Antibiotic Recommendations for Cardiothoracic Operative Procedures

Procedure	Pre-Operative	
Closed Sternum <u>Low</u> Risk	Vancomycin 15 mg/kg (≥ 50 kg max dose: 1000 mg)	And Cefazolin 30 mg/kg (< 120 kg max dose: 2000 mg; ≥ 120 kg max dose: 3000 mg)
	• Dosing Preoperatively is for all patients up to maximum dose • Administer cefazolin (as soon as central access is obtained for patients without prior access) 60 minutes prior to incision, infusion should be completed prior to incision • Administer vancomycin (as soon as peripheral access is obtained for patients without prior access) 60 to 120 minutes prior to incision, infusion should be completed prior to incision	
	Post Operative	
	Vancomycin 15 mg/kg Q12h, < 7days > 2 kg; > 6 days 1.2-2 kg	And Cefazolin 30 mg/kg Q12h, Any age < 2 kg; < 8 days > 2 kg
	Vancomycin 15 mg/kg Q8h, 8-28 days > 2 kg	And Cefazolin 30 mg/kg Q8h, >8 days 2-60 kg
	Vancomycin 15mg/kg Q6h, > 28 days < 50 kg	And Cefazolin 2000 mg Q8h, 60-119kg
	Vancomycin 1000 mg Q8h, ≥ 50 kg	And Cefazolin 3000 mg Q8h, ≥ 120 kg
	• Redose cefazolin 4 hours after preoperative dose • Redose vancomycin according to appropriate interval as defined by above order sentences • Continue for **24** hours post op • Monitor vancomycin troughs as clinically necessary	
Procedure	Pre-Operative	
Closed Sternum <u>High</u> Risk • G or J Tube Stoma • Trach • Asplenia • Pacemaker • Hx of mediastinitis	Vancomycin 15 mg/kg (≥ 50 kg max dose: 1000 mg)	And Cefotaxime 50 mg/kg (≥ 20 kg max dose: 1000 mg) or Ceftazidime 50 mg/kg (≥ 40 kg max dose: 2000 mg) or Ceftriaxone 50 mg/kg > 28 days (≥ 40 kg max dose: 2000 mg)
	• Dosing Preoperatively is for all patients up to maximum dose • Administer cefotaxime/ceftazidime/ceftriaxone (as soon as central access is obtained for patients without prior access) 60 minutes prior to incision, infusion should be completed prior to incision • Administer vancomycin (as soon as peripheral access is obtained for patients without prior access) 60 to 120 minutes prior to incision, infusion should be completed prior to incision	
	Post-Operative	
	Vancomycin 15 mg/kg Q12h, < 7days > 2 kg; > 6 days 1.2-2 kg	And Cefotaxime 50 mg/kg Q12h, < 8 days any weight or Ceftazidime 50 mg/kg Q12h, < 8 days any weight
	Vancomycin 15 mg/kg Q8h, 8-28 days > 2 kg	And Cefotaxime 50 mg/kg Q8h, > 7 days any weight or Ceftazidime 50 mg/kg Q8h, > 7 days any weight
	Vancomycin 15 mg/kg Q6h, > 28 days < 50 kg	And Ceftriaxone 50 mg/kg q24h, > 28 days
	Vancomycin 1000 mg Q8h, ≥ 50 kg	And Ceftriaxone 2000 mg Q24h, ≥ 40 kg

	• Redose cefotaxime 3 hours after preoperative dose, ceftazidime 4 hours after preoperative dose
	• Redose vancomycin according to appropriate interval as defined by above order sentences
	• **Positive MRSA** Surveillance:
	  ○ Continue vancomycin and cefotaxime/ceftazidime/ceftriaxone for **48** hours post op
	• **Negative MRSA** Surveillance:
	  ○ Stop vancomycin, start oxacillin and continue cefotaxime/ceftazidime/ceftriaxone for **48** hours post op
	• **Negative MRSA** Surveillance known preoperatively (repeat surveillance not necessary while in hospital):
	  ○ Vancomycin for one dose preoperatively, then start oxacillin and continue cefotaxime/ceftazidime/ceftriaxone for **48** hours post op
	• Monitor vancomycin troughs as clinically necessary	

	Pre- Operative	
Open Sternum	Vancomycin 15 mg/kg (≥ 50 kg max dose: 1000 mg)	And Cefazolin 30 mg/kg (< 120 kg max dose: 2000 mg; ≥ 120 kg max dose: 3000 mg)
	• Dosing Preoperatively is for all patients up to maximum dose • Administer cefazolin (as soon as central access is obtained for patients without prior access) 60 minutes prior to incision, infusion should be completed prior to incision • Administer vancomycin (as soon as peripheral access is obtained for patients without prior access) 60 to 120 minutes prior to incision, infusion should be completed prior to incision	
	Post-Operative	
	Vancomycin 15 mg/kg Q12h, < 7days > 2 kg; > 6 days 1.2-2 kg	And Cefotaxime 50 mg/kg Q12h, < 8 days any weight or Ceftazidime 50 mg/kg Q12h, < 8 days any weight
	Vancomycin 15 mg/kg Q8h, 8-28 days > 2 kg	And Cefotaxime 50 mg/kg Q8h, > 7 days any weight or Ceftazidime 50 mg/kg Q8h, > 7 days any weight
	Vancomycin 15 mg/kg Q6h, > 28 days < 50 kg	And Ceftriaxone 50 mg/kg q24h, > 28 days
	Vancomycin 1000 mg Q8h, ≥ 50 kg	And Ceftriaxone 2000 mg Q24h, ≥ 40 kg

	• Redose cefotaxime 3 hours after preoperative dose, ceftazidime 4 hours after preoperative dose
	• Redose vancomycin according to appropriate interval as defined by above order sentences
	• **Positive MRSA** Surveillance:
	  ○ Continue vancomycin and cefotaxime/ceftazidime/ceftriaxone until **48** hours after chest closure
	• **Negative MRSA** Surveillance:
	  ○ Stop vancomycin, start oxacillin and continue cefotaxime/ceftazidime/ceftriaxone until **48** hours after chest closure
	• **Negative MRSA** Surveillance known preoperatively (repeat surveillance not necessary while in hospital):
	  ○ Vancomycin for one dose preoperatively, then start oxacillin and continue cefotaxime/ceftazidime/ceftriaxone until **48** hours after chest closure
	• Monitor vancomycin troughs as clinically necessary
	• Check mediastinal cultures for additional coverage	

Procedure	Pre- Operative	
Penicillin Allergy (with anaphylaxis) • **Closed Sternum Low Risk** • **Closed Sternum High Risk** • **Open Sternum**	Vancomycin 15 mg/kg (≥ 50 kg max dose: 1000 mg)	And Levofloxacin 10 mg/kg (≥ 50 kg max dose: 500 mg)
	• Dosing Preoperatively is for all patients up to maximum dose • Administer vancomycin/levofloxacin 60 to 120 minutes prior to incision, infusion should be completed prior to incision	
	Post- Operative	
	Vancomycin 15 mg/kg Q12h, < 7days > 2 kg; > 6 days 1.2-2 kg	And Levofloxacin 10 mg/kg Q12h, < 5 years
	Vancomycin 15 mg/kg Q8h, 8-28 days > 2 kg	And Levofloxacin 10 mg/kg Q24h, ≥ 5 years

	Vancomycin 15 mg/kg Q6h, > 28 days < 50 kg	And Levofloxacin 500 mg Q24h, ≥ 50 kg
	Vancomycin 1000 mg Q8h, ≥ 50 kg	

	• Closed Sternum (Low Risk): Continue for **24** hours postop
	• Close Sternum (High Risk)/Open sternum with **Positive MRSA** surveillance:
	  ○ Continue vancomycin and levofloxacin for **48** hours after post op (closed sternum – high risk) or chest closure (open sternum)
	• Close Sternum (High Risk)/Open sternum with **Negative MRSA** surveillance:
	  ○ Stop Vancomycin. Continue levofloxacin until **48** hours after post op (closed sternum – high risk) or chest closure (open sternum)
	• Close Sternum (High Risk)/Open sternum with **Negative MRSA** Surveillance known preoperatively (repeat surveillance not necessary while in hospital):
	  Vancomycin for one dose preoperatively. Continue levofloxacin until **48** hours after post op (closed sternum – high risk) or chest closure (open sternum)
	• Monitor vancomycin troughs as clinically necessary
	• Check mediastinal cultures for additional coverage	