

## IC – Intracranial Infection (Brain Abscess, Subdural or Epidural Infection, Encephalitis)

(Revised January 1, 2019)

**DEFINITION:** Intracranial infection must meet at least **ONE** □ of the following criteria:

□ **Criterion 1:** (Revised January 1, 2019)

- Patient has organism(s) identified from **ONE** △ of the following:

- △ brain tissue<sup>#</sup>
- △ dura<sup>#</sup>

□ **Criterion 2:** (Revised January 1, 2019)

- Patient has **ONE** △ of the following:

- △ abscess seen during **ONE** ◇ of the following:
  - ◇ gross anatomic exam
  - ◇ histopathologic exam
- △ evidence of intracranial infection on **ONE** ◇ of the following:
  - ◇ gross anatomic exam
  - ◇ histopathologic exam

□ **Criterion 3:** (Revised January 1, 2019)

- Patient has at least **TWO** △ of the following signs or symptoms:

- △ headache\*
- △ dizziness\*
- △ fever (>38.0°C)
- △ Localizing neurologic signs\*
- △ changing level of consciousness\*
- △ confusion\*

**AND**

- Patient has at least **ONE** △ of the following:

- △ organism(s) seen on microscopic examination of **ONE** ◇ of the following:
  - ◇ brain tissue obtained during **ONE** + of the following:
    - + needle aspiration
    - + invasive procedure
    - + autopsy

**CENTRAL NERVOUS SYSTEM (CNS)**

◇ abscess tissue obtained by **ONE +** of the following:

- + needle aspiration
- + invasive procedure
- + autopsy

△ imaging test evidence suggestive of infection (for example ultrasound, CT scan, MRI, radionuclide brain scan, or arteriogram)^

△ Choose **ONE** ◇ of the following:

- ◇ diagnostic single antibody titer (IgM)
- ◇ 4-fold increase in paired sera (IgG) for organism

□ **Criterion 4:** *(Revised January 1, 2019)*

○ Patient ≤1 year of age has at least **TWO** △ of the following signs or symptoms:

- △ fever (>38.0°C)
- △ hypothermia (<36.0°C)
- △ apnea\*
- △ bradycardia\*
- △ localizing neurologic signs\*
- △ changing level of consciousness\* (for example, irritability, poor feeding, lethargy)

**AND**

○ Patient has at least **ONE** △ of the following:

△ organism(s) seen on microscopic examination of **ONE** ◇ of the following:

◇ brain tissue obtained during **ONE +** of the following:

- + needle aspiration
- + invasive procedure
- + autopsy

◇ abscess tissue obtained by **ONE +** of the following:

- + needle aspiration
- + invasive procedure
- + autopsy

△ imaging test evidence suggestive of infection (for example ultrasound, CT scan, MRI, radionuclide brain scan, or arteriogram)^



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**CENTRAL NERVOUS SYSTEM (CNS)**

△ choose **ONE** ◇ of the following:

- ◇ diagnostic single antibody titer (IgM)
- ◇ 4-fold increase in paired sera (IgG) for organism

\* with no other recognized cause

# *by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing (ASC/AST)).*

^ *which if equivocal is supported by clinical correlation, specifically, physician documentation or antimicrobial treatment for intracranial infection.*

**REPORTING INSTRUCTIONS: (Revised January 1, 2019)**

- Report as MEN if meningitis (MEN) and encephalitis (IC) are present together.
- Report as IC if meningitis (MEN) and a brain abscess (IC) are present together after operation.
- Report as SA if meningitis (MEN) and spinal abscess/infection (SA) are present together.

**CENTRAL NERVOUS SYSTEM (CNS)****MEN – Meningitis or Ventriculitis***(Revised January 1, 2019)*

**DEFINITION:** Meningitis or ventriculitis must meet at least **ONE** □ of the following criteria:

□ **Criterion 1:** *(Revised January 1, 2019)*

- Patient has organism(s) identified from cerebrospinal fluid (CSF)<sup>#</sup>

□ **Criterion 2:** *(Revised January 1, 2019)*

- Patient has at least **TWO** △ of the following signs or symptoms:

- △ fever (>38.0°C) or headache<sup>&</sup>

- △ meningeal sign(s)\*

- △ cranial nerve sign(s)\*

<sup>&</sup> *this first element may not be used to meet the two required elements*

**AND**

- Patient has at least **ONE** △ of the following:

- △ **ALL** ◇ of the following found in the CSF (per reporting laboratory's reference range):

- ◇ increased white cells

- ◇ elevated protein

- ◇ decreased glucose

- △ organism(s) seen on Gram stain of CSF

- △ organism(s) identified from blood<sup>#</sup>

- △ choose **ANY** ◇ of the following:

- ◇ diagnostic single antibody titer (IgM) for organism

- ◇ 4-fold increase in paired sera (IgG) for organism

□ **Criterion 3:** *(Revised January 1, 2019)*

- Patient ≤1 year of age has at least **TWO** △ of the following elements:

- △ fever (>38.0°C); hypothermia (<36.0°C); apnea\*; bradycardia\*; or irritability\*<sup>&</sup>

- △ meningeal signs\*

- △ cranial nerve signs\*

<sup>&</sup> *this element may not be used to meet the two required elements*

**AND**

**CENTRAL NERVOUS SYSTEM (CNS)**

- Patient has at least **ONE** ▲ of the following:
  - ▲ **ALL** ◇ of the following found in CSF (per reporting laboratory's reference range):
    - ◇ increased white cells
    - ◇ elevated protein
    - ◇ decreased glucose
  - ▲ organism(s) seen on Gram stain of CSF
  - ▲ organism(s) identified from blood<sup>#</sup>
  - ▲ choose **ONE** ◇ of the following:
    - ◇ diagnostic single antibody titer (IgM) for organism
    - ◇ 4-fold increase in paired sera (IgG) for organism


*\* with no other recognized cause*

*<sup>#</sup> by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing (ASC/AST)).*







**REPORTING INSTRUCTIONS:** (Revised January 1, 2019)

- Report CSF shunt infection as SSI-MEN if it occurs within 90 days of placement; if later or after manipulation/access, it is considered CNS-MEN but is not reportable as an SSI.
- Report MEN if meningitis (MEN) and encephalitis (IC) are present together.
- Report IC if meningitis (MEN) and brain abscess (IC) are present together after an operation.
- Report SA if meningitis (MEN) and spinal abscess/infection (SA) are present together.










**CENTRAL NERVOUS SYSTEM (CNS)****SA – Spinal Abscess/infection (spinal abscess, spinal subdural or epidural infection)***(Revised January 1, 2019)*

**Spinal abscess/infection** must meet at least **ONE**  of the following criteria:







 **Criterion 1:** *(Revised January 1, 2019)*

- Patient has organism(s) identified from abscess in **ONE**  of the following:
  -  spinal epidural space<sup>#</sup>
  -  subdural space<sup>#</sup>
- Patient has organism(s) identified from purulent material found in **ONE**  of the following:
  -  spinal epidural space<sup>#</sup>
  -  subdural space<sup>#</sup>



 **Criterion 2:** *(Revised January 1, 2019)*

- Patient has **ONE**  of the following:
  -  abscess seen during **ONE**  of the following:
    -  gross anatomic exam
    -  histopathologic exam
  -  other evidence of infection seen during **ONE**  of the following:
    -  gross anatomic exam
    -  histopathologic exam

 **Criterion 3:** *(Revised January 1, 2019)*

- Patient has at least **ONE**  of the following localized signs or symptoms:
  -  fever (>38.0°C)
  -  back pain\* or tenderness\*
  -  radiculitis\*
  -  paraparesis\*
  -  paraplegia\*

**AND**

- Patient has at least **ONE**  of the following:
  -  organism(s) identified from blood<sup>#</sup> and imaging test evidence of spinal abscess/infection<sup>^</sup>



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**CENTRAL NERVOUS SYSTEM (CNS)**

△ imaging test evidence of a spinal abscess/infection (for example myelography, ultrasound, CT scan, MRI, or other scans [gallium, technetium, etc.])^

# *by a culture or non-culture based microbiologic testing method which is performed for purposes of clinical diagnosis or treatment (for example, not Active Surveillance Culture/Testing (ASC/AST)).*

^ *which if equivocal is supported by clinical correlation, specifically, physician documentation of antimicrobial treatment for spinal abscess/infection.)*

\* *with no other recognized cause*

**REPORTING INSTRUCTIONS:** (Revised January 1, 2019)

- Report as SA if meningitis (MEN) and spinal abscess/infection (SA) are present together after operation