Neutropenic Fever Outpatient Treatment For Solid Tumor Patients (18 years and older)

This practice algorithm has been specifically developed for MD Anderson using a multidisciplinary approach and taking into consideration circumstances particular to MD Anderson, including the following: MD Anderson’s specific patient population; MD Anderson’s services and structure; and MD Anderson’s clinical information. Moreover, this algorithm is not intended to replace the independent medical or professional judgment of physicians or other health care providers. Based on general principles, local microbiology and susceptibility/resistance patterns should be taken into consideration when selecting antibiotics.

Patient presents with fever to MDACC

- Complete physical exam
- Start IV fluids
- CBC with differential and platelets, BMP, lactic acid
- Blood cultures (with a set collected from each lumen simultaneously if CVC present and 1 peripheral site); other cultures (e.g., sputum culture, urinalysis with culture and sensitivity) only if clinically indicated
- Chest x-ray or other tests as clinically indicated
- Calculate MASCC score (See Appendix A)

Patient must meet all of the following criteria for outpatient treatment:
- Solid tumor
- Able to tolerate oral medications
- Able to tolerate fluids
- Does not use feeding tube as primary route for nutrition and medications
- No confirmed focus of infection
- Lives within 1 hour travel time of MD Anderson
- Has a 24 hour caregiver
- Not currently on antibiotics
- Has access to transportation and telephone at residence
- 18 years of age or older
- No quinolone allergy for oral regimens
- Patient is considered low risk (i.e., MASCC score greater than or equal to 21 and no other complicating factors present)
- No colonization with fluoroquinolone-resistant or multi-drug resistant organisms

First dose of each antibiotic should be given STAT in the EC for all febrile neutropenic patients

- Patient should be observed 4 hours prior to discharge
- Selection of antimicrobials should be performed after careful review of antimicrobial allergies, recent antimicrobial exposure, past infections and microbiological studies
- Combination therapy is preferred:
  - Ciprofloxacin 750 mg PO twice daily and amoxicillin/clavulanic acid 875 mg PO twice daily each for 7 days
  - Combination therapy if true penicillin allergy:
    - Clindamycin 600 mg PO three times daily and ciprofloxacin 750 mg PO twice daily each for 7 days
  - Monotherapy (No randomized control trials):
    - Levofloxacin 750 mg PO daily for 7 days or
    - Moxifloxacin 400 mg PO daily for 7 days

Note: Doses indicated are for patients with normal renal/hepatic function

- Schedule outpatient visit for Days 2, 3 and 7 and phone follow-up for Days 4, 5 and 6
- Day 2: CBC with differential; repeat creatinine if baseline greater than 1.2 mg/dL
- Day 3: CBC with differential, repeat creatinine
- Day 7: CBC with differential, repeat creatinine or phone follow-up if NF has resolved

If unable to adhere to or if patient experiences persistent fever, refer to Neutropenic Fever Inpatient Adult Treatment (Solid Tumors, Lymphoma, Myeloma) Algorithm

Solid Tumor Patients
Neutropenic Fever

Criteria met?

Yes

- 

No

Refer to Neutropenic Fever Inpatient Adult Treatment (Solid Tumors, Lymphoma, Myeloma) Algorithm

NF = neutropenic fever

ANC less than 1 K/microliter and temperature greater than or equal to 38.3°C or equal to 38°C for 1 hour or longer

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APPENDIX A: Multinational Association for Supportive Care in Cancer (MASCC) Risk Index Score

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burden of illness: no or mild symptoms</td>
<td>5</td>
</tr>
<tr>
<td>No hypotension</td>
<td>5</td>
</tr>
<tr>
<td>No chronic obstructive pulmonary disease</td>
<td>4</td>
</tr>
<tr>
<td>Solid tumor 4</td>
<td></td>
</tr>
<tr>
<td>No dehydration</td>
<td>3</td>
</tr>
<tr>
<td>Burden of illness: moderate symptoms</td>
<td>3</td>
</tr>
<tr>
<td>Outpatient status</td>
<td>3</td>
</tr>
<tr>
<td>Age less than 60 years</td>
<td>2</td>
</tr>
</tbody>
</table>

- “Burden of illness” not cumulative
- Patients with score of 21 or greater are considered low risk

\textsuperscript{1} Neutropenic Fever
Neutropenic Fever\(^1\) Outpatient Treatment For Solid Tumor Patients (18 years and older)

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SUGGESTED READINGS


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Neutropenic Fever 1 Outpatient Treatment For Solid Tumor Patients (18 years and older)

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SUGGESTED READINGS - continued


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Neutropenic Fever 1 Outpatient Treatment For Solid Tumor Patients (18 years and older)

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SUGGESTED READINGS - continued


Neutropenic Fever\(^1\) Outpatient Treatment For Solid Tumor Patients (18 years and older)

This practice consensus algorithm is based on majority expert opinion of the Neutropenic Fever Work Group at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following core group members:

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- Terry W. Rice, MD (Emergency Medicine)
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- Frank P. Tverdek, PharmD (Pharmacy Clinical Programs)
- Anita M. Williams, BS
- Sonal Yang, PharmD

\(^T\) Core Development Team Lead
\(^\circ\) Clinical Effectiveness Development Team

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DEVELOPMENT CREDITS