

Take this letter with you to the Emergency Department and give it to the Nurse or Doctor when you arrive.

To: **Emergency Department Physician and Nurse**

RE: Febrile Neutropenia

From: Dr. \_\_\_\_\_ (patient's medical oncologist or hematologist) at  
\_\_\_\_\_ (name of cancer centre).

This patient recently received chemotherapy. They have been instructed to report to the nearest Emergency Department as soon as possible if **febrile (a single oral temperature of 38.3°C/100.9°F or higher or an oral temperature reading of 38.0°C/100.4°F measured at two occasions, one hour apart)**. If left untreated, this complication of febrile neutropenia could lead to life-threatening sepsis.

### Assessment

If this patient presents to you with a fever as defined above, they should undergo a:

- History and physical exam to determine the site of infection
- Complete hematological profile and chemistry profile (see Table 1 below)
- Chest-x-ray

**Table 1.** Hematological, Chemistry and Culture Recommendations:

Recommendation	Notes
CBC with differential/absolute neutrophil count (ANC)	Neutropenia is defined by an absolute neutrophil count (ANC) less than $0.5 \times 10^9$ cells/L or an ANC less than $1.0 \times 10^9$ cells/L with an expected fall to less than $0.5 \times 10^9$ cells/L within the next 48 hours
Blood cultures x 2	
Electrolyte panel	
CR, Bilirubin, Alk Phos, Transaminases (ALT or AST)	
Urinalysis and culture	Absence of pus cells on urinalysis does not rule out UTI in the setting of neutropenia
Sputum gram stain and culture	If productive
Nasopharyngeal swab for viral respiratory panel PCR	If respiratory symptoms are present

For complete recommendations and evidence, access the full guideline at:

[www.ahs.ca/guru](http://www.ahs.ca/guru) > Symptom Management > Febrile Neutropenia

### Treatment - No focus of infection is identified and **ANC is between $0.5$ and $1.0 \times 10^9$ cells**

- Call the oncologist or hematologist (see contact information below) for consultation of antibiotic administration, hospitalization or follow-up arrangements

**Treatment Recommendations – Focus of infection identified or ANC is less than  $0.5 \times 10^9$  cells**

Combination therapy	<ul style="list-style-type: none"> <li>Piperacillin-tazobactam 4.5 grams IV every 8 hours</li> <li>Hemodynamically unstable or septic shock patients: <math>\beta</math>-Lactam plus an aminoglycoside plus vancomycin until C&amp;S results are available [Vancomycin 15 mg per kg IV every 12 hours, in combination with either gentamicin 5-7 mg/kg IV every 24 hours or tobramycin 7 mg/kg IV every 24 hours].</li> </ul>
Monotherapy (alternative for penicillin-allergic patients)	<ul style="list-style-type: none"> <li>Cefepime 2 grams IV every 8 hours for penicillin-allergic or anaphylactic patients. <b><i>Due to the current shortage of cefepime, alternatives include combination therapy as listed above, Carbapenem monotherapy or empiric vancomycin.</i></b></li> <li>Alternative: Carbapenem monotherapy. In order to prevent the carbapenem resistance, carbapenems should not be used in first line unless there is a known or suspected infection with ESBL/Amp C cephalosporinase-producing organisms or a penicillin allergy.</li> </ul>
Empiric vancomycin	Consult the guideline <a href="http://www.ahs.ca/guru">www.ahs.ca/guru</a> (Symptom Management > Febrile Neutropenia)

**Contact Information for Medical Staff**

Please call the patient's oncologist:

<b>Daytime Weekdays</b>	
<b>Calgary</b> (Tom Baker Cancer Centre)	403-521-3735 or Toll Free 1-844-465-6330 After hours, weekends and holidays call the Foothills Medical Centre at 403-944-1110 (ask to speak to the oncologist or hematologist on call)
<b>Edmonton</b> (Cross Cancer Institute)	780-432-8771 or Toll Free 1-877-707-4848 After hours, weekends and holidays call 780-432-8771 (ask to speak to the oncologist or hematologist on call)
<b>Grande Prairie</b> (Grande Prairie Cancer Centre)	825-412-4200
<b>Lethbridge</b> (Jack Ady Cancer Centre)	403-388-6800
<b>Medicine Hat</b> (Margery E. Yuill Cancer Centre)	403-529-8817
<b>Red Deer</b> (Central Alberta Cancer Centre)	403-343-4526
<b>After Hours</b>	
To locate the oncologist on call after hours, or if septic shock is a concern	<b>RAAPID North</b> at 1-800-282-9911
	<b>RAAPID South</b> at 1-800-661-1700

Thank you for your assistance in the care of this patient.