

Condensed Algorithm for Identifying Central Line Associated Bloodstream Infection Using NHSN Criteria, 2020 Revision

Positive Blood Culture(s) or non-culture based microbiologic testing (Karius test)* with central venous catheter that had had been in place >2 calendar days, AND was either:

1. Still present on date of event, OR
2. Removed day before date of event

Matching organism recovered from alternate site culture?

- Blood contains at least 1 matching organism **AND**
- Blood culture collected between (matching culture date - 3) and (matching culture date + 13) **AND**
- Specific infection criteria is met utilizing matching organism culture

YES

**2° BSI.
Not a
CLABSI**

NO

ECMO or VAD use ≥ 2 days including blood cx collection date? Documentation of self-injection in notes? EB or MSBP? Matching cx from pus at another vascular access site? Group B strep from blood during first 6 days of life?

NO

Recognized Pathogen?

YES

**CLABSI
LCBI 1**

NO

**Alternate infection site identified?

Explore less common/more complicated options:
Burn, Disc, Endocarditis, Meningitis, Other Reproductive, Omphalitis, Urinary System Infection
[NHSN Infection Criteria](#)

**Alternate infection site identified?

YES

**NO
to all**

**YES
to any**

NO

Common skin commensal?

NO

x 1 culture?

YES

**Not a
CLABSI**

NO

≥ 2 cx w/ same organism?
AND
Fever >38°, chills or hypotension, hypothermia <36°C#, apnea#, or bradycardia#

YES

**Alternate infection site identified?

NO

**CLABSI
LCBI 2, 3**

MBI Organism x1 or Viridans Streptococcus x2 AND meets LCBI 2 or 3?

YES

- Stem cell transplant ≤ 1 year previous **AND**
 - Grade III or IV GI GVHD **OR**
 - ≥ 1 liter diarrhea in ≤ 24 hrs w/ onset ≤ 7 days prior to blood cx collection date

OR

- WBC or ANC < 500 cells/mm³ on 2 days from blood collect date ± 3.

YES

**Alternate infection site identified?

CLABSI

Patients ≤ 1 year of age

**Most common alternate sources of bacteremia

- Each blood culture contains **AT LEAST ONE eligible** organism for the criteria met, if applicable
- All criteria for site-specific infection, including collection of blood culture, occur within a 7-day window defined by the first date on which any criterion is met.

Potential GI Source

- MBI Organism **AND**
- Evidence of infection on histopathology or direct examination (i.e. visualization during surgery) **OR**
- ≥ 2 symptoms (fever > 38.0, nausea, vomiting, pain/tenderness, other less common sx) **AND**
- Imaging test evidence of GI infection

Potential Pneumonia*

- Chest imaging w/ new or progressive and persistent infiltrates, consolidation, cavitation or pneumatoceles in pt ≤ 1 year old **AND**
 - Fever, leukopenia or AMS in pt ≥ 70 years old **AND**
 - New purulent sputum, new/worsening cough/dyspnea/tachyynia, rales/bronchial breath sounds, or worsening gas exchange
- *Enterococcus, yeast, S.epi ineligible

Potential Ortho Related Sources

- BONE:** ≥ 2 sx*: fever, swelling, pain, heat, drainage **AND** imaging test evidence of infection
 - JOINT:** ≥ 2 sx*: swelling, pain, heat, evidence of effusion, limitation of motion
 - SPINAL ABSCESS:** ≥ 1 sx*: fever, back pain, radiculitis, paraparesis or paraplegia **AND** imaging test evidence of spinal abscess
- *w/ no other recognized cause

NOTE: BSI may not be attributed to SST or SSI without a matching culture.

*Karius test is excluded when a blood culture is collected within NHSN window (1 day before or 2 days after).