HOW TO USE THE TABLE FOR RENAL DOSAGE ADJUSTMENT

Estimation of Renal Function- Creatinine Clearance Calculation using Cockroft-Gault equation:

Male CrCL (mL/min)= $\frac{(140\text{-age}) \times (\text{weight in kg}) \times 1.2}{\text{Scr } (\mu\text{mol/L})}$ Female CrCL = 0.85 x male CrCL

Use Ideal Body Weight (IBW) or Adjusted Body Weight (ABW) if patient is obese (i.e. TBW > 30% over IBW)

IBW (male) = 50kg + 2.3kg (each inch > 5 ft)

IBW (female) = 45.5 + 2.3kg (each inch > 5 ft)

Adjusted Body Weight (ABW) = IBW + 0.4 (TBW - IBW)

- Anti- infective agents are listed alphabetically by generic name, by class
- Recommendations for dose adjustment are made for different degrees of renal insufficiency:
  30-49mL/min: mild renal insufficiency
  10-29mL/min: moderate renal insufficiency
  < 10mL/min: severe renal disease
  On Hemodialysis, Peritoneal Dialysis or Continuous Renal Replacement Therapy

NOTE: the dose information in this table is based on Cockcroft- Gault creatinine clearance and not eGFR. These recommendations should only be used as guidelines and dosing based on pharmacokinetics and clinical evaluation is recommended where possible

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GUIDELINES FOR ANTIBIOTIC DOSING

DRUG: form	USUAL DOSE	MILD 30-49 mL/min	MODERATE 10-29 mL/min	SEVERE < 10mL/min	HEMODIALYSIS	PERITONEAL DIALYSIS	CRRT
PENICILLINS							
Amoxicillin: PO	250-500mg q8h	Same dose q8h	Same dose q12h	Same dose q24h	500mg q24h: on dialysis days, schedule routine dose after dialysis	500mg q12h	Usual dose
Amoxicillin + Clavunate: PO	500/125mg q8h	Usual dose	250/125mg q12h	250/125mg q24h	Dose as CrCl <10: on dialysis days, schedule routine dose after dialysis	250/125mg q12h	Usual dose
	875/125mg q12h		500/125mg q12h	500/125mg q24h			
Ampicilln: IV	1-2g q4-6h	Same dose q6-8h	Same dose q8-12h	Same dose q12h	Same dose q12h: on dialysis days, schedule routine dose after dialysis	500-1000mg q12h	Usual dose
Cloxacillin: IV	1-2g q4-6h	No adjustment necessary days					
Penicillin G: IV	2-4MU q4-6h	Usual dose	75% of usual dose	25-50% of usual dose on dialysis days, schedule routine dose after dialysis			Usual dose
Piperacillin + Tazobactam: IV	Traditional: 4.5g q8h	> 20:4.5 g q8h < 20: 3.375 g q8h			2.25 g q8h		4.5 g q8h
	Documented pseudomonas infection: 4.5g q6h	> 20: 4.5 g q6h < 20: 4.5g q8h			2.25 g q6h		4.5 g q6h
CARBAPENEMS							
Ertapenem: IV (restricted to ID)	1g q24h	Usual dose	500 mg q24h: on dialysis days, schedule routine dose after dialysis				
Meropenem: IV (restricted to ID)	Standard: 500mg q6h	500mg q6-8h	500mg q8-12h	500mg q12-24h: on dialysis days, schedule routine dose after dialysis			500mg 6-8h
	CNS & CF infection: 2g q8h	Usual dose	2g q12h	2g q24h: on dialysis days, schedule routine dose after dialysis			2g IV q8-12h
	Febrile neutropenia: 1g IV q8h	Usual dose	1g q12h	1g q24h: on dialysis days, schedule routine dose after dialysis			1g IV q8-12h
1st GEN CEPHALOSPORINS							

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Cephalexin: PO	500mg q6h	Usual dose	Usual dose	Usual dose 8-12h	500mg q8-12h; on dialysis days, schedule routine dose after dialysis	500mg q12-24h	Usual dose
Cefazolin: IV	1-2g q8h	Usual dose	1-2 g q12h	1-2g q24h	1-2g post HD on dialysis days OR q24h	1g q12h	Usual dose
2nd GEN CEPHALOSPORINS							
Cefuroxime: IV	750-1500mg q8h	Usual dose	750-1500 mg q12h	750-1500 mg q24h	750-1500mg q24h: on dialysis days, schedule routine dose after dialysis	750-1500 mg q24h	Usual dose
Cefuroxime: PO	500mg q12h	No adjustment necessary: on dialysis days, schedule routine dose after dialysis					
Cefprozil: PO	250-500mg q12h	50% of usual dose: on dialysis days, schedule routine dose after dialysis					
3rd GEN CEPHALOSPORINS							
Ceftazidime: IV	1-2g q8h	1-2g q8-12h	1-2g q12-24h	1-2g q24h	Usual dose q24h: on dialysis days, schedule routine dose after dialysis	1g q24h	Usual dose
Ceftriaxone: IV	1-2g q12-24h	No adjustment necessary					
QUINOLONES							
Ciprofloxacin: PO/IV	500-750mg PO q12h 400mg q12h IV (q8h: documented pseudomonas)	Usual dose	Usual dose once daily (documented pseudomonas: q12h)	Usual dose once daily (documented pseudomonas: q12h)	Usual dose once daily (documented pseudomonas: q12h)	Usual dose once daily (documented pseudomonas: q12h)	Usual dose
Levofloxacin PO/IV (HHS) (restricted at SJH)	500mg q24h	Usual dose	500mg q48h				Usual dose
	750mg q24h	750mg x 1 then 500 mg q24h	750mg q48h				Usual dose
Moxifloxacin: PO/IV (SJH only)	400mg q24h	No adjustment necessary					
MACROLIDES							

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Azithromycin: PO/IV	250-500mg q24h	No adjustment necessary					
TETRACYCLINES							
Doxycycline: PO	100mg q12h	No adjustment necessary					
Tetracycline: PO	250-500mg q6h	Same dose q6-8h	Same dose q12-24h	Same dose q24h	Not applicable	Not applicable	Not applicable
MISCELLANEOUS							
Clindamycin: PO/IV	300-450mg PO q6-8h 600-900mg IV q8h (900mg is usually used for necrotizing fasciitis)	No adjustment necessary					
Daptomycin: IV (restricted to ID)	Skin/soft tissue: 4mg/kg q24h 6mg/kg q24h *higher doses may be used	Usual dose	Same dose q48h	Same dose q48h	Same dose q48h: post HD on dialysis days *alternate dosing strategy may be used	Same dose q48h	Usual dose
Linezolid: PO/IV (restricted to ID)	600mg q12h	No adjustment necessary					
Metronidazole: PO/IV	500mg q8-12h	Usual dose	Usual dose	Usual dose	Usual dose	Usual dose	Usual dose
Nitrofurantoin: PO	50-100mg q12h	AVOID: not recommended for CrCl < 40ml/min and in dialysis					
Trimethoprim + Sulfamethoxazole: PO/IV *please see section on weight-based dosing	See page						
ANTIFUNGAL AGENTS							
Liposomal Amphotericin B	3-5mg/kg q24h	No adjustment necessary but highly nephrotoxic: May consider 500mL-1L NS pre- or divided pre-/post-infusion to decrease nephrotoxicity risk					

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(Ambisome): IV Restricted to ID							
Caspofungin: IV (HHS: febrile neutropenia)	70mg LD then 50mg q24h	No adjustment necessary					
Anidulafungin: IV (HHS only for non-neutropenia; restricted to ID) (non-formulary at SJH)	200mg LD then 100mg q24h	No adjustment necessary					
Fluconazole: PO/IV	Invasive candidiasis: 12mg/kg LD then 6mg/kg MD PO/IV q24h	Usual dose	Usual LD then 50% MD q24h		Usual dose post HD on dialysis days OR q24h	Usual LD then 50% of usual dose q24h	Usual dose
	Esophageal candidiasis: 200mg PO/IV q24h		50% of usual dose q24h		Usual dose post HD on dialysis days or q24h	50% usual dose q24h	
	Oropharyngeal candidiasis: 100mg q24h						
Itraconazole: PO	100-200mg q24h	No adjustment necessary					
Voriconazole: PO/IV (restricted to ID)	6mg/kg q12h x 2 then 4mg/kg q12h	PO: No adjustment necessary					
		For CrCl <50ml/min dialysis: Oral therapy is preferred over IV due to accumulation of intravenous cyclodextrin vehicle					
ANTIVIRAL AGENTS							
Acyclovir: IV	5-10mg/kg q8h (based on IBW)	same dose q12h	same dose q24h	50% of usual dose q24h	50% of usual dose q24h (give dose post HD on dialysis days).		dose as usual
Acyclovir: PO	200-400 mg 5x/day	Usual dose	Usual dose	same dose q12h			
	800mg 5x/day	usual dose	same dose q8h	same dose q12h			

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Ganciclovir: IV	Induction: 5mg/kg q12h	50-69: 2.5 mg/kg q12h 25-49: 2.5 mg/kg q24h 10-24: 1.25 mg/kg q24h < 10: 1.25 mg/kg 3x/week			Dose as CrCL < 10: post HD on dialysis days		2.5 mg/kg q12h
	Maintenance: 5mg/kg q24h	50-69: 2.5 mg/kg q24h 25-49: 1.25 mg/kg q24h 10-24: 0.625 mg/kg 3x weekly < 10: 0.625 mg/kg 3x/week					2.5 mg/kg q24h
Oseltamivir: PO	Treatment: 75mg q12h	Usual dose	75mg q24h	75mg q48h (or 3x/week after each HD)			Usual dose
	Prevention: 75mg q24h		75mg q48h				