### ANMC Adult Inpatient Antibiotic Guidelines for Febrile Neutropenia

#### Definition
- Fever: oral temp ≥38.0°C (100.4°F) sustained over 1 hour
- Neutropenia: ANC <500 cells/mm³ or one that is expected to fall below 500 cells/mm³ over the next 48 hours
- Functional neutropenia: hematologic malignancy results in qualitative defects of circulating neutrophils

#### Common Pathogens

<table>
<thead>
<tr>
<th>Gram Positive Pathogens</th>
<th>Gram Negative Pathogens</th>
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</thead>
<tbody>
<tr>
<td>Coagulase-negative Staph</td>
<td>E.coli</td>
</tr>
<tr>
<td>Staph aureus</td>
<td>Klebsiella sp.</td>
</tr>
<tr>
<td>Enterococcus</td>
<td>Enterobacter sp.</td>
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<tr>
<td>Viridans group Strep</td>
<td>P. aeruginosa</td>
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<tr>
<td>Strep pneumoniae</td>
<td>Citrobacter sp.</td>
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<tr>
<td>Strep pyogenes</td>
<td>Acinetobacter sp.</td>
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<td></td>
<td>Stenotrophomonas maltophilia</td>
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</tbody>
</table>

#### Tests/Cultures
- CBC w/ diff
- CMP
- Blood cultures (set from central catheter and peripheral if both present)
- Specific for site of presumed infection
- Chest X-ray if sx of respiratory infection

### Antibiotic Selection

#### High-Risk

<table>
<thead>
<tr>
<th>Inpatient IV Antibiotics for High Risk Patients</th>
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<tbody>
<tr>
<td>Cefepime 2g IV q8h +/− Vancomycin based on indications for empiric therapy</td>
</tr>
</tbody>
</table>

Reassess after 48 hours of empiric therapy

Adjust antimicrobials based on specific clinical, radiograph and/or culture data

#### Indications for Empiric Vancomycin Therapy
- Hemodynamic instability or other evidence of severe sepsis
- Pneumonia documented radiographically
- Positive blood culture for Gram-positive bacteria, before identification and susceptibility testing is available
- Clinically suspected IV catheter-related infections
- Skin or soft tissue infection

#### High Risk Criteria
- Anticipated profound neutropenia
- Clinically unstable
- Medical comorbidities (Hypotension, Pneumonia, Abdominal pain, Neurologic changes)

#### Role for G-CSF
- Generally not recommended for treatment of established febrile neutropenia
- Consider adding if not responding/clinically worsening and persistently febrile

#### Comments:
- Patients receiving fluoroquinolone prophylaxis should not receive empiric therapy with a fluoroquinolone
- Ceftazidime should not be used as monotherapy due to poor activity against gram positive bacteria, notably viridans group streptococci

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