

Zuckerberg San Francisco General Hospital Oncology Anti-infective Prophylaxis Guidelines

These recommendations are based on available literature and should not replace clinical judgment

	Most solid tumors Anticipated neutropenia < 7 days <i>Low risk for infection</i>	Lymphoma, Multiple Myeloma, CLL Anticipated neutropenia 7-10 days <i>Intermediate risk for infection</i>	Acute Leukemia Anticipated neutropenia > 10 days <i>High risk for infection</i>				
Overall Recommendations Neutropenia defined as ANC \leq 500 cells/mm ³ or \leq 1000 cells/mm ³ with a predicted decline to \leq 500 cells/mm ³ over the next 48hr							
	Not recommended for most patients HSV seropositive patients: May consider viral prophylaxis during active therapy and periods of prolonged neutropenia	During neutropenia, consider prophylaxis: <ul style="list-style-type: none"> • Bacterial • Fungal (with anticipated mucositis) • PJP Viral prophylaxis is recommended during active therapy and/or during periods of prolonged neutropenia (or longer depending on risk)	During neutropenia, consider prophylaxis: <ul style="list-style-type: none"> • Bacterial • Fungal • PJP Viral prophylaxis is recommended during active therapy and/or during periods of prolonged neutropenia (or longer depending on risk)				
Preferred regimen recommendations per NCCN (split by disease state or regimen)							
Fungal	Not recommended	Fluconazole 400 mg PO/IV daily	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">ALL</td> <td style="text-align: center;">Fluconazole 400 mg PO/IV daily</td> </tr> <tr> <td style="text-align: center;">MDS AML</td> <td style="text-align: center;">Posaconazole 300 mg PO q12h x 2 doses, then 300 mg PO daily <u>OR</u> voriconazole 400 mg PO q12h x2, then 200 mg PO q12h Alternative: isavuconazole, micafungin</td> </tr> </table>	ALL	Fluconazole 400 mg PO/IV daily	MDS AML	Posaconazole 300 mg PO q12h x 2 doses, then 300 mg PO daily <u>OR</u> voriconazole 400 mg PO q12h x2, then 200 mg PO q12h Alternative: isavuconazole, micafungin
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Viral	Acyclovir 400 mg PO BID or 250 mg/m ² IV Q12H						
Bacterial	Not recommended	Levofloxacin 500 mg PO/IV daily Alternative: cefdinir 300 mg PO BID	Throughout anti-leukemic therapy and neutropenia: Levofloxacin 500 mg PO/IV daily Alternative: cefdinir 300 mg PO BID				
PJP	Not recommended	Bactrim (TMP/SMX) 1 DS tablet PO MWF Alternative: atovaquone 1500 mg PO daily, dapsone 100 mg PO daily Indications: <ul style="list-style-type: none"> • Throughout anti-leukemic therapy (ALL) • PI3K inhibitors: through active treatment • Prolonged corticosteroids (\geq20 mg daily of prednisone x 4+ weeks) or receiving temozolomide + radiation therapy • Consider during purine analog therapy and other T-cell depleting agents until CD4 count > 200 					
Hepatitis B	Entecavir 0.5 mg PO daily <u>OR</u> tenofovir (TDF 300 mg PO daily or TAF PO 25 mg daily) x 6 – 12 months following conclusion of treatment Alternative: lamivudine 100 mg PO daily Indicated for: HBsAg+ or HBcAb+						

See page 2 for renal dosing recommendations.

Dosing and Monitoring Guidance

Bacterial Prophylaxis		Recommended Dose		Monitoring
Levofloxacin	CrCl (ml/min)	Dose (IV or PO/FT)		<ul style="list-style-type: none"> - Check baseline QTc, SCr - Okay to crush tabs or use oral suspension if ordering per FT
	≥ 50	500 mg daily		
	20-49	500 mg x1 then 250 mg daily		
	< 20	500 mg x1 then 250 mg q48h		
	Dialysis	See IDMP		
Cefdinir (ID restricted) *Use if FQ intolerance/allergy or prolonged QTc	CrCl (ml/min)	Dose (PO/FT)		- Check baseline SCr
	≥ 30	300 mg BID		
	< 30	300 mg daily		
Fungal prophylaxis agents		Recommended Dose		Monitoring
Fluconazole	CrCl (ml/min)	Dose (IV or PO/FT)		<ul style="list-style-type: none"> - Check baseline QTc, SCr, LFTs, drug interactions - No trough monitoring necessary - Use oral suspension if ordering per FT
	> 50	400 mg daily		
	10-50	200 mg daily		
	< 10	100 mg daily		
Posaconazole (ID restricted)	PO/FT	300 mg DR tab q12h x2 doses then 300 mg DR tab q24h		<ul style="list-style-type: none"> - Check baseline QTc, LFTs, drug interactions - Consider trough monitoring for prolonged therapy - Okay to crush DR tabs for FT, contact ID Pharmacy for dosing
	IV (central line)	300 mg q12h x2 doses then 300 mg q24h		
	Trough monitoring:	≥ 0.7 mcg/mL (prophylaxis)		
	Check a level within 5-7 days of initiation or dose adjustment (steady-state)			
Voriconazole (ID restricted)	PO/FT (≥ 40 kg)	400 mg q12h x 2 doses, then 200 mg q12h *Consider weight-based dosing (below) in obesity		<ul style="list-style-type: none"> - Check baseline QTc, LFTs, drug interactions, visual disturbances/hallucinations, long-term complications such as increased risk for squamous cell carcinoma and hyperphosphatemia - Consider trough monitoring for prolonged therapy - Use oral suspension if ordering per FT
	IV	6 mg/kg q12h x 2 doses, then 4 mg/kg q12h *Use adjusted BW if TBW > 1.2x IBW **Consider PO if CrCl < 50 ml/min and anticipated prolonged duration of therapy due to accumulation of excipient which may lead to kidney injury		
	Trough monitoring:	1-5.5 mcg/mL		
	Check a level within 5-7 days of initiation or dose adjustment (steady-state)			

Isavuconazonium sulfate (ID restricted) *Not NCCN recommended for prophylaxis, use only if QT prolongation issues	372 mg IV/PO/FT q8h x 6 doses then 372 mg IV/PO/FT daily	- Isavuconazole levels are not typically drawn given universal PK/PD parameters. Consider an isavuconazole trough if there are concerns for oral absorption. Contact ID Pharmacy for guidance
Micafungin (ID restricted) *Alternative if patients are unable to receive PO azoles or if significant drug interactions. Contact ID Pharmacy for dosing recommendation.	50-100 mg IV daily	- No trough monitoring necessary

Viral	Recommended Dose		
Acyclovir	CrCl (ml/min)	Dose (PO/FT)	
	> 50	400 mg BID	
	10-50	200 mg BID	
	< 10	200 mg daily	
	HD	200 mg daily	
	CrCl (ml/min)	Dose (IV) -- multiply dose by BSA	
	> 50	250 mg/m ² q12h	
	25-50	125 mg/m ² q12h	
	10-24	125 mg/m ² q24h	
	< 10 or iHD	62.5 mg/m ² q24h	

PJP prophylaxis agents	Recommended Dose		Monitoring
Bactrim (TMP/SMX)	CrCl (ml/min)	Dose (PO/FT)	- Check SCr, electrolytes (K)
	≥ 30	1 DS tab three times weekly (MWF)	
	< 30	1 SS tab three times weekly (MWF)	
Dapsone *Alternative if unable to receive Bactrim due to sulfonamide antibiotic allergy or hyperkalemia	100 mg PO/FT daily		- Do not use if G6PD deficient due to risk of hemolytic anemia
Atovaquone	1500 mg PO/FT daily		

*Alternative if unable to receive Bactrim due to sulfonamide antibiotic allergy or hyperkalemia		
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Hepatitis B		Recommended Dose		
Entecavir	CrCl (ml/min)	Dose (PO/FT)		- Use oral solution if ordering per FT
	≥ 50	0.5 mg daily		
	30-50	0.5 mg q48h		
	10-29	0.5 mg q72h		
	< 10 or iHD	0.5 mg every 7 days		
Tenofovir disoproxil fumarate (TDF)	CrCl (ml/min)	Dose (PO/FT)		- Avoid use if CrCl < 15 ml/min
	≥ 50	300 mg daily		
	30-49	300 mg q48h (or 150 mg daily)		
	< 30	300 mg twice weekly		
Tenofovir alafenamide (TAF, non-formulary)	25 mg PO/FT daily			
Lamivudine (3TC)	100 mg PO/FT daily			- No renal dose adjustment necessary given generally well tolerated (see section on alternative renal dosing recommendation on Lexicomp)
*Note: alternative agent to entecavir and tenofovir due to higher potential for HBV resistance				

Reviewed/Approved by:

Hematology/Oncology: 02/2024

Antimicrobial Subcommittee: 4/2024

Pharmacy & Therapeutics Committee: 4/2024

Infectious Diseases contact information (for questions and approval to use ID restricted or non-formulary antimicrobials):

- ID Pharmacist: "ZSFG ID Pharmacist" on Epic secure chat or pager 443-4379
 - Monday-Friday 8am-4:30pm
- ID Fellow: 443-2847
 - Monday-Friday 4:30-8pm and weekends 8am-8pm

Last reviewed: 6/2024