Febrile Neutropenia Algorithm for High Risk Adult Patients – NO ALLERGY
(AML, ALL, AlloSCT, expected ANC < 500 for ≥10 days, GVHD with steroids > 20 mg/day, alemtuzumab therapy)

**Sepsis? Hemodynamic instability + new organ dysfunction**

- YES
  - Cefepime + Amikacin (A) + Vanc (V). Replace Cefepime with Pip/tazo if concern for intra-abdominal or peri-rectal source, oropharyngeal abscess, or VRE colonized.
  - If still febrile after 96 hours, assess antifungal prophylaxis
  - Evaluate the following:
    - Posaconazole trough
    - Chest imaging
    - History of azole exposure
    - Pattern of breakthrough fever
    - Evidence of candida infection (e.g. thrush, vaginal candidiasis, dermatitis)
  - Consider adding metronidazole to cefepime or changing antibacterial to meropenem if:
    - Limited azole exposure (<14 days, counting prior admissions)
    - Multiple episodes of breakthrough fever
    - Suspicion for typhlitis or neutropenic enterocolitis

- NO
  - Cefepime or Pip/tazo (add vanc only if specific criteria are met)**
  - If still febrile after 96 hours, assess antifungal prophylaxis
  - Consider continuing posaconazole and monitoring if:
    - Chest CT is negative
    - Posaconazole trough is adequate for prophylaxis
    - Single episode of breakthrough fever
    - Clinically stable
  - If multiple episodes of breakthrough fever and/or respiratory symptoms are present, obtain chest CT. If consistent with invasive mold infection and/or GM positive, change micafungin to voriconazole

**Vanc criteria**
Cellulitis
- Pneumonia documented radiographically
- Obtain sputum culture or nasopharyngeal swab (to determine colonization status); recommend 7 days vanc duration for pneumonia
- Catheter-related infection
  - Chills/fever with flushing catheter, catheter site infection, positive blood culture
  - MRSA colonization or prior infection

*Signs and symptoms of sepsis*
- SBP <90mmHg or MAP <65mmHg
- Creatinine increase >0.5mg/dL
- Acute oliguria
- Hyperlactatemia
- Altered mental status

**Continue current therapy and monitor if:**
- Single episode of breakthrough fever
- No respiratory symptoms
- Negative GM
- Clinically stable