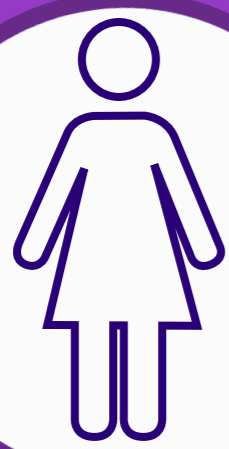


# Improving Antibiotic Therapy Decisions

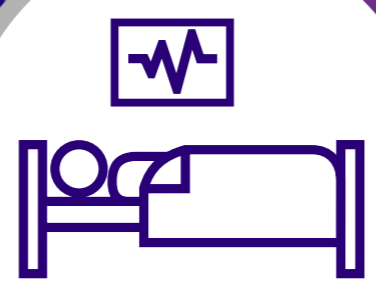
Tackling antimicrobial resistance can help optimize sepsis treatment.



A 42-year-old woman gets cut in the lower arm while working in her garden, and the wound becomes painful and develops red bumps.



Patient seeks help at the emergency department and is given Ibuprofen.



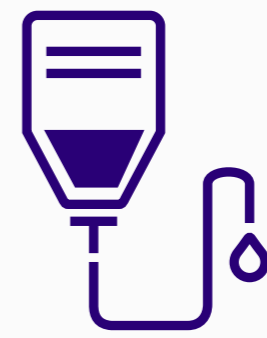
The lab processes the sample while the abscess is drained. The patient is started on a course of vancomycin. The next morning, the ID on the Bruker MALDI-TOF system shows a *Staphylococcus aureus* (*S. aureus*) bacterial infection.



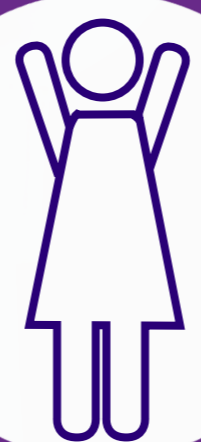
Within 48 hours, her wound turns into a painful abscess and she develops a fever. She returns and is admitted to the emergency department, suspected to be septic. A swab is collected and sent to the laboratory for Gram stain, culture and sensitivity testing.



Despite starting on vancomycin, the patient begins showing signs of sepsis. The culture results indicate VISA - the isolate processed on the MicroScan WalkAway system shows it as non-susceptible to daptomycin, but susceptible to ceftaroline.



While VISA isolates have intermediate resistance to vancomycin and may be treated with higher doses, alternative antibiotics may be necessary due to nephrotoxicity and poor clinical outcomes.<sup>1</sup>



The patient is switched to ceftaroline, without adverse side effects and the infection resolves completely.

**Vancomycin-intermediate *S. aureus* (VISA) are specific types of antimicrobial-resistant bacteria. Although rare, VISA infections can lead to serious or fatal outcomes, including sepsis when bacteria get into the bloodstream.<sup>2</sup>**

At Beckman Coulter, we continue to innovate with updated drugs, dilutions and breakpoints to make sure that we have drugs like ceftaroline on our panels. We are dedicated to our vision of "Accelerating Innovation To Improve Antimicrobial Therapy Decisions For Every Patient."



1. Lab testing for Vancomycin-resistant *S. Aureus* (<https://www.cdc.gov/staphylococcus-aureus/php/laboratories/index.html>)

2. *Staphylococcus aureus* Basics (<https://www.cdc.gov/staphylococcus-aureus/about/index.html>)

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