UNMH Fever and Oncology Pathway in a Well Appearing Child

5 min

Triage Screening Tool

Triage Screening Tool Positive

No → **UNMH Pediatric ED Sepsis Pathway if Abnormal Heart Rate or Ill Appearing**

YES

Immediate PED Bed Placement, Triage B
MD/RN Rapid Team Assessment

5-20 min

PHYSICIAN

ORDER labs and ANTIBIOTICS:

- Use careset "**ED Peds Sepsis and Oncology (>60 days)**"
- In that careset use "**ED Peds Oncology Antibiotics**" for antibiotic order (see antibiotic recommendations on next page)
- Be sure to order a blood culture for each port

If URI symptoms order CXR and viral swab but beware bleeding if platelets < 20K

NURSING

ACCESS CENTRAL VENOUS CATHETER (two attempts then peripheral IV at 45 minutes if unsuccessful)

Draw Labs (with lactate, blood culture from each port and label "green port," "red port," etc.)

Verify antibiotic order, remind MD if needed

If failed IV, ask for IM antibiotics

20-40 min

ADMINISTER ANTIBIOTICS

60 min

Current Absolute Neutrophil Count

ANC < 500

Discuss with Hem/Onc Attending

Admit to Hospital[1]

ANC > 500

Discuss with Hem/Onc Attending

Discharge Criteria:

- Live within 30 min of UNM
- Hem/Onc follow-up in 24 hours

Positive Screen Includes	
Temp[1,2]	Fever > 38°C (101°F) by current or home measurement
Normal Heart Rate[3]	Age / Normal Heart Rate < 1 year: 90 - 180 1 – 2 yrs: 80 - 160 2 - 5 yrs: 65 - 140 6 - 12 yrs: 55 - 130 13 - 18 yrs: 50 - 120
PLUS ONE of the Following	• Currently on or recent chemotherapy • History of bone marrow transplant • Last known ANC < 500 • Central Line
AND MUST BE Well Appearing	• Normal mental status • Normal capillary refill (1-2 seconds) • Normal pulses without mottling • Normal heart rate (above)

TRIAGE LEVEL B

If ill-appearing or abnormal heart rate see UNMH Pediatric ED Sepsis Pathway

PRACTICE CHANGE: Antibiotics will need to be administered before the ANC results[6]

GUIDELINE GOALS:

Appropriate antibiotics given within 60 minutes[4,5]
Optimizing access of central venous catheter[7]
Appropriate blood cultures with correct labeling
Discussion with Hem/Onc Attending[1]
Appropriate disposition

ANTIBIOTIC RECOMMENDATIONS[8]

Use "ED Peds Oncology Antibiotics"

Suspect Neutropenia if:
Oncology attending suspects neutropenia on pre-arrival call **OR** ANC < 500 within the last week

Neutropenia Unlikely or Unsure[2]	Ceftriaxone
Suspected Neutropenia[1,2,8]	Cefepime
Anaphylactic penicillin allergy (Neutropenia unlikely and Suspected Neutropenia)[2,8]	Aztreonam
Septic Oncology Patient (+/- Neutropenia)[1] **Use UNMH Pediatric ED Sepsis Pathway**	Cefepime and Vancomycin

If Ceftriaxone is given and ANC results < 500 then give appropriate dose of Cefepime

Recommended Labs [1,8]: STAT CBC/Diff, CRP, UA/Culture
Blood culture for EACH PORT
If URI symptoms consider: CXR, viral swab but beware bleeding for platelets < 20K

Common Antibiotic Dosing:

Cefepime
<10kg: 50mg/kg q8h
10-12kg: 550 mg q8h
13-15kg: 700 mg q8h
16-18kg: 850 mg q8h
19-22kg: 1000 mg q8h
23-27kg: 1250 mg q8h
28-32kg: 1500 mg q8h
33-37kg: 1750 mg q8h
>37kg: 2000 mg q8h

Ceftriaxone
<10kg: 50 mg/kg q24h
10-12kg: 550 mg q24h
13-15kg: 700 mg q24h
16-18kg: 850 mg q24h
19-22kg: 1000 mg q24h
23-27kg: 1250 mg q24h
28-32kg: 1500 mg q24h
33-37kg: 1750 mg q24h
>37kg: 2000 mg q24h

Aztreonam
<14kg: 30 mg/kg q8h
14-16kg: 400 mg q8h
17-19kg: 500 mg q8h
20-23kg: 600 mg q8h
24-26kg: 700 mg q8h
27-29kg: 800 mg q8h
30-33kg: 900 mg q8h
34-36kg: 1000 mg q8h
37-39kg: 1100 mg q8h
40-43kg: 1200 mg q8h
44-46kg: 1300 mg q8h
47-49kg: 1400 mg q8h
50-53kg: 1500 mg q8h
54-56kg: 1600 mg q8h
57-59kg: 1700 mg q8h
60-63kg: 1800mg q8h
64-66kg: 1900 mg q8h
>67kg: 2000mg q8h

Vancomycin
<13kg: 15mg/kg q6h
13-14kg: 200mg q6h
15-18kg: 250mg q6h
19-21kg: 300mg q6h
22-24kg: 350mg q6h
25-27kg: 400mg q6h
28-30kg: 450mg q6h
31-35kg: 500mg q6h
36-37kg: 550mg q6h
38-45kg: 625mg q8h
46-53kg: 750mg q8h
54-62kg: 875mg q8h
63-74kg: 1000mg q8h
>74kg: 1250mg q8h

Other Antibiotic Dosing

Antibiotic	First Dose IV	Maximum
Meropenem	**20 mg/kg**	**1 gram**
Clindamycin	**10 mg/kg**	**600 mg**
Ertapenem	**15 mg/kg**	**1 gram**

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3. Bonafide CP, Brady PW, Keren R, Conway PH, Marsolo K, Daymont C. Development of Heart and Respiratory Rate Percentile Curves for Hospitalized Children. Pediatrics. Volume 131, Number 4, April 2013.
4. Fletcher, M., Hodgkiss, H., Zhang, S., Browning, R., Hadden, C., Hoffman, T., Winick, N. and McCavit, T. L. (2013), Prompt administration of antibiotics is associated with improved outcomes in febrile neutropenia in children with cancer. Pediatr Blood Cancer, 60: 1299–1306. doi:10.1002/pbc.24485
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6. Lamble A, Nguyen T, Lindemulder, T, Spiro, D Malempati S, Nolt D, Stork L. A Clinical Pathway to Reduce Time to Antibiotic Administration in Pediatric Cancer Patients With Fever and Potential Neutropenia. *Journal of Clinical Pathways*. 2015;1(2):33–42
7. Volpe D, Harrison S, Damian F, Rachh P, Kahlon P, Morrissey L, Mack J, Akenroye A, Stack A. Improving Timeliness of Antibiotic Delivery for Patients With Fever and Suspected Neutropenia in a Pediatric Emergency Department. Pediatrics Jul 2012, 130 (1) e201-e210;
8. Freifeld A, Bow E, Sepkowitz K, Boeckh M, Ito J, Mullen C, Raad I, Rolston K, Young J, Wingard J. Clinical Practice Guideline for the Use of Antimicrobial Agents in Neutropenic Patients with Cancer: 2010 Update by the Infectious Diseases Society of America. *Clinical Infectious Diseases*. 2011; 52, (4): 56-93