

Term	Definitions and comments
Disease definition	
<i>Staphylococcus aureus</i> bacteremia (SAB)	The presence of <i>S. aureus</i> in the bloodstream, due to an infectious process. <i>S. aureus</i> is rarely a blood culture contaminant.
Bacteremic <i>Staphylococcus (S.) aureus</i> infection	Most accurate description of the disease.
<i>S. aureus</i> bloodstream infection (SAB, SABSI, SABI)	Common shorthand for bacteremic <i>S. aureus</i> infection.
Patient with SAB	Any patient with ≥ 1 positive blood culture for <i>S. aureus</i> due to infection.
Start of infection	
Onset of bacteremia	The timepoint when the first blood culture positive with <i>S. aureus</i> was drawn (recognizing that bacteremia may have been present before its collection).
Clinical onset of SAB	The time point when the first clinical symptoms caused by SAB began.
Hospital-onset SAB	<p>Onset of bacteremia (first positive blood culture) at ≥ 48 hours after hospital admission.</p> <p>Delayed recognition of community-onset infection may be misclassified as hospital-onset (e.g., no blood cultures drawn until day four of the hospitalization).</p>
Community-onset SAB	<p>Onset of bacteremia (first positive blood culture) at < 48 hours of admission or before hospitalization.</p> <p>Community-acquired SAB is an alternative term, but its use is discouraged. It may be used to differentiate between "community-onset SAB without healthcare-association" (i.e., community-acquired SAB) and "community-onset with healthcare-association".</p>
Community-onset SAB with healthcare association	<p>Community-onset SAB with recent healthcare exposure (e.g., attending dialysis clinic, intravenous therapy, wound care, recent hospitalization, nursing home).</p> <p>This patient population is exposed to risks associated with healthcare settings (e.g., venous catheters).</p>
Site of infection	
Portal of entry	<p>The site where <i>S. aureus</i> first enters the body.</p> <p>An infection is often established at the site of barrier crossing, e.g., a skin and soft tissue infection, a respiratory infection, and, less frequently, a urinary tract infection. However, infection may or may not be present at the portal of entry, and in many cases, the portal of entry is unknown. In some cases, direct inoculation of deeper tissues occurs (e.g., trauma, surgery).</p>

Infective focus	Body site or device with active infection. Several infective foci can be present. Alternative: “focus of infection”.
Source of infection	Sometimes used interchangeably with “infective focus” but sometimes used as a synonym for “portal of entry”. These other terms are generally preferred due to greater precision.
Deep-seated focus of infection	Serious complication of SAB that includes a non-cutaneous and non-intravenous line-associated site of <i>S. aureus</i> infection of deep tissues or infection in sites or organs (e.g., endocarditis, osteomyelitis, splenic abscess, psoas abscess, septic thrombophlebitis, cardiac device-associated infection).
Embolic event	Embolic events are a result of dislodgement and travel of fragments of potentially infected material (e.g., thrombus) from a primary infection site through the bloodstream to distant sites, causing infarction or secondary sites of infection. Some examples may include septic embolic to the lungs, cerebral emboli, splenic or renal infarcts and peripheral manifestations such as Janeway lesions and splinter hemorrhages.
Metastatic seeding	The process of spreading through the bloodstream to form distant foci of infection.
Metastatic focus	Infectious focus that has arisen through metastatic seeding. The term implies that there is another primary site or portal of entry (known or unknown) distinct from the metastatic focus from which bacteria have seeded. This term is often used when several foci are present and a sequence of events is likely (e.g., endocarditis with splenic metastatic foci). “Secondary focus” is an alternative term.
Primary focus	Original site of infection from which bacteria have seeded. In practice, the sequence of events cannot always be determined, and the primary focus may not be known.
Contiguous spread	Extension of the infection from an infective focus to adjacent tissues.
Superficial focus of infection	Localized, surface-level infection (e.g., skin-soft-tissue infections, cutaneous abscesses, or catheter-related infections).
Dominant focus	Focus requiring the longest or most complex treatment when multiple infective foci are present.
Classification	
Primary bacteremia	A microbiologically documented bloodstream infection without a known source (including an intravenous or arterial line infection). The term is most often used when data on the infective focus is not collected, mainly in epidemiological studies. The use of the term is discouraged outside of epidemiological studies.
Secondary bacteremia	A local infection leading to bacteremia (e.g., bacteremic skin and soft tissue infection).

	Easily confused with secondary focus; therefore, use is discouraged.
Complicated SAB	SAB with infection of deep tissues or organs (e.g., endocarditis and other endovascular structures, osteomyelitis, septic arthritis, myositis, kidney, deep tissue planes), relapse, or infection-related mortality. Definitions vary, and the use of this term is discouraged.
Uncomplicated SAB	Superficial/removable source with no deep-seated infection, relapse, or infection-related mortality. Definitions vary, and the use of this term is discouraged.
Low-risk SAB	SAB with no risk factors or signs of deep tissues or metastatic foci of infection (including endocarditis) or relapse.
Increased-risk SAB	SAB with at least one risk factor for infection of deep tissues, metastatic foci, or relapse (see Consensus Statement 1).
Predisposing heart valve conditions	Previous history of endocarditis, prosthetic valve, previous valve repair, congenital heart disease, more than mild regurgitation or stenosis of any etiology, endovascular intracardiac implantable electronic device, hypertrophic obstructive cardiomyopathy. Refer to 2023 Duke-ISCVID criteria for additional details [20].
Disease Course	
Central venous catheter-related infection	SAB that arises from, or is directly associated with, a central venous catheter. Diagnosis is usually posed when the same <i>S. aureus</i> isolate (based on antibiotic susceptibility) is identified in one of the following scenarios: <ul style="list-style-type: none"> • Present in both a peripheral blood culture and the catheter tip culture, or • Present in both a blood culture and a pus or skin swab from the catheter exit site, or • Present in two initial blood cultures—one drawn from a peripheral site and the other through the catheter—with a differential time to positivity (DTTP) of at least 120 minutes (i.e., the catheter-drawn culture becomes positive at least 120 minutes earlier than the peripheral culture), and • No other plausible source of infection is identified. Strong clinical suspicion for catheter-related infection: Cultures not obtained, but signs such as pus, redness, pain at exit/tunneled site, or chills during infusion, with no other plausible source.
Central-line associated bloodstream infection (CLABSI)	Laboratory confirmed bloodstream infection that develops in a patient with a central line (>48h in place) and the infection is not related to another site of infection. The term CLABSI was designed primarily for surveillance purposes and should not be used to classify clinical diagnoses of SAB. The term CLABSI is non-specific, and surveillance criteria do not clearly characterize the role of the CVC. Thus, patients

	identified as having a CLABSI may not meet clinical criteria for CVC-related infections.
Source control	<p>An intervention to eliminate or control a focus of <i>S. aureus</i> infection that would be unlikely to respond to antibiotic therapy alone and would increase risk for ongoing sepsis, spread of infection, or relapse.</p> <p>Examples include removal of central line or implanted device, incision and drainage of a skin abscess, interventional drainage of a liver abscess, surgical debridement of an epidural abscess, amputation of an infected diabetic foot, and surgical valve replacement for a perivalvular abscess.</p>
Recurrence	Denotes relapse or re-infection.
Relapse or relapsed bacteremia	<p>Return of <i>S. aureus</i> infection due to unresolved initial infection.</p> <p>Often defined as occurring after completion of a course of therapy. Most relapses occur within 90 days after index infection.</p>
Re-infection	<p>Another episode of <i>S. aureus</i> infection (bacteremic or not) independent from the initial episode of the infection.</p> <p>It can be distinguished from relapse by whole-genome sequencing or other genetic markers when these differ between the two isolates. However, same-strain re-infections can occur, e.g., because of colonization. Most recurrences occur more than 90 days after the index infection.</p>
Diagnostics	
Blood culture set	One aerobic and one anaerobic blood culture bottle from a single draw.
Follow-up blood culture	Blood culture drawn after an initial positive blood culture to monitor the duration of blood culture positivity and document the timing of blood culture clearance.
Blood culture clearance	<p>Day of sampling of the first negative blood culture after which there are no positive blood cultures with <i>S. aureus</i>.</p> <p>The date of blood culture clearance is typically used as a start date for counting the duration of antibiotic therapy (see Consensus Statement 2 for additional details).</p>
Time-to-positivity (TTP)	Incubation time of a blood culture for sufficient growth to be detected as “positive” in the blood culture instrument. When several bottles (e.g., aerobic and anaerobic blood culture bottles) are incubated, the shortest time is considered the TTP. TTP is used to calculate the differential time-to-positivity (DTTP) which is used to define CVC-related bloodstream infections (see above).
Skip phenomenon	Intermittent blood culture positivity (i.e., negative follow-up blood cultures followed by positive).

	The consecutive blood cultures need to be closely spaced and early in the course of infection to distinguish from relapse (see Consensus Statement 2).
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