

SHC Guidelines for Antimicrobial De-Escalation in Febrile Neutropenia

Situation: Broad-spectrum antimicrobial therapy for febrile neutropenia is often continued longer than necessary based on clinical guideline recommendations.

Background: Broad-spectrum antimicrobial therapy with an anti-pseudomonal beta-lactam antibiotic (and in select cases, vancomycin) is appropriate for initial treatment in a patient with febrile neutropenia based on NCCN and ASCO guidelines. However, appropriate de-escalation from these broad-spectrum agents is often lacking.

Assessment: Guidance for anti-microbial de-escalation in febrile neutropenia is necessary to encourage judicious use of broad-spectrum antimicrobials while also ensuring patients are given adequate treatment.

Recommendation:

1. For patients who are clinically stable/improving and are afebrile for 72 hours with no identified infectious source, discontinue broad-spectrum antimicrobial therapy.
 - a. If ANC is ≥ 1000 cells/mcL, discontinue all antimicrobial therapy.
 - b. If ANC < 1000 cells/mcL, de-escalate to appropriate antimicrobial prophylaxis based on SHC Oncology Antimicrobial Prophylaxis Guidelines.
2. For patients who are clinically worsening or have persistent fever but are otherwise clinically stable, consider broadening coverage based on clinical and microbiologic data to include other organisms not covered by empiric regimen.
 - a. Antimicrobial therapy should NOT be escalated in the absence of new specific clinical findings and/or microbiologic results.
 - i. An exception to this is patients with persistent fever lasting ≥ 4 days, in whom addition of a mold-active antifungal should be considered.
 - b. ID consult should also be considered for persistent fever without a source.
3. For patients with an identified infectious source, treat with the narrowest antibiotic possible that covers the infectious organism (taking into account sensitivities) for the duration recommended for the type of infection present.

References:

1. Taplitz RA, Kennedy EB, Bow EJ, et al. Outpatient management of fever and neutropenia in adults treated for malignancy: American Society of Clinical Oncology and Infectious Diseases Society of America Clinical Practice Guideline update. *J Clin Oncol*. 2018;36(14):1443-1453.
2. Zimmer AJ, Freifeld AG. Optimal management of neutropenic fever in patients with cancer. *J Oncol Pract*. 2019;15(1):19-24.
3. Aguilar-Guisado M, Espigado I, Martín-Peña A, et al. Optimisation of empirical antimicrobial therapy in patients with haematological malignancies and febrile neutropenia (How Long study): an open-label, randomised, controlled phase 4 trial. *Lancet Haematol*. 2017;4(12):e573-83.
4. NCCN Guidelines® for Prevention and Treatment of Cancer-Related Infections v3.2024 – September 23, 2024.