Febrile Neutropenia Pathway

**Diagnosis of Febrile Neutropenia:**

- **Neutropenia:** ANC < 500 cells/m3 or expected decrease to <500 cells/m3 during the next 48 hours AND
- **Fever:** temperature >38

**Labs:** CBC with diff, CMP, Blood cultures

- Obtain 2 blood cultures at time of fever and with each subsequent fever.
- Include 1 anaerobic culture bottle if concerned for anaerobic process
- Use central line for blood cultures when possible
- **Other studies as clinically indicated:** e.g. CXR, respiratory pathogen panel, stool studies, UA (no catheter specimens)

**Additional antibiotics:**

- When clinically indicated, consider addition of an agent to cover resistant gram-positive bacteria (e.g. MRSA, coagulase-negative staphylococcus, enterococcus).
- Options may include: Daptomycin, Cefaroline, and Vancomycin

**Empirc antibiotics:**

- First line: Cefepime
- If concerned for intra-abdominal process: Piperacillin-tazobactam
- If concerned for cefepime-resistant organism: Meropenem
- Severe beta-lactam allergy: consult Infectious Diseases
- Concern for central nervous system infection: consult Infectious Diseases

**Administer antibiotics within 1 hour of presentation:**

- Do not delay antibiotics while waiting for lab results
- IV fluid bolus(es) if indicated

**Re-evaluation at 48 hours of empiric therapy**

**Positive culture obtained or source identified?**

- **YES**
  - Consult Infectious Diseases to determine appropriate definitive treatment course

- **NO**
  - **YES**
    - If previously started, consider discontinuation of extended grampositive coverage (e.g. daptomycin / vancomycin / cefaroline), even if patient remains febrile
    - Continue other agent(s) and close clinical assessment
    - Consider ID consult
  - **NO**
    - Patient afebrile before 5 days
    - **YES**
      - Source identified?
      - **YES**
        - Continue empiric antibiotics until ANC >200 and rising AND patient afebrile AND well-appearing
      - **NO**
        - If previously started, consider discontinuation of extended grampositive coverage (e.g. daptomycin / vancomycin / cefaroline), even if patient remains febrile
        - Continue other agent(s) and close clinical assessment
        - Consider ID consult
        - Patient remains febrile for 5 days or more*: Initiate empiric antifungal treatment
        - Call Infectious diseases to decide best choice, appropriate infection workup and if formal consult needed
        - Patient remains febrile for 5 continuous days
        - Also applies if fever resolves and then recurs while on antibiotics for 5 continuous days

*Also applies if fever resolves and then recurs while on antibiotics for 5 continuous days