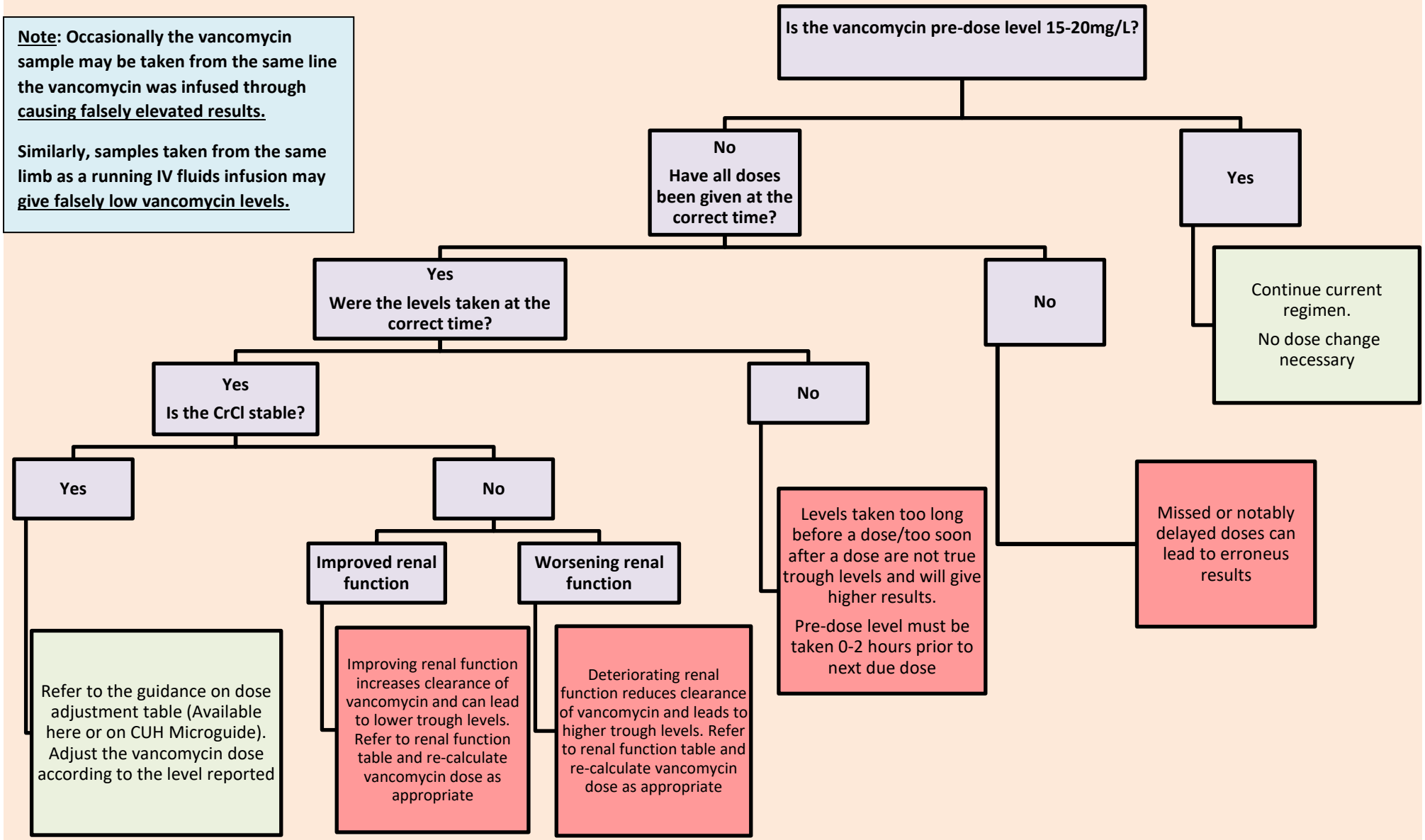
Interpretation of Vancomycin levels

Note: Occasionally the vancomycin sample may be taken from the same line the vancomycin was infused through causing falsely elevated results.

Similarly, samples taken from the same limb as a running IV fluids infusion may give falsely low vancomycin levels.



For further information contact Pharmacy (Ext: 26166) *Reference: Cork University Hospital Adult Antimicrobial Guide (via MicroGuide App)*

SIVUH Vancomycin Dosing and Monitoring Guidelines

Dose

For surgical prophylaxis dosing see MicroGuide App

Step 1: Loading Dose

- Give one loading dose to all patients: **25mg/kg IV (up to max 2g)**.
- Calculate dose using actual body weight. Round the dose up to the nearest 250mg.
- Request MRSA screen if prescribed empirically to cover MRSA infection.
- Check renal function (i.e. order U&Es)

Step 2: Maintenance Dose

- Calculate renal function using CrCl calculator. Calculate dose using actual body weight. Do not exceed 2g BD unless advised by Micro or Pharmacy

CrCl	Vancomycin Dose
>50ml/min	**15mg/kg (max 2g) IV BD** at 10am and 10pm Start 6-18 hours after loading dose *1st level due on morning of Day 3*
20-50ml/min	**15mg/kg (max 2g) IV OD** Start 24hours after loading dose *1st level due on Day 2*
<20ml/min	**Discuss with Microbiology**. Generally prescribe stat dose 15mg/kg and hold until levels are known. *1st level due on Day 2.*
HD/CAPD/CVVH	Consult Renal team

Administration

Maximum infusion rate: 10mg/minute

AVOID rapid administration as it has been associated with severe hypotension and Vancomycin infusion reaction.

Available Preparations	500mg vial 1g vial
Reconstitution with **water for injection**	10mL per 500mg vial 20mL per 1g vial. Dilute further prior to administration
Compatible with	Sodium Chloride 0.9% (NS) Glucose 5% (G5%)

Administer via intermittent intravenous infusion (Using an electronically controlled infusion device due to risk of thrombophlebitis and Vancomycin infusion reaction).

Dilute to a **maximum concentration of 5mg/ml**

Vancomycin Dose (Max 2g)	Suggested Dilution	Minimum Rate of Administration
2g	500ml NS or G5%	200 minutes
1.75g	500ml NS or G5%	175 minutes
1.5g	500ml NS or G5%	150 minutes
1.25g	250ml NS or G5%	125 minutes
1g	250ml NS or G5%	100 minutes
750mg	250ml NS or G5%	75 minutes
500mg	100ml NS or G5%	50 minutes

Monitoring

All request forms for vancomycin levels MUST state the SAMPLING TIME

Target pre-dose (trough) level 15-20mg/L

- **Take level 0-2 hours prior to next due dose.**
- Send blood sample in a red top bottle. Ensure the bottle is labelled with patient details and sampling time.
- If renal function stable do not hold next vancomycin dose while awaiting result (unless advised by Micro or Pharmacy)

Suggested Vancomycin Dose Adjustments

Pre-dose level	Suggested Action
<6 mg/L	Discuss with Micro/Pharmacy
6-10 mg/L	Increase each dose by 100% *e.g. 1g BD to 2g BD*
10 – 12.9 mg/L	Increase each dose by 50% *e.g. 1g BD to 1.5g BD*
13 – 14.9 mg/L	Increase each dose by 25% *e.g. 1g BD to 1.25g BD*
15 – 20 mg/L	No change necessary
20.1- 25 mg/L	Reduce each dose by 25%. Give 1 dose then check level before subsequent dose
25.1 – 39 mg/L	Hold dose until level <20mg/L Reduce each dose by 50%
>39 mg/L	Hold dose until level <20mg/L Discuss with Micro/Pharmacy