

Initial Vancomycin Dose Determination in ADULTS

Consider loading doses in obese patients:

- Obese = actual body weight > 120% IBW
- Give 1500 mg loading dose for obese patients weighing 85 – 109 kg
- Give 2000 mg loading dose for obese patients weighing > 110 kg

Initial maintenance dose:

| Estimated CrCl (ml/min) | Initial dosing regimen |
|--|---|
| Continuous Renal Replacement (eg. CVVH, CVVHD) | 1000mg IV q 24 h |
| < 20 and/or intermittent hemodialysis | 1000 mg dose IV q 72 h |
| 20-29 | 1000 mg IV q 48 h |
| 30-39 | 1500 mg IV q 48 h OR 750 mg IV q 24 h |
| 40-55 | 1000 mg IV q 24 h |
| 56-99 | 1000 mg IV q 12 h |
| 100-120, age > 65 | 1000 mg IV q12 h |
| 100-120, age < 65 | 1250 mg IV q 12 h |
| ≥ 120 and/or hypermetabolic state** | 1000 mg IV q 8 h |

*Interval determined by

** Hypermetabolic states include trauma and burn patients

| Trough Serum Concentration ¹ | Dose Adjustment Recommended | Follow-Up/Monitoring ² |
|---|---|--|
| <3.5 mg/L | Shorten dose interval to next standard interval: | Draw trough level thirty (30) minutes prior to 3 rd dose of new dosing regimen |
| | If Q 48 H → Q 24 H | |
| | If Q 24 H → Q 12 H | |
| | If Q 12 H → Q 8 H | |
| 3.5-4.9 mg/L | If Q 8 H → Q 6 H | Draw trough level approximately 30 minutes prior to 3 rd dose of new dosing regimen |
| | Increase dose by 250 mg to 500 mg at same time interval. If improvement in renal function ³ , consider shortening interval. | |
| 5-15 mg/L | No change in therapy ⁴ | No further trough levels to be drawn unless : <ul style="list-style-type: none"> • Duration of therapy is >7 days; If therapy >7 days, check trough level every 5 to 7 days • Patient status declines • Serum creatinine increases >0.5 mg/dL from baseline |
| 15.1-19.9 mg/L | Decrease dose by 250 mg at same time interval | Draw trough level approximately 30 minutes prior to 3 rd dose of new dose regimen therapy |
| ≥ 20 mg/L and Dose ≥ 1000 mg | Decrease dose by 500 mg at same time interval OR If decline in renal function ³ , hold dose(s) and check another level in 12-24 hours. When trough is therapeutic, restart at lower dose and/or extend interval, based on patient-specific clearance. | Draw trough level approximately 30 minutes prior to 3 rd dose of new dose regimen therapy |
| ≥ 20 mg/L and Dose < 1000 mg | Extend dose interval to next standard interval | Draw trough level approximately 30 minutes prior to 3 rd dose of new dose regimen therapy |
| | If Q 6 H → Q 8 H | |
| | If Q 8 H → Q 12 H | |
| | If Q 12 H → Q 24 H | |
| | If Q 24 H → Q 48 H | |
| | OR If decline in renal function ³ , hold dose(s) and check another level in 12-24 hours. When trough is therapeutic, restart at lower dose and/or extend interval, based on patient-specific clearance | |

¹ Higher trough concentrations may be necessary for some types of patients/infections. Examples include, but are not limited to, meningitis, endocarditis, osteomyelitis.

² Serum creatinine levels should also be monitored daily in patients with decreased renal function and/or increased risk of nephrotoxicity.

³ Changes in serum creatinine (SCr) of ± 50% from baseline may signify change in renal function.

⁴ Maximum serum trough level in patients with increased risk for nephrotoxicity is 12mg/L, particularly patients on concomitant nephrotoxins (eg. aminoglycosides, amphotericin B, cisplatin, cyclosporin, foscarnet, ganciclovir, loop diuretics, NSAIDs, radiocontrast dye, tacrolimus, vasopressors).