Zuckerberg San Francisco General Hospital Oncology Anti-infective Prophylaxis Guidelines

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

<table>
<tr><th></th><th>Most solid tumors
Anticipated neutropenia < 7 days
Low risk for infection</th><th colspan="2">Lymphoma, Multiple Myeloma, CLL
Purine analog therapy (ie. Fludarabine, clofarabine, nelarabine, cladribine)
Anticipated neutropenia 7-10 days
Intermediate risk for infection</th><th>Acute Leukemia
Moderate to severe GVHD
Anticipated neutropenia > 10 days
High risk for infection</th></tr>
<tr><td colspan="5">Overall Recommendations
Neutropenia defined as ANC ≤ 500 cells/mm^3 or ≤ 1000 cells/mm^3 with a predicted decline to ≤ 500 cells/mm^3 over the next 48hr</td></tr>
<tr><td></td><td>Not recommended for most patients.

HSV seropositive patients: May consider viral prophylaxis during active therapy and periods of prolonged neutropenia.</td><td colspan="2">During neutropenia, consider prophylaxis:
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).</td><td>During neutropenia, consider prophylaxis:
Bacterial
Fungal
PJP
Viral prophylaxis is recommended during active therapy and/or during periods of prolonged neutropenia (or longer depending on risk).</td></tr>
<tr><td colspan="5">Preferred regimen recommendations per NCCN (split by disease state or regimen)</td></tr>
<tr><td rowspan="2">Fungal</td><td rowspan="2">NOT recommended</td><td rowspan="2">Fluconazole 400 mg PO/IV daily</td><td>ALL</td><td>Fluconazole 400 mg PO/IV daily
Alternative: micafungin</td></tr>
<tr><td>MDS
AML</td><td>Posaconazole 300 mg PO q12h x2, then 300 mg PO daily <u>OR</u> voriconazole 200 mg PO q12h
Alternative: isavuconazole, micafungin, or fluconazole (if no mold activity needed)</td></tr>
<tr><td>Viral</td><td colspan="4">HSV: Acyclovir 400 mg PO BID or 250 mg/m^2 IV q12h
VZV: Valacyclovir 500 mg PO BID (preferred) <u>OR</u> Acyclovir 800 mg PO BID</td></tr>
<tr><td>Bacterial</td><td rowspan="2">NOT recommended</td><td>Levofloxacin 500 mg PO/IV q24h
Alternative: cefpodoxime 200 mg PO BID or Bactrim</td><td colspan="2">Throughout anti-leukemic therapy and neutropenia:
Levofloxacin 500 mg PO/IV daily
Alternative: cefpodoxime 200 mg PO BID or Bactrim</td></tr>
<tr><td>PJP</td><td colspan="3">Bactrim (TMP/SMX) DS 1 tablet PO MWF
Alternative: atovaquone 1500 mg PO daily or dapsone 100 mg PO daily

Indications:
Throughout anti-leukemic therapy (ALL)
PI3K inhibitors: through active treatment
Prolonged corticosteroids (≥20 mg daily prednisone x4+ weeks) or temozolomide + radiation therapy
Consider during purine analog therapy and other T-cell depleting agents for x6-12 months until CD4 count >200</td></tr>
<tr><td>Hepatitis B</td><td colspan="4">Entecavir 0.5 mg PO daily <u>OR</u> tenofovir (TDF 300 mg PO daily or TAF 25 mg PO daily) x6-12 months following conclusion of treatment
Alternative: lamivudine 100 mg PO daily (inferior due to higher potential for HBV resistance; use only when entecavir not available)
Indicated for: HBsAg+ or HBcAb+ patients receiving immunosuppressive therapy. Consult hepatology/ID for active HBV disease.</td></tr>
</table>

See page 2 for renal dosing recommendations.

Dosing and Monitoring Guidance

Refer to IDMP for full dosing recommendations

<table>
<tr><th>Bacterial Prophylaxis</th><th>Recommended Dose</th><th>Monitoring</th></tr>
<tr><td>Levofloxacin</td><td><table><tr><td>CrCl (mL/min)</td><td>Dose (IV or PO/FT)</td></tr><tr><td>≥ 50</td><td>500 mg daily</td></tr><tr><td>20-49</td><td>250 mg daily</td></tr><tr><td>< 20</td><td>250 mg q48h</td></tr><tr><td>Dialysis</td><td>See IDMP</td></tr></table></td><td>Check baseline QTc, SCr
Okay to crush tabs or use oral suspension if ordering per FT</td></tr>
<tr><td>Cefpodoxime (ID restricted)
*Use if FQ intolerance/allergy or prolonged QTc</td><td><table><tr><td>CrCl (mL/min)</td><td>Dose (PO/FT)</td></tr><tr><td>≥ 30</td><td>200 mg BID</td></tr><tr><td>< 30</td><td>200 mg daily</td></tr></table></td><td>Check baseline SCr</td></tr>
</table>

<table>
<tr><th>Fungal Prophylaxis</th><th>Recommended Dose</th><th>Monitoring</th></tr>
<tr><td>Fluconazole</td><td><table><tr><td>CrCl (mL/min)</td><td>Dose (IV or PO/FT)</td></tr><tr><td>> 50</td><td>400 mg daily</td></tr><tr><td>10-50</td><td>200 mg daily</td></tr><tr><td>< 10</td><td>100 mg daily</td></tr></table></td><td>Check baseline QTc, SCr, LFTs, drug interactions
No trough monitoring necessary
Use oral suspension if ordering per FT</td></tr>
<tr><td>Posaconazole (ID restricted)</td><td><table><tr><td>PO/FT</td><td>300 mg DR tab q12h x2 doses then 300 mg DR tab q24h</td></tr><tr><td>IV (central line)</td><td>300 mg q12h x2 doses then 300 mg q24h</td></tr></table></td><td>Check baseline QTc, LFTs, drug interactions
Consider trough monitoring for prolonged therapy
Okay to crush DR tabs for FT, contact ID Pharmacy for dosing
<table><tr><td>Trough monitoring:</td><td>≥ 0.7 mcg/mL (prophylaxis)</td></tr><tr><td colspan="2">Check a level within 5-7 days of initiation or dose adjustment (steady-state)</td></tr></table></td></tr>
<tr><td>Voriconazole (ID restricted)</td><td><table><tr><td>PO/FT (≥ 40 kg)</td><td>400 mg q12h x2 doses, then 200 mg q12h
*In patients with obesity (BMI ≥ 30kg/m^2), consider a weight-based regimen (4 mg/kg q12h based on adjusted body weight), see IDMP</td></tr></table></td><td>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
<table><tr><td>Trough monitoring:</td><td>1-5.5 mcg/mL</td></tr><tr><td colspan="2">Check a level within 5-7 days of initiation or dose adjustment (steady-state)</td></tr></table></td></tr>
</table>

Isavuconazonium sulfate (ID restricted) *Not NCCN recommended for prophylaxis, use only if QT prolongation issues	372 mg IV/PO/FT q8h x6 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 Prophylaxis	Recommended Dose	
Acyclovir	CrCl (mL/min) / Dose (PO/FT) > 25 / 400 mg BID ≤25 or iHD / 200 mg BID CrCl (mL/min) / Dose (IV) – use 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	
Valacyclovir *Preferred for VZV	CrCl (mL/min) / Dose (PO/FT) ≥ 30 / 500 mg BID < 30 / 500 mg daily	

PJP Prophylaxis	Recommended Dose	Monitoring
Bactrim (TMP/SMX)	CrCl (mL/min) / Dose (PO/FT) ≥ 30 / 1 DS tab 3x weekly (MWF) < 30 / 1 SS tab 3x weekly (MWF)	• Check SCr, electrolytes (K)
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 • Check G6PD prior to initiation
Atovaquone *Alternative if unable to receive Bactrim due to sulfonamide antibiotic allergy or hyperkalemia	1500 mg PO/FT daily	

<table>
<tr><th>Hepatitis B</th><th>Recommended Dose</th><th></th></tr>
<tr><td>Entecavir</td><td><table><tr><td>CrCl (mL/min)</td><td>Dose (PO/FT)</td></tr><tr><td>≥ 50</td><td>0.5 mg daily</td></tr><tr><td>30-50</td><td>0.5 mg q48h</td></tr><tr><td>10-29</td><td>0.5 mg q72h</td></tr><tr><td>< 10 or iHD</td><td>0.5 mg every 7 days</td></tr></table></td><td>• Use oral solution if ordering per FT</td></tr>
<tr><td>Tenofovir disoproxil fumarate (TDF)</td><td><table><tr><td>CrCl (mL/min)</td><td>Dose (PO/FT)</td></tr><tr><td>≥ 50</td><td>300 mg daily</td></tr><tr><td>30-49</td><td>300 mg q48h (or 150 mg daily)</td></tr><tr><td>10-30</td><td>300 mg twice weekly</td></tr></table></td><td>• Avoid use if CrCl < 10 mL/min</td></tr>
<tr><td>Tenofovir alafenamide (TAF)</td><td>25 mg PO/FT daily</td><td>• Avoid use if CrCl <15 mL/min</td></tr>
<tr><td>Lamivudine (3TC)

*Note: alternative agent to entecavir and tenofovir due to higher potential for HBV resistance</td><td>100 mg PO/FT daily</td><td>• No renal dose adjustment necessary given generally well tolerated (see section on alternative renal dosing recommendation on Lexicomp)</td></tr>
</table>

<u>Reviewed/Approved by:</u>

Hematology/Oncology: 02/2024

Antimicrobial Subcommittee: 04/2024

Pharmacy & Therapeutics Committee: 04/2024

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

- ID Pharmacist: “ZSFG ID Pharmacist” on Epic secure chat
  - Monday-Friday 8am-4:30pm
- ID Fellow: 443-2847
  - Monday-Friday 4:30-8pm and weekends 8am-8pm

Last reviewed: 08/2026