**Inclusion Criteria:**
1. Oncology patients receiving chemotherapy/radiation AND
2. Fever: temperature (obtained in any way) at home or in hospital ≥38 sustained over an hour, or ≥38.5 at any time OR
   the patient is ill-appearing (hypothermic/hypotensive/altered mental status)

**Exclusion Criteria:**
1. Patients who completely finished chemotherapy >1 mo ago AND no longer have a central venous line (CVL); (2) Bone marrow transplant

### Initial Management:
**ED RN:**
- Obtain vitals ASAP upon presentation
- Obtain vascular access and labs per Nursing Treatment Protocol
  - Access port/central line if present. Place PIV if unable to access or no CVL
  - Blood cultures from all lumens of CVL; peripheral blood CX only if PIV placed
  - CBC with diff
- If febrile and not already given in last 4 hours:
  - Give acetylcystein 15 mg/kg PO
- Do NOT give any medications per rectum.
- Do NOT give NSAIDs (contraindicated in oncology patients).

**ED Provider:**
- **STAT:** Order antibiotics1 and labs (CBC w diff, blood cultures if not done by RN) – see dosing below2
- Obtain H&P
  - Type of cancer; stage of treatment; recent chemo (type, date); hx of prior infections; mucositis; CVL erythema/discharge/pain; prior complications; signs of neutropenic enterocolitis
  - Consider further work up as indicated (CRP, chemistries, LFTs, UA/LuCr, CXR, type & screen)

### Discharge Criteria:
1. Well appearing; (2) tolerating PO; (3) Afebrile x 24 hours; (4) negative blood cultures; (5) APC >200 with rising ANC ≥2 days; (6) outpatient follow up in place

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**ED Triage: Triage ESI Level 2**

### High Risk2
- Ill-appearing
- Skin soft tissue infection
- Mucositis
- Concern for neutropenic enterocolitis
- Pneumonia
- Hx of strep viridans or known ESBL colonization
- If ANC < 500:
  - ALL, not in maintenance
  - AML
  - Relapsed ALL/Lymphoma
  - Down syndrome

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**Antibiotics: Start antibiotics ASAP (if not already given in the ED)**
- Piperacillin/Tazobactam 100 mg/kg q6hr IV (max 4.5 g/dose)
  - If allergy: Clindamycin 10 mg/kg q6hr IV (max 600 g/dose) AND Ciprofloxacin 10 mg/kg q8hr IV (max 400 g/dose)
- Labs:
  - CBC q24hr
  - Blood culture q24hr from all CVL lumens if patient remains febrile

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PUBLIC CLINICAL PATHWAY:  Oncology Patient with Fever

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**'GIVE ANTIBIOTICS within 1 hour of presentation!**

Do NOT wait until labs have returned! Review any labs completed in past 24 hours.

### Standard Risk:
- ANC ≥ 500 (on CBC done in last 24 hr) AND well appearing; OR no CBC available:
  - Ceftriaxone 75 mg/kg IV (max 2 g) x 1 dose
  - If allergy: Levofloxacin 6 mo-4 yr: 10 mg/kg, 5-9 yrs old: 7 mg/kg, ≥10 yrs old: 10 mg/kg (max 750 mg) x 1 dose
- ANC < 500 (on CBC done in last 24 hr) OR ill-appearing:
  - Piperacillin/Tazobactam 100 mg/kg (max 4.5 g) x 1 dose
  - If allergy: Ciprofloxacin 10 mg/kg q6hr IV (max 600 g/dose) AND Ciprofloxacin 10 mg/kg q8hr IV (max 400 g/dose)

### High Risk2
- Ceftazidime 50 mg/kg IV x 1 dose AND Vancomycin 15 mg/kg IV (max initial dose 1 g/dose) x 1 dose

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**Discharge home if following criteria met:**
- Family able to return q24hr if still febrile
- Discussion with Heme/Onc attending re: disposition
- Follow-up with Heme/Onc if Ceftriaxone allergy: Provide prescription for 24 hours of coverage of levofloxacin:
  - 6 mo-5yr: 12 mg/kg q12hr
  - 5-10 yr: 8 mg/kg q12hr
  - >10 yr: 10 mg/kg q24hr
  - max 750 mg/day for all ages

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**Antibiotics: Start antibiotics ASAP (if not already given in the ED)**
- Vancomycin IV 15 mg/kg (max initial dose 1 g/dose) subsequent dosing per pharmacy AND
- Ceftazidime 50 mg/kg q8hr [max 2 g/dose] AND Clindamycin 10 mg/kg q6hr IV (max 600 g/dose)

### Labs:
- CBC q24hr
- Blood culture q24hr from all CVL lumens if patient remains febrile

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If negative blood culture =48 hours (after starting Vancomycin) and well appearing:
- Discontinue Vancomycin (even if still febrile)
- Change Ceftazidime to Piperacillin/Tazobactam

If positive blood culture or history of multi-drug resistant organisms:
- Consider Infectious Disease consult

If febrile >96 hours OR new fever after afebrile x 24 hr with persistent neutropenia:
- Consider starting anti-fungal therapy: Micafungin 3 mg/kg daily (max 150 mg/day)
  - If concern for mucor or CNS/urine disease: consider Liposomal Amphotericin B 3 mg/kg daily
- Prior to starting antifungals: Send fungal culture, aspergillus antigen (galactomannan)
- Consider Infectious Disease consult

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**CONTACTS: NATALIE BEZLER, MD | ANDREA ORSEY, MD**

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