CAR-T INFECTION PROPHYLAXIS GUIDELINES

I. PURPOSE: CAR-T patients are at risk for infections in the post-transplant period.

II. SCOPE: This guideline outlines the routine infection prophylaxis for at risk patients.

III. GUIDELINE:

<table>
<thead>
<tr>
<th>Organism</th>
<th>Population</th>
<th>First Choice</th>
<th>Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCP (pneumocystis carinii/jiroveci pneumonia)</td>
<td>All Adult patients</td>
<td>Pentamidine on day -1. Continue until ≥ day 30, ANC &gt; 1, and PLT &gt; 50, then:</td>
<td>Pentamidine 300 mg aerosolized Q month</td>
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<tr>
<td></td>
<td>Start: Pentamidine on day -1</td>
<td>Bactrim SS (Trimethoprim-sulfamethoxazole SS) 1 tablet daily</td>
<td>Pentamidine 4 mg/kg IV q3-4weeks</td>
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<td></td>
<td>Duration: Stop after 6 months and CD4 &gt; 300 cells/mm³</td>
<td>Pentamidine 300 mg aerosolized Q month (if old enough to cooperate; &gt;5 years), or</td>
<td>Dapsone 100 mg PO daily (G6PD screening recommended for African Americans, Indians or Mediterranean descent)</td>
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<td></td>
<td>Pentamidine 4 mg/kg IV q3-4weeks</td>
<td>*Be aware of increased risk of methemoglobinemia</td>
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<td>Dapsone 2 mg/kg/dose PO daily (max: 100 mg/dose)</td>
<td>Atovaquone (Mepron) 1500 mg PO daily</td>
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<td></td>
<td>Atovaquone 1-3 mo or &gt;24: 30 mg/kg/day; 4-24 mo: 45 mg/kg/day (max: 1500 mg PO daily)</td>
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<td></td>
<td>All Pediatric patients</td>
<td>Pentamidine on day -1. Continue until ≥ day 30, ANC &gt; 1, and PLT &gt; 50, then:</td>
<td>Pentamidine 300 mg aerosolized Q month</td>
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<td>Start: Pentamidine on day -1</td>
<td>Bactrim (trimethoprim-sulfamethoxazole)</td>
<td>Pentamidine 4 mg/kg IV q3-4weeks</td>
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<tr>
<td></td>
<td>Duration: Stop after 6 months and CD4 &gt; 300 cells/mm³</td>
<td>TMP 150 mg/m²/day (max: 100 mg)/SMZ 750 mg/m²/day</td>
<td>Dapsone 2 mg/kg/dose PO daily (max: 100 mg/dose)</td>
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<td>• Divided BID, 3 consecutive days per week</td>
<td>Atovaquone</td>
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<td>Pentamidine 300 mg aerosolized Q month (if old enough to cooperate; &gt;5 years), or</td>
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<tr>
<td><strong>Invasive Fungal Infections</strong></td>
<td>Adult ALL and DLBCL</td>
<td><strong>Micafungin</strong> 100 mg IV q24h until day +7, then:</td>
<td><strong>Isavuconazole</strong> 372 mg PO/IV q8h x6 doses, then 372 mg PO/IV daily</td>
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<td><strong>Posaconazole</strong> tablet 300 mg PO BID day +8, then 300 mg PO daily day +9*</td>
<td><strong>Posaconazole</strong> 300 mg IV q24h</td>
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<td>Start: On CAR-T admission Continue posaconazole until ANC &gt;1000 and in CR</td>
<td><strong>Micafungin</strong> 100 mg IV q24h</td>
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<td>Pediatric ALL</td>
<td><strong>Micafungin</strong> 3-5 mg/kg (max: 100 mg) IV q24h until Day +7, then:</td>
<td>For patients &lt;15 years old:</td>
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<td></td>
<td></td>
<td><strong>Posaconazole</strong> tablet*</td>
<td><strong>Posaconazole</strong> IV*</td>
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<td>&lt;40 kg: 100 mg PO BID</td>
<td>&lt;40 kg: 100 mg IV q12h</td>
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<td>40-60 kg: 200 mg PO BID</td>
<td>40-60 kg: 200 mg IV q12h</td>
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<td>&gt;60 kg: 300 mg PO BID</td>
<td>&gt;60 kg: 300 mg IV q12h</td>
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<td><strong>Micafungin</strong> 3-5 mg/kg IV q24h</td>
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<td><strong>Bacterial Infections</strong></td>
<td>Adult ALL and DLBCL</td>
<td><strong>Levofloxacin</strong> 500 mg PO daily starting on D+1 and continuing until:</td>
<td><strong>Cefpodoxime</strong> 200 mg PO BID</td>
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<td></td>
<td><em>Febrile Neutropenia</em></td>
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<td>*ANC &gt;500</td>
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<td>Pediatric ALL</td>
<td><strong>Levofloxacin</strong> 10 mg/kg/dose (max: 500 mg) PO BID for &lt;5 yrs or daily if ≥5 yrs starting on D+1 and continuing until:</td>
<td><strong>Cefpodoxime</strong> 5 mg/kg PO) BID (max: 200 mg)</td>
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The recommendations in this guide are meant to serve as treatment guidelines for use at Michigan Medicine facilities. If you are an individual experiencing a medical emergency, call 911 immediately. These guidelines should not replace a provider’s professional medical advice based on clinical judgment, or be used in lieu of an Infectious Diseases consultation when necessary. As a result of ongoing research, practice guidelines may from time to time change. The authors of these guidelines have made all attempts to ensure the accuracy based on current information, however, due to ongoing research, users of these guidelines are strongly encouraged to confirm the information contained within them through an independent source.

If obtained from a source other than med.umich.edu/asp, please visit the webpage for the most up-to-date document.

### Organism | Population | First Choice | Alternatives
--- | --- | --- | ---
Viral Infections | Adult ALL and DLBCL | **Acyclovir** 400 mg PO BID, indefinitely
Start: On CAR-T admission | **Acyclovir** 2.5 mg/kg IV q12h
**Valacyclovir** 500 mg PO daily

| | Pediatric ALL | **Acyclovir** 400 mg PO BID if ≥6 years
Start: On CAR-T admission | **Acyclovir** 2.5 mg/kg IV q12h

**Valacyclovir** 500 mg PO daily

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*posaconazole: trough levels are preferred with goal be >0.7 for prophylaxis at >1.0 for treatment.

### Citations:

