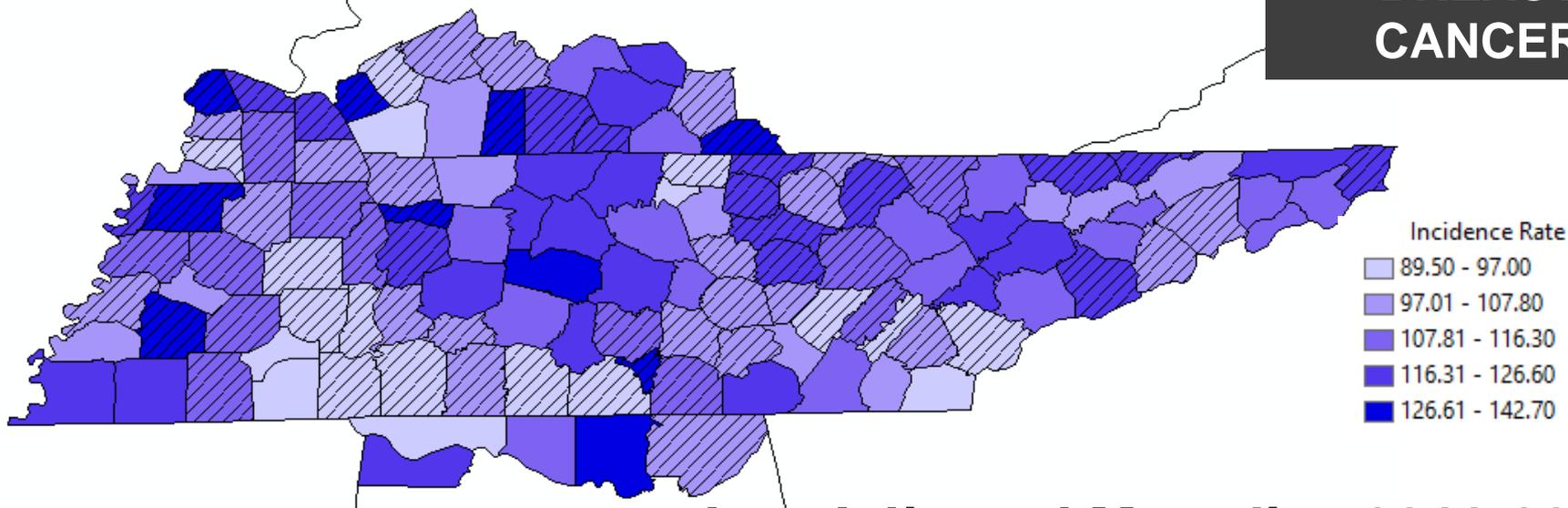
# Age-Adjusted Mortality, 2011-2015

□ Non-Rural County  
▨ Rural County



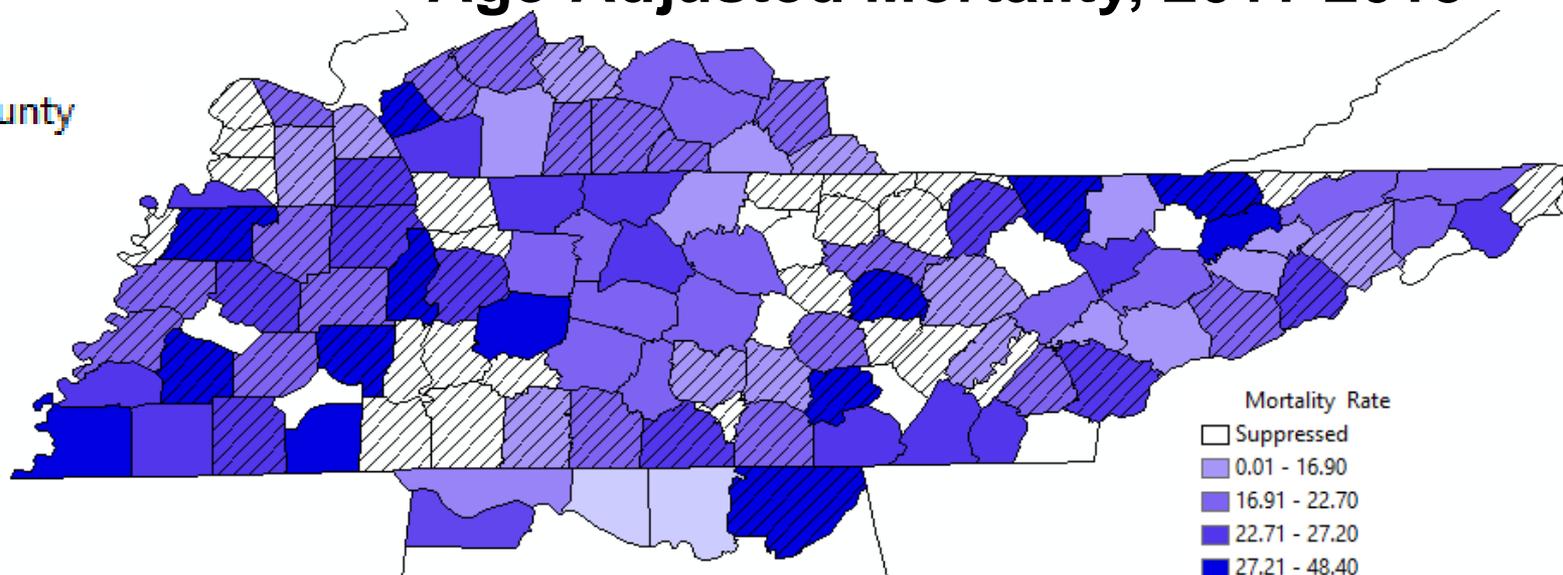
# Age-Adjusted Incidence, 2011-2015

## BREAST CANCER



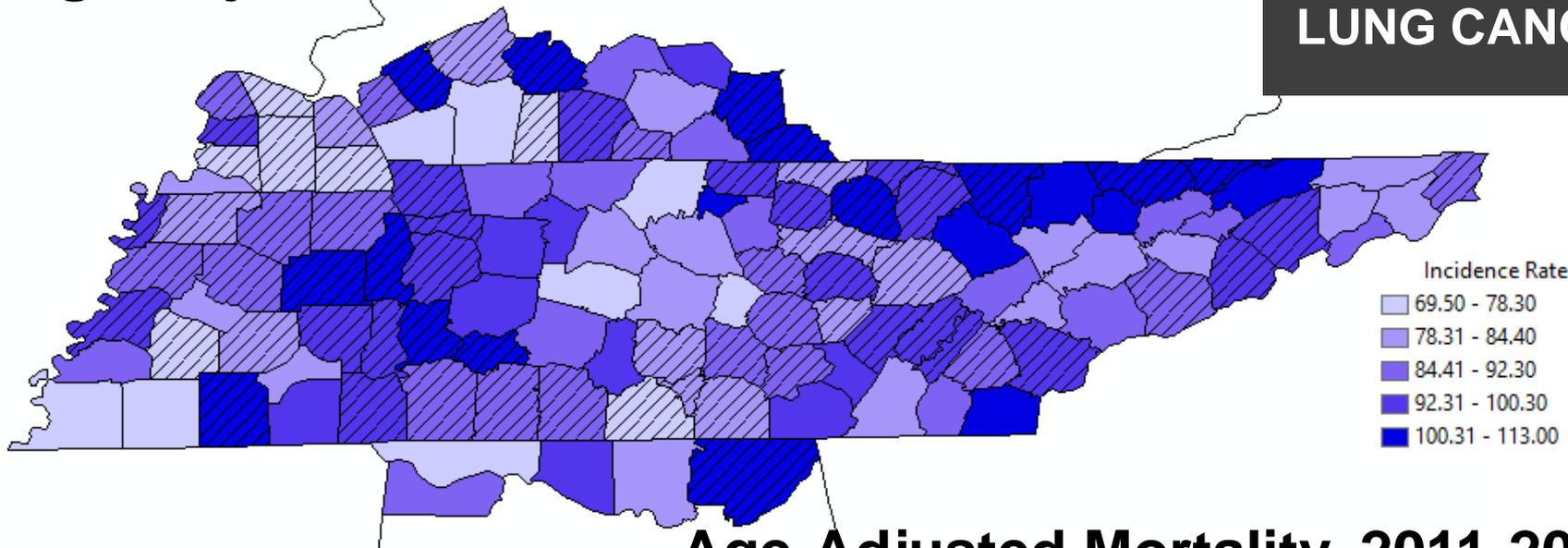
# Age-Adjusted Mortality, 2011-2015

□ Non-Rural County  
▨ Rural County



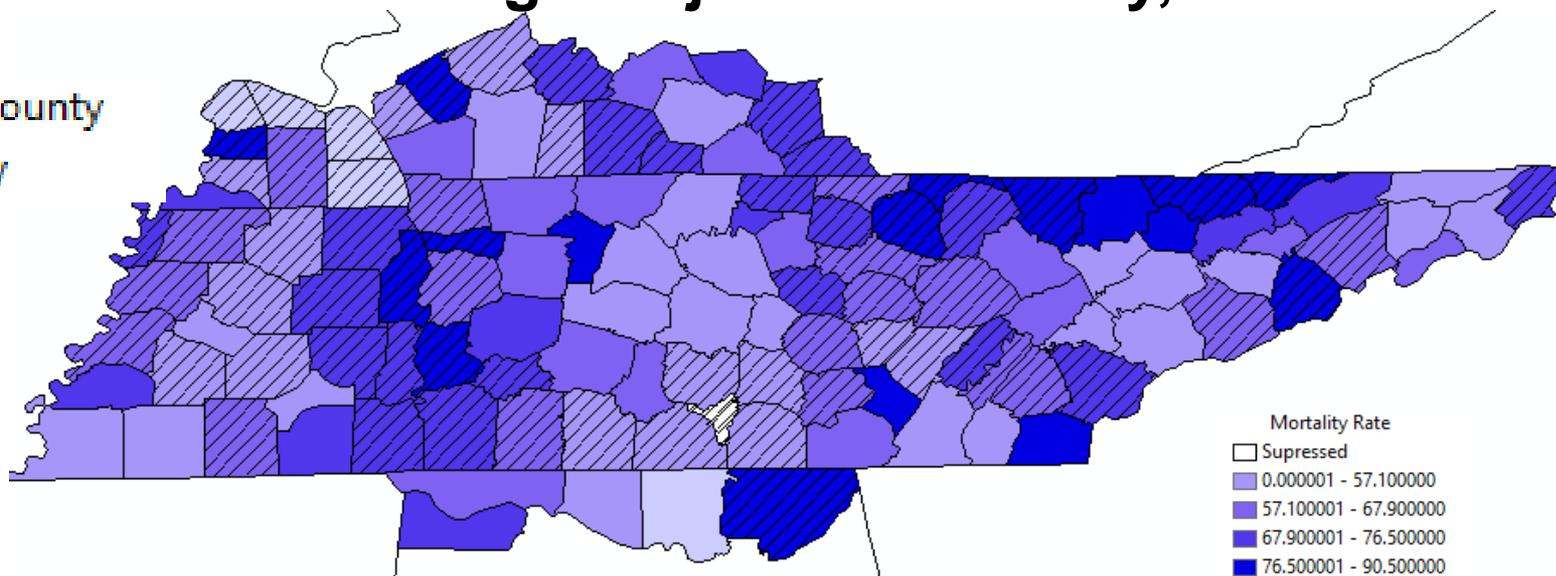
# Age-Adjusted Incidence, 2011-2015

## LUNG CANCER



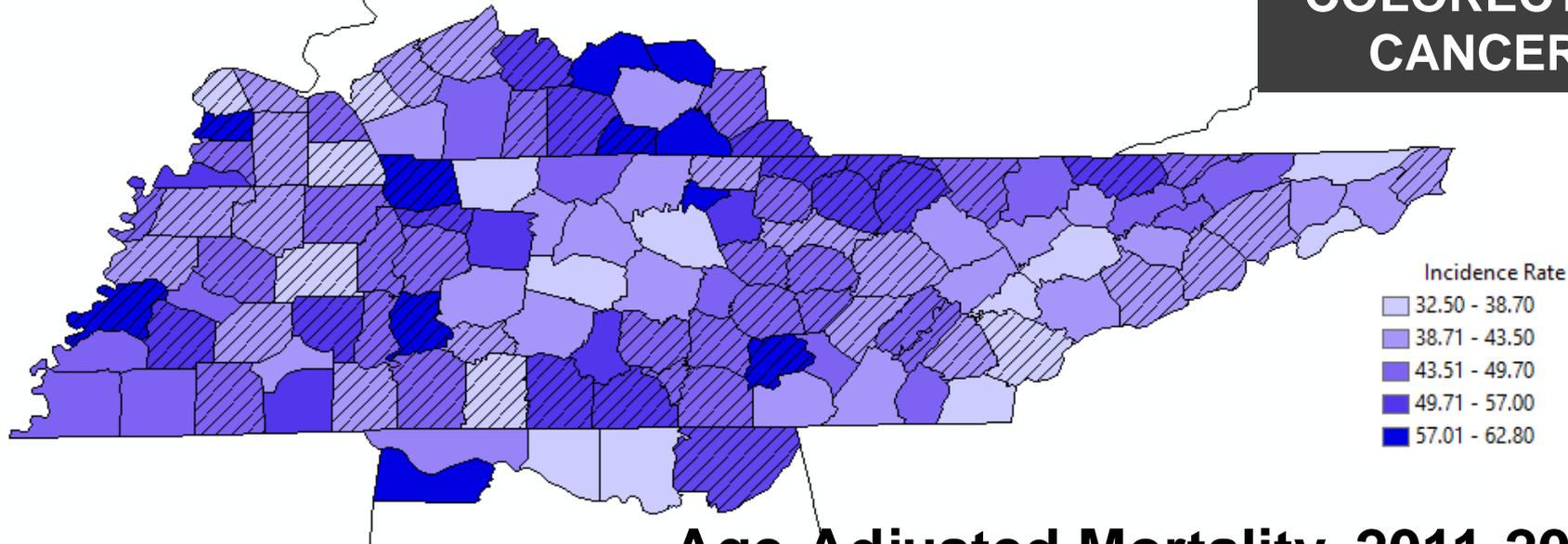
# Age-Adjusted Mortality, 2011-2015

□ Non-Rural County  
▨ Rural County



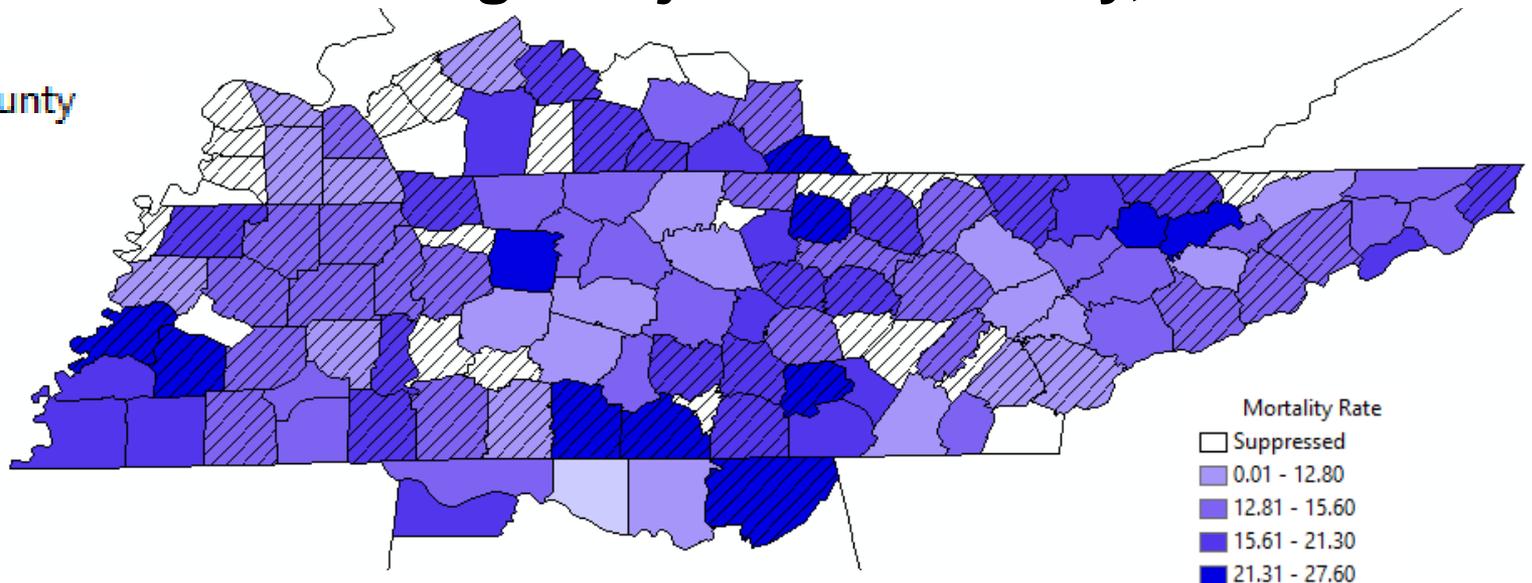
# Age-Adjusted Incidence, 2011-2015

## COLORECTAL CANCER



# Age-Adjusted Mortality, 2011-2015

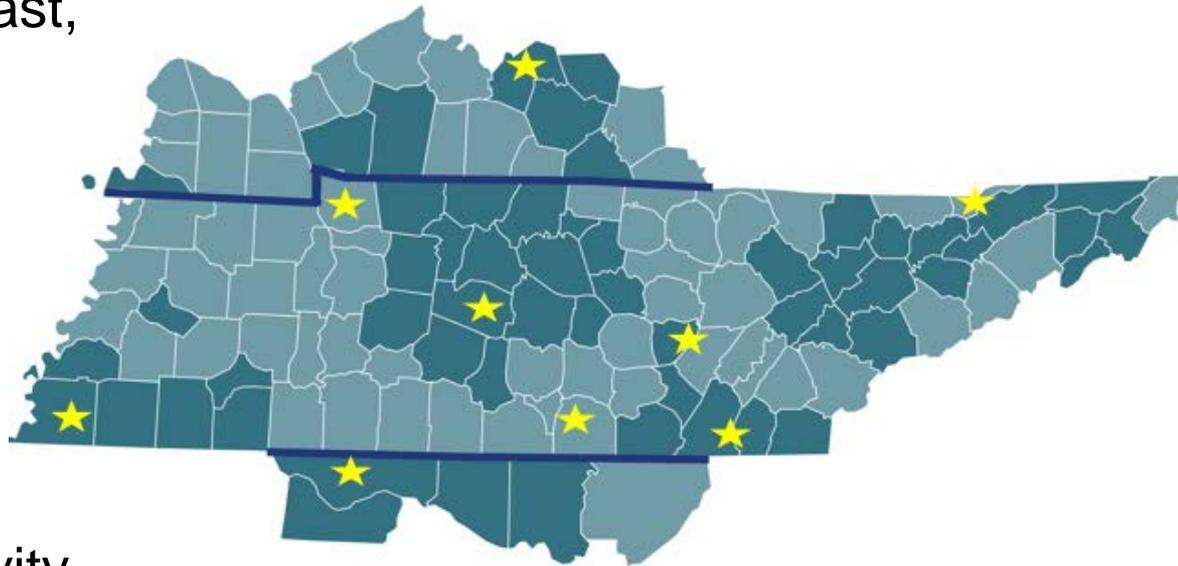
□ Non-Rural County  
▨ Rural County



# COMMUNITY HEALTH NEEDS ASSESSMENTS REVIEW

Rural compared with urban hospital priorities:

- Less likely to identify breast, colorectal, and lung cancer(s), social determinants of health, and HPV vaccine uptake
- More likely to identify access to care, smoking, obesity and physical activity



# Telehealth Services Interest Survey

Give feedback on cancer related services needed in your area



Complete 5 minute survey:

- 1 Online: <http://j.mp/2Rvxudf> or scan QR code
- 2 Or fill out paper survey



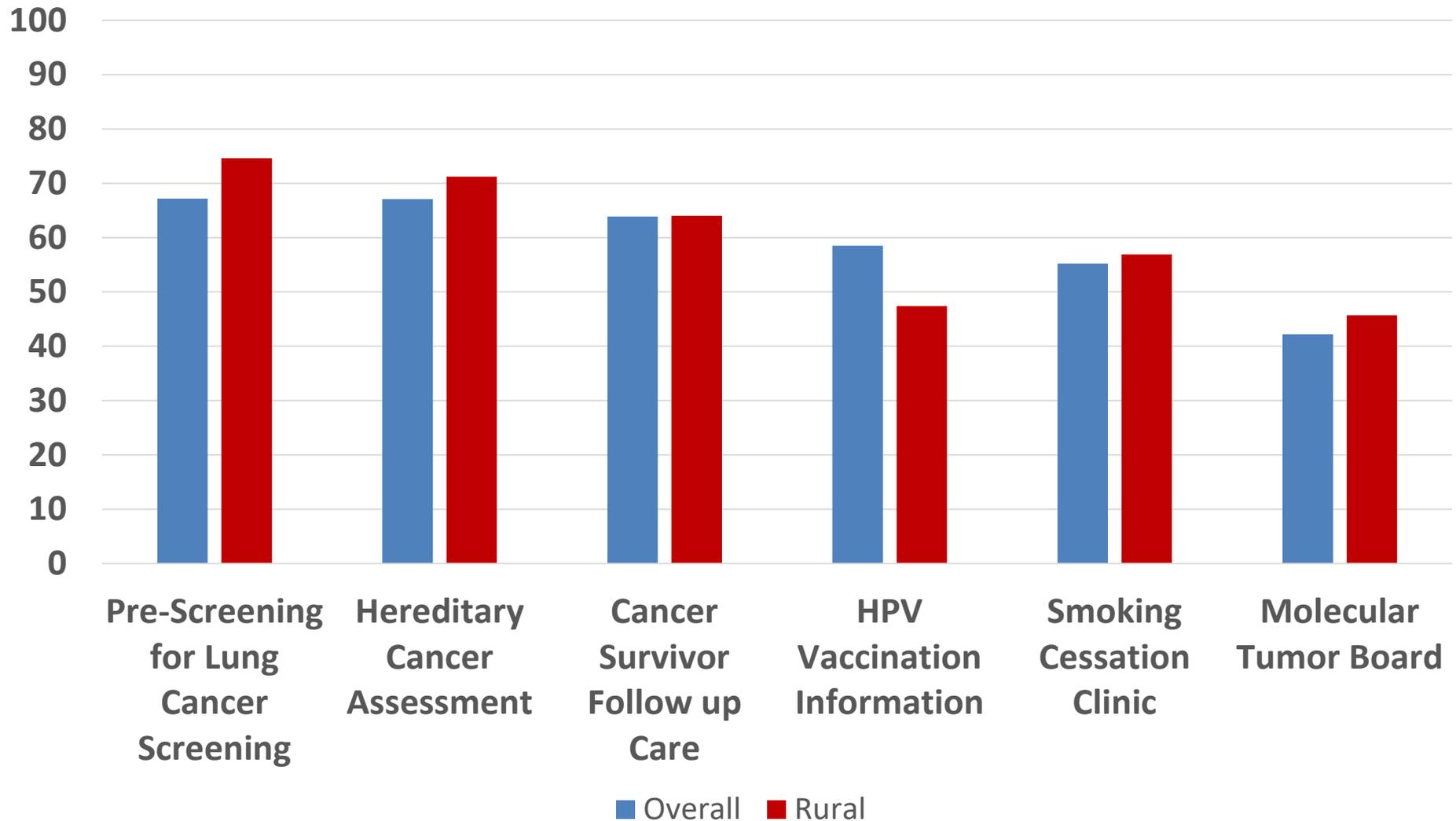
# TELEHEALTH SERVICES DEFINITIONS

- **HPV vaccination Information**: Provide trainings and educational tools to healthcare providers and staff in our rural provider network via web-based resources, telehealth, and educational opportunities.
- **VICC Molecular Tumor Board (MTB)**: A multi-disciplinary team provides guidance on treatment and other issues, including potential germline implications of result. The multidisciplinary team consists of medical oncologists, geneticists, molecular pathologists, and bioinformatics researchers.
- **Smoking Cessation Clinic**: Through self and provider referrals, outpatient counseling and other evidence-based strategies for smoking cessation are provided to patients, and a tobacco cessation care plan is formulated.

# TELEHEALTH SERVICES DEFINITIONS

- **Pre-Screening for Lung Cancer Screening**: Patients may be screened for eligibility and consented through telehealth.
- **Cancer Survivor Follow-up Care Program**: Offers physical, emotional or practical, of post-therapy cancer survivors. Each survivor receives a personalized Cancer Survivorship Care Plan that serves as a roadmap for future health and wellbeing.
- **VICC Hereditary Cancer Clinic**: Offers genetic risk assessment, counseling and testing to individuals with or without cancer interested in learning about their inherited cancer risk. This information may be used to guide screening and treatment.

# High/Very High Interest in Telehealth Services by Rural Classification



# Assessment and Analysis of New Data

## Community Advisory Board:

22 members/2 meetings

- Access to care, education and prevention, social determinants of health, care coordination between oncology and primary care



## Focus Groups (N = 10, 4 in rural counties)

- Education: nutrition, & behavioral changes to decrease cancer risk & enhance health post cancer care
- Barriers to care: fear of screening, education, distance, transportation & insurance
- Support for patients and caregivers > navigation

## Key Informant Interviews (N = 26)

- Echoed CAB and focus groups



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# EXPANDING RURAL HEALTH CANCER CONTROL CAPACITY: FOCUS ON CANCER SURVIVORSHIP

Debra Friedman, MD and Dr. Tuya Pal, MD

# FOCUS ON CANCER SURVIVORSHIP AIMS

*To improve long-term health outcomes for underserved rural cancer survivors by building capacity to deliver risk-adapted guideline-based care focused on the unique needs of cancer survivors*

## Aim 1

Pilot test the implementation of guideline-based survivorship care planning in a rural setting using patient navigation plus telehealth

## Aim 2

Identify the facilitators & barriers to future larger scale implementation of guideline-based survivorship care planning in rural settings



# CANCER SURVIVORSHIP STUDY POPULATION AND PARTNERS

## Study Population

- Vanderbilt Health Affiliated Network (two sites)
- Age >18 year with Stage 0-III cancer successfully treated with curative intent
- Completion of cancer therapy within the previous 12 months

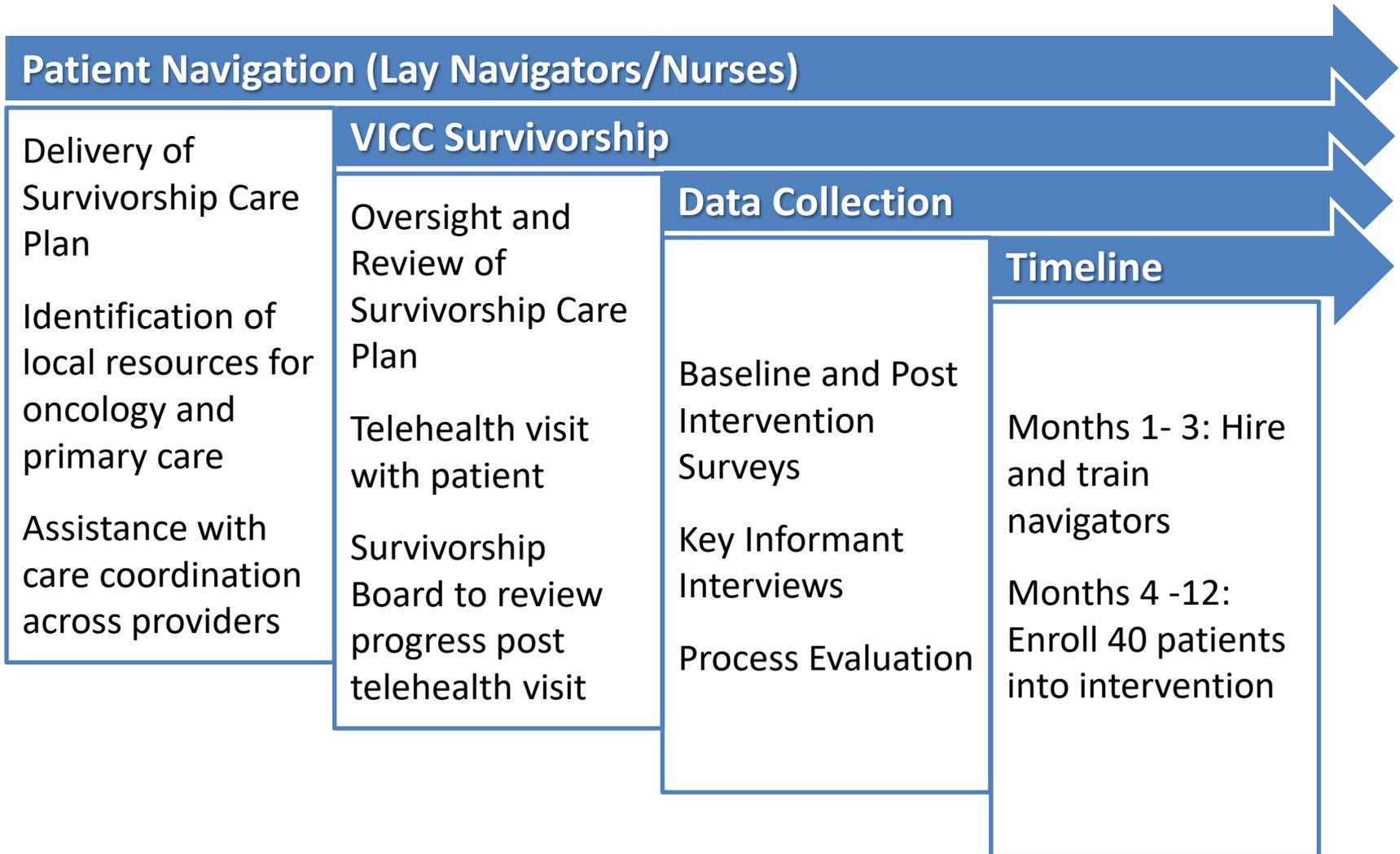
## Partners

**Vanderbilt Health**  
Affiliated Network



Community  
Members

# Approach and Timeline





VANDERBILT-INGRAM CANCER CENTER

# ENHANCING CANCER CARE OF RURAL DWELLERS THROUGH TELEHEALTH AND ENGAGEMENT (ENCORE)

Debra Friedman, MD and Dr. Tuya Pal, MD

# Aims

## Aim 1

Test a multi-level telehealth-based intervention for rural hospitals

### Provider level:

Molecular tumor board



### Patient level:

Supportive care intervention



*Cancer: Thriving and Surviving*

## Aim 2

Study facilitators & barriers to large-scale dissemination & implementation



# Study Population

## Target Population:

Rural communities, including those with persistent poverty

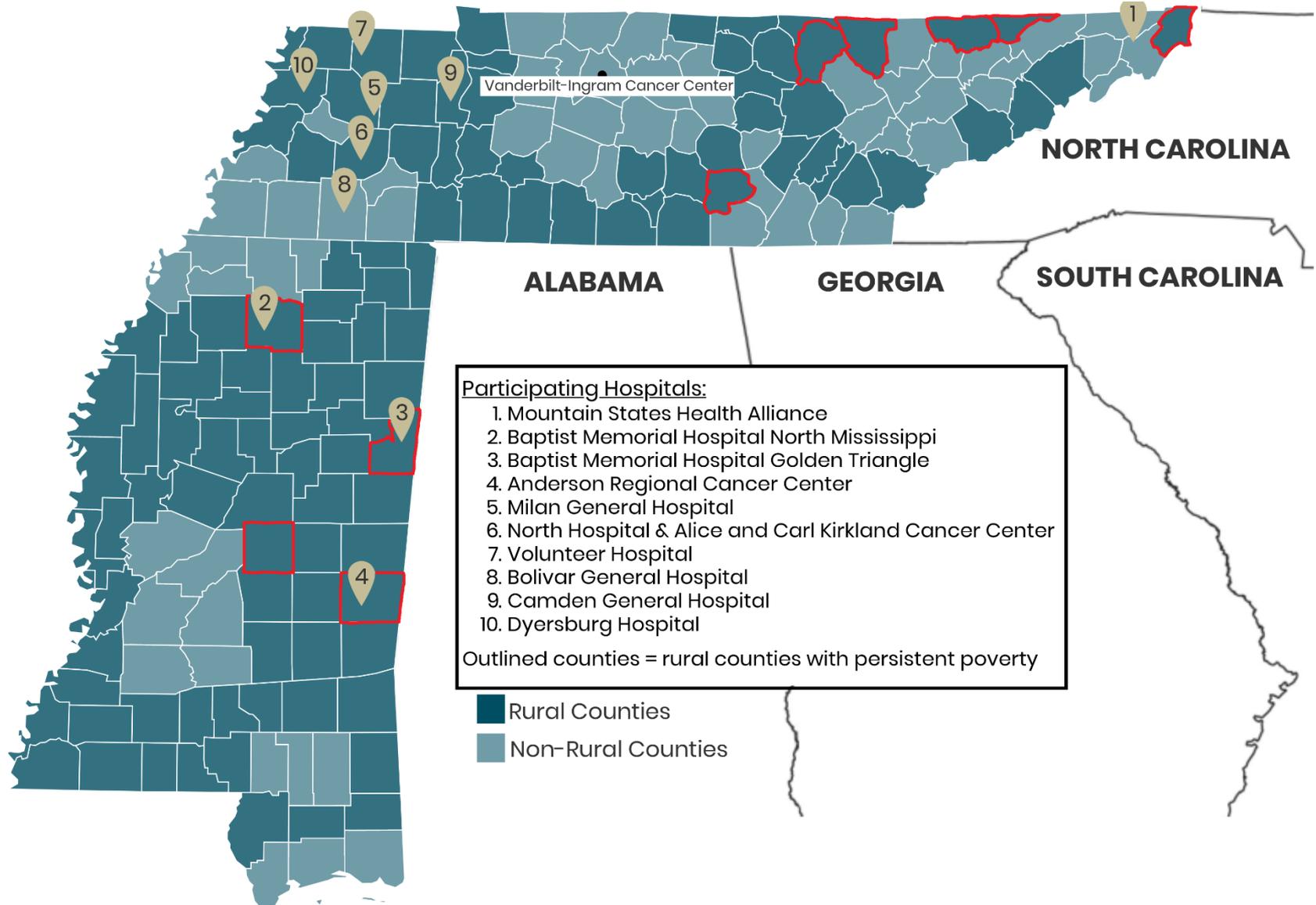
Oncology providers at  
selected practices

Patients of those providers:

- Newly diagnosed or relapsed disease
  - Ages 21 years and older
  - Breast, lung, colorectal, prostate, cervical cancer



# Study Sites Under Consideration



## Aim 1

# Outcomes

## Provider

Use of and adherence to Molecular Tumor Board Recommendations



## Patient

### Primary:

- Adherence to oncology treatment plan

### Secondary:

- Psychosocial and functional wellbeing
- Patient-provider communication
- Progression-free survival

## Aim 1

# Outcome Measurement

Molecular Tumor Board  
provider and patient  
questionnaires  
for treatment  
decision

Medical records/  
self report  
for treatment  
adherence

Communication  
Assessment  
Tool for  
patient-provider  
communication

Distress thermometer,  
Functional Assessment of  
Cancer Therapy, MD  
Anderson Symptom  
Inventory for psychosocial  
and functional outcome data

## Aim 2

# Implementation Questions

Potential barriers/  
facilitators to “real-world”  
implementation in  
rural areas?

Potential modifications to  
maximize implementation?

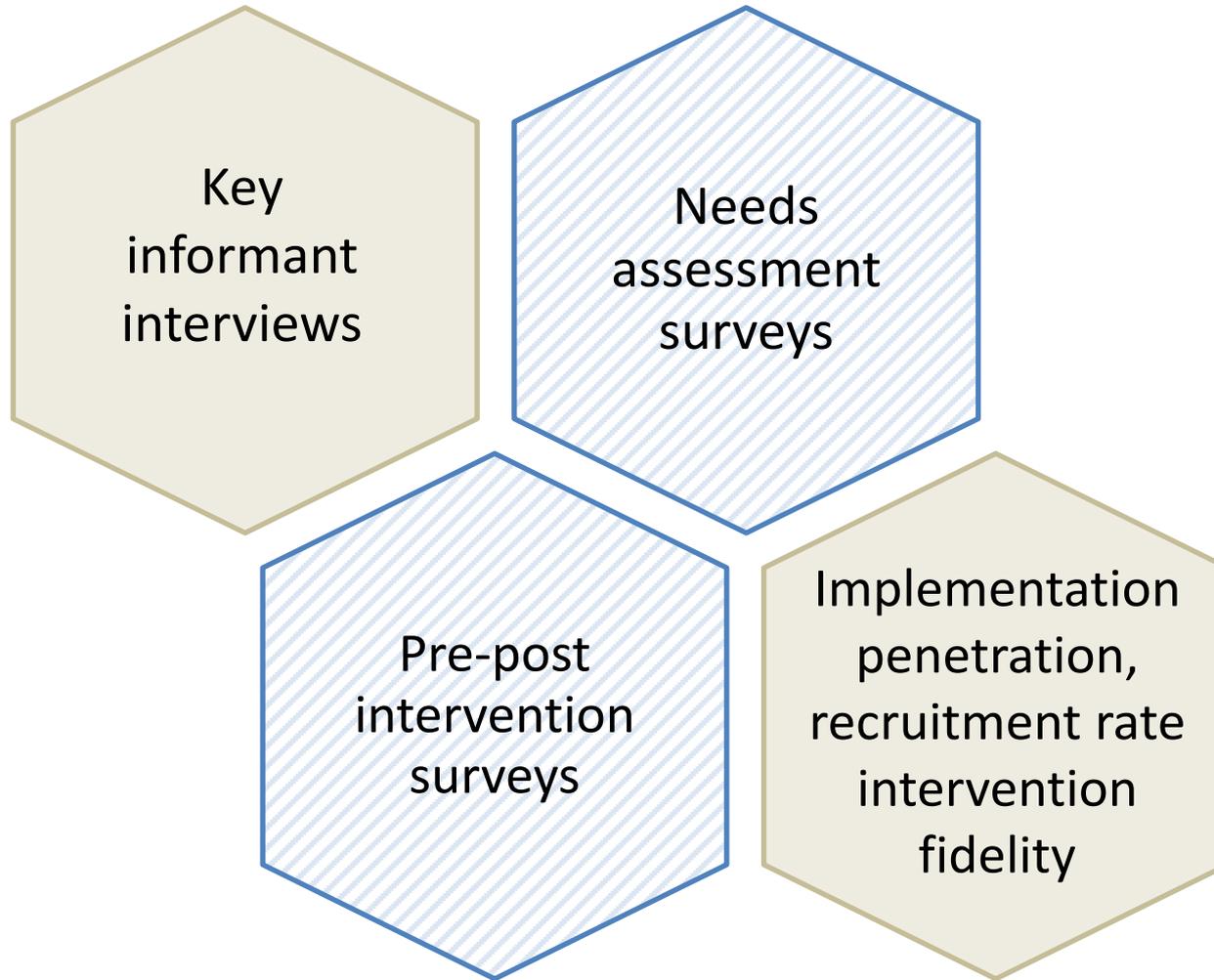
Problems associated with intervention delivery and translation to  
real-world implementation in other rural settings?

Promising potential  
implementation strategies?

Evaluation of process  
evaluation data to explain  
or provide context  
for outcome findings?

## Aim 2

# Outcome Measurement



# Current Status

Final study site determinations

Study personnel

Study logistics



# KEY POINTS

Differences exist in cancer incidence and mortality among rural counties

Rural communities are eager for increased services for their population of at risk and cancer patients

Partnerships must be bidirectional and take time to cultivate

New initiatives must be thoughtful and provide clear benefit for the community



**Cancer  
is the Competition!**

**Thank you for your attention!**

**Questions?**

# SUPPLEMENTAL SLIDES

# BACKGROUND: RURAL HEALTH

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20% of Americans live in rural areas

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Elevated cancer incidence and/or mortality in rural compared to urban communities

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Rural counties have amongst the highest rates of poverty

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Challenges: Cancer treatment, supportive care services, transportation, and finances

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Providers have limited access to comprehensive care

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# Multi-level Environmental Scan: Assessment and Analysis of Existing Data

Incidence and Mortality Data

Focus Groups

Key Informant Interviews

Community Health Needs Assessment

# DEVELOPMENT OF RURAL HEALTH PROVIDER NETWORK

## Establish a Provider Network

Collaboration with rural health offices in Departments of Health, state hospital and primary care associations.

## Telehealth

Pilot underway for hereditary cancer and survivorship



