Antibiotic Algorithm for Neutropenic Patients
Adult Leukemia and BMT and Adult Antimicrobial Stewardship Programs
Approved by P+T 5.14.2019

These are guidelines only and cannot be applied to every clinical situation. All patients should be examined carefully and treated for suspected focal infection if identified.

If at any point in the algorithm patient becomes unstable and needs ICU-level care, return to this step.

Considerations for anaerobic coverage and addition of metronidazole to cefepime
1) Intra-abdominal infection
2) Typhilitis

If recent bloodstream infection with a retained central line, antibiotic coverage should include an agent active against the prior blood culture isolate. In patients with recent (< 90 days) clinical cultures with drug-resistant organisms, empirical therapy should typically include coverage for these organisms.

Refer to the UCSF Adult Beta-lactam Allergy Guideline if listed allergy is present.

Patients on renal replacement therapy are at risk for cefepime neurotoxicity. Pay attention to appropriate dosing. Piperacillin/tazobactam is an alternative.

Step 4: Fungal Work-Up/Tx
1) Cont antifungal
2) Cont cefepime
3) Additional fever work-up
4) Transplant ID consult?

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Clinical response after 3-5 days?
1) D/C antifungal
2) Cont cefepime
3) Additional fever work-up
4) Transplant ID consult?

Positive fungal work-up?
1) D/C antifungal
2) Cont cefepime
3) Additional fever work-up
4) Transplant ID consult?

Resolution of fever and other signs of infection by day 4-5?
1) D/C vancomycin at 48hrs if applicable
2) Continue cefepime

Regardless of ANC, stop IV antibiotics 72 hours after last fever; restart bacterial prophylaxis if indicated
1) D/C vancomycin
2) D/C tobramycin (if ordered)
3) D/C if caspofungin (if ordered) once culture negative for 96hrs
4) Continue meropenem or change to piperacillin/tazobactam for 7 days from point of clinical stability
5) Restart bacterial prophylaxis, if indicated

Positive cultures or work-up?
1) D/C levofloxacin or cefepime
2) Start meropenem and vancomycin
3) If not on voriconazole ppx, and high risk for candidemia, consider caspofungin
4) Consider addition of tobramycin if not responding

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3) If not on voriconazole ppx, and high risk for candidemia, consider caspofungin
4) Consider addition of tobramycin if not responding

Still unstable?
1) D/C antifungal
2) Cont cefepime
3) Additional fever work-up
4) Transplant ID consult?

ID consult pager: 443-2552
ASP Voalte: (628)248-5602

If cultures positive with a suspected pathogen, antibiotics to be targeted at that organism. If not needed for treatment of recovered pathogen, cefepime should be stopped and bacterial prophylaxis restarted.

If clinical syndrome consistent with Cdiff:
1) Treat per UCSF Cdiff guidelines
2) D/C all other empiric antibiotics as soon as possible

For Step 4, fungal work-up/Tx, please see full SOP

For 4 Consideration of MRSA infection:
1) Bacterial pneumonia
2) Skin and soft tissue infection
3) Evidence of central line infection
4) Recent systemic MRSA infection

5 Consideration of MRSA infection:
1) Intra-abdominal procedure
2) TPN
3) >7 days broad spectrum abx
4) Long-term central line
5) Candida colonization

6 Considerations for candidemia:
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