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

Disclaimer: *This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson's specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providersin the context of individual clinical circumstances to determine a patient's care. Local microbiology and susceptibility/resistance patterns should be taken into consideration when selecting antibiotics. This algorithm should not be used to treat pregnant women.*

Patient presents with suspected or proven neutropenia **and** fever

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

Assess if patient is considered low risk: (*i.e.*, MASCC Risk Index score ≥ 21 and no other complicating factors present) **and** meets 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
- Resides within 1 hour travel time of MD Anderson
- Has a 24-hour caregiver
- Has access to transportation and telephone at residence
- Age ≥ 18 years old
- No quinolone allergy for oral regimens
- No colonization with fluoroquinolone-resistant or multi-drug resistant organisms
- No history of non-compliance
- Not currently on antibiotics

Does patient meet criteria?

Yes

- First dose of each antimicrobial should be given STAT in the EC for all febrile neutropenic patients
- Patient should be observed ≥ 4 hours after initial dose of antimicrobial prior to discharge
- Selection of antimicrobials should be performed after careful review of antimicrobial allergies, recent antimicrobial exposure, past infections and microbiological studies
- First line therapy[2]:
  Ciprofloxacin 750 mg PO twice daily **and**
  Amoxicillin/clavulanic acid 875 mg PO twice daily each for 7 days
- First line therapy[2] if penicillin allergy *(i.e.*, IgE-mediated or other serious reaction**):**
  Ciprofloxacin 750 mg PO twice daily **and**
  Clindamycin 600 mg PO three times daily each for 7 days
- Second line therapy[2]:
  Levofloxacin 750 mg PO daily for 7 days

Tolerates therapy **and** no persistent fever?

Yes

Able to adhere to outpatient follow up[3]?

Yes

Schedule patient for outpatient follow up[3]

No

Refer to Neutropenic Fever Inpatient Adult Treatment (Solid Tumors) algorithm

No

Refer to Neutropenic Fever Inpatient Adult Treatment (Solid Tumors) algorithm

[1] ANC < 1 K/microliter and temperature ≥ 38.3°C **or** equal to 38°C for 1 hour or longer
[2] Doses indicated are for patients with normal renal/hepatic function
[3] See Appendix B: Outpatient Follow up

BMP = basic metabolic panel
MASCC = Multinational Association of Supportive Care in Cancer
NF = neutropenic fever

Department of Clinical Effectiveness V7
Approved by The Executive Committee of the Medical Staff on 09/17/2019

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

MASCC Score

Characteristic	Weight
Burden of illness: no or mild symptoms	5
No hypotension	5
No chronic obstructive pulmonary disease	4
Solid tumor	4
No dehydration	3
Burden of illness: moderate symptoms	3
Outpatient status	3
Age < 60 years	2

- "Burden of illness" not cumulative
- Patients with score ≥ 21 are considered low risk

APPENDIX B: Outpatient Follow Up

- 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

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