INDICATIONS FOR INITIAL BLOOD CULTURES (BCx) in ADULTS*

*Excludes severely immunosuppressed patients (neutropenia, hematopoietic stem cell transplant, solid organ transplant)

BCx being considered for evaluation of infection

CLINICALLY EVALUATE PATIENT
Is patient clinically unstable with new onset sepsis/septic shock?

NO

BCx NOT RECOMMENDED

YES

Have blood cultures been performed within last 48 hours?

NO

BCx NOT RECOMMENDED

YES

BCx RECOMMENDED
Draw 2 peripheral sets

Obtain BCx based on likely source of infection and pretest probability of bacteremia

Low Probability (<10%)
- Isolated fever/leukocytosis without other findings
- Non-severe cellulitis/SSTI
- Lower UTI (e.g., cystitis, prostatitis)
- Non-severe CAP, aspiration pneumonitis
- Non-severe diabetes-related foot infection or non-vertebral osteomyelitis
- Fever within 48 hours after surgery
- Uncomplicated intra-abdominal infection (cholecystitis, diverticulitis, pancreatitis)

Intermediate Probability (≥10% and <50%)
- Acute pyelonephritis
- Severe CAP
- VAP
- Cholangitis
- Severe cellulitis or cellulitis in patients with comorbidities†
- Rigors

High Probability (>50%)
- Infective endocarditis/endovascular infection‡
- Catheter-associated bloodstream infection††
- Vertebral discitis/osteomyelitis, epidural abscess
- Meningitis
- Native joint septic arthritis

BCx NOT RECOMMENDED

BCx RECOMMENDED
Draw 2 peripheral sets
Algorithm of indications for blood cultures for non-severely immunocompromised patients. The algorithm is not a substitute for clinical judgment.

† Severe Cellulitis and Cellulitis in patients with comorbidities: ICU level of care, necrotizing soft tissue infection, severe immunocompromise, end-stage renal disease, end-stage liver disease

‡ Confirmed or suspected endovascular infection includes:
  • Clinical evidence for endovascular infection such as septic thrombophlebitis, infected endovascular thrombi, implantable cardioverter defibrillator (ICD)/pacemaker lead infections, and vascular graft infections
  • High-risk patient for endovascular infection including ICD/pacemaker, vascular graft, prosthetic valves and prosthetic material used for cardiac valve repair, history of infective endocarditis, valvulopathy in heart transplant recipient, unrepaired congenital heart disease, repaired congenital heart disease with residual shunt or valvular regurgitation, or within the first 6 months post-repair.

†† In setting of suspected central line infection, one blood culture should be obtained peripherally, then one culture should be obtained from the central line.

**Abbreviations:** BCx, blood culture; CAP, community-acquired pneumonia; SSTI: skin and soft tissue infection; UTI, urinary tract infection; VAP, ventilator-associated pneumonia.