

Linezolid

Linezolid is an oxazolidinone. It has activity against most strains of staphylococci (including MRSA) and streptococci (including VRE). It does NOT have activity against gram-negative organisms. It is available IV and PO and is 100% bioequivalent.

Acceptable uses

- Documented vancomycin-intermediate *Staphylococcus aureus* (VISA) or vancomycin-resistant (VRSA) infection
- Documented MRSA or methicillin-resistant coagulase-negative staphylococcal infection in a patient with a serious allergy to vancomycin
- Documented MRSA or methicillin-resistant coagulase-negative staphylococcal infection in a patient failing vancomycin therapy (as defined below):
- Bacteremia/endocarditis: failure to clear blood cultures after 7-9 days despite vancomycin troughs of 15-20 mcg/mL. Should be used in combination with another agent as linezolid is bacteriostatic, not bacteriocidal.
- Pneumonia: worsening infiltrate or pulmonary status in a patient with documented MRSA pneumonia after 2-3 days of vancomycin therapy or if the MIC of vancomycin is ≥ 2 mcg/ml. ID consultation strongly advised.
- High suspicion of CA-MRSA necrotizing pneumonia in a seriously ill patient.
- Documented VRE infection (not colonization)
- Post-neurosurgical shunt infection, meningitis or ventriculitis due to staphylococcal species or VRE.
- Gram-positive cocci in chains in a blood culture in an ICU, solid oncology, or transplant patient known to be colonized with VRE
- Treatment of certain atypical mycobacterial or nocardial infections. ID consultation strongly advised.

Unacceptable uses

- Prophylaxis
- Initial therapy for staphylococcal infection
- VRE colonization of the stool, urine, respiratory tract, wounds, or drains

Dose

- 600 mg IV/PO q12h

Toxicity

- Bone marrow suppression (usually occurs within first 2 weeks of therapy). Pyridoxine is of no benefit.
- Optic neuritis and irreversible sensory motor polyneuropathy (usually occurs with prolonged therapy >28 days)
- Case reports of lactic acidosis
- Case reports of serotonin syndrome when co-administered with serotonergic agents (SSRIs, TCAs, MAOIs)
- Monitoring: CBC weekly, consider periodic LFTs with prolonged use.