

Vancomycin Use Evaluation by Indication

Likely Appropriate

- Culture-documented MRSA infection (susceptible to vancomycin)
- Severe beta-lactam allergy and Gram-positive coverage needed
- Suspected enterococcal infection when resistant to ampicillin but susceptible to vancomycin
- Empiric coverage for septic shock (initial 48 hours)
- Empiric coverage for GPC bacteremia or suspected line-related infection
- Severe, purulent cellulitis or necrotizing fasciitis
- Empiric coverage for osteomyelitis, septic arthritis, or prosthetic joint infection
- Empiric coverage for bacterial meningitis, vertebral osteomyelitis, or epidural abscess
- Empiric coverage for infective endocarditis
- Empiric pneumonia coverage (CAP with risk factors, HAP, VAP, hospital-acquired empyema)
- Empiric coverage for neutropenic fever if MRSA risk factors present
- Orbital/pre-septal cellulitis

Maybe Appropriate

- Non-purulent cellulitis refractory to appropriate doses of beta-lactam therapy
- Fever of unknown origin
- Necrotizing otitis externa
- Community-acquired empyema (review risk factors for MRSA and review pleural fluid cultures)

Likely Inappropriate

- Culture-documented VRE or VRSA infection
- Uncomplicated cystitis, pyelonephritis, or perinephric abscess
- Prostatitis
- Non-purulent cellulitis that is “streaky”
- CAP with less than 2 MRSA risk factors
- Community-acquired aspiration pneumonia
- Uncomplicated intra-abdominal infection (community-onset cholecystitis, diverticulitis, etc.)
- Neutropenic fever without MRSA risk factors (hemodynamic instability, pneumonia, penicillin allergy, severe mucositis, catheter-related infection)
- Immunosuppression as the only reason cited for vancomycin use

Piperacillin-Tazobactam Use Evaluation by Indication

Likely Appropriate

- Empiric coverage for septic shock (initial 48 hours)
- Complicated UTI (pyelonephritis with sepsis, perinephric abscess)
- Cholangitis following biliary anastomosis
- High risk and/or severe intra-abdominal infection (cholecystitis, peritonitis, perirectal abscess, diverticulitis, necrotizing pancreatitis)
- Necrotizing fasciitis
- Empiric pneumonia coverage (CAP with risk factors, HAP, VAP)
- Severe/limb-threatening DFI
- Infected surgical wound post-op
- Failure of moderately broad-spectrum antibiotics after 48 hours (e.g., ceftriaxone, ampicillin-sulbactam)
- Recent history of documented infection with *Pseudomonas aeruginosa* susceptible to piperacillin-tazobactam

Maybe Appropriate

- Fever of unknown origin
- Necrotizing otitis externa

Likely Inappropriate

- Uncomplicated cystitis or pyelonephritis
- Prostatitis
- CAP with less than 3 risk factors for resistant Gram-negative rods
- Uncomplicated intra-abdominal infection (community-onset cholecystitis, diverticulitis, perirectal abscess, appendectomy with perforation); Cefazolin/flagyl
- Spontaneous bacterial peritonitis (SBP)
- Endometritis (acute postpartum) or salpingitis/PID
- Infective endocarditis
- Septic arthritis/prosthetic joint infection
- Immunosuppression as the only reason cited for piperacillin-tazobactam use
- Bite wound (human or animal)
- Uncomplicated SSTI (furunculosis, cutaneous abscess, cellulitis, mild DFI)
- Neutropenic fever: Cefepime+ AG (Per IDSA guidelines)