MSH + UHN ASP ANTIMICROBIAL STEWARDSHIP PROGRAM

HIGH-RISK FEBRILE NEUTROPENIA PROTOCOL WITH ADDED SECTION ON MANAGEMENT OF PULMONARY INILTRATES (OCTOBER 2014 VERSION)

FREQUENTLY ASKED QUESTIONS

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1. What are the new features and changes in this version compared to the last one?

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Guidance on management of pulmonary infiltrates, Section 3b (details below)
    - **For optimal user's experience, especially with examples of CT images, please open the file with Adobe® Reader.** This applies to both Windows and Macintosh users.
    - **Click on each CT image to enlarge, and then click again to minimize.**
- Emphasize re-assessment of aminoglycoside, and vancomycin (if selected) in patients at risk of acute kidney injury after the first dose has been given. We aim to taken advantage of the benefits of appropriate empiric therapy, while minimizing their adverse effects.
- Minor changes (streamlining) to prophylactic antimicrobials.

2. What was the need for the additional section on pulmonary infiltrates?

Once the High-Risk Protocol was implemented, we recognized that recommendations are required for a common scenario where the clinician requests a low-dose chest CT due to the patient's risk factors and clinical presentation, before microbiological tests are underway. Based on results from the low-dose chest CT, clinical decision regarding interim antimicrobial management and consultation with specialist teams may become necessary. It is intended to complement the existing Section 3 which addresses the use of pre-emptive antifungals following positive surveillance serum galactomannan test.

3. Who was involved in the development of this Pulmonary Infiltrate Protocol?

Our working group was multidisciplinary-disciplinary, with representatives from Malignant Hematology (Dr. Andre Schuh); Allogeneic Bone Marrow Transplant (Drs. Jeff Lipton, Matthew Seftel); Infectious Diseases/Antimicrobial Stewardship (Dr. Shahid Husain, Dr. Andrew Morris and Miranda So, PharmD); Respirology (Drs. Meyer Balter, Puja Sahni, Clodagh Ryan); Radiology (Dr. Heidi Roberts). **We are very grateful to our working group members for their time, expertise and invaluable insights in creating this section**. The document then underwent consultative reviews by members of Infectious Diseases and Malignant Hematology for further refinement.

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4. Why would follow-up CT not be recommended routinely?

If patient is improving clinically, there is no strong rationale to repeat CT as "proof of cure", especially since radiological changes often fall behind clinical improvement. Importantly, if the patient's bone marrow is in recovery phase, imaging studies may appear worse, and not correlate with clinical improvement. Follow up CT is therefore only recommended if there is suspicion of clinical progression or non-response.

5. What does each abnormality on low-dose CT represent?

- Nodules halo signs, reverse halo signs, crescent signs: potentially invasive *Aspergillus* infection
- Greater than 10 small nodules with pleural effusion: potentially mucormycosis
- Ground glass opacity, interstitial pattern and consolidation: potentially bacterial or viral infections

We provided CT images (courtesy of Dr. Heidi Roberts) to supplement the description of the abnormalities, though indeed they are for information only and do not substitute clinicians' judgment.