Cellulitis Protocol

**Is lesion red, warm, swollen, tender with flat margins?**

- NO or UNSURE → See ABCESS I&D pathway
- YES → Fluctuant mass present?
  - NO → CELLULITIS
  - YES → "Trigger"?
    - NO → Cellulitis Protocol
    - YES → "Trigger" / Immunocompromised
      - YES → Immunocompromised
      - NO → Cellulitis Protocol

**Differential Diagnosis**
- MILD
  - "Typical cellulitis" with no signs of systemic infection, afebrile, well-controlled co-morbidities, not located on face or hands.
  - OUTPATIENT MANAGEMENT:
    - Keflex 500 mg QID x 7 days
    - Clindamycin 300-450 mg TID x 7 days if penicillin allergic
    - If concern for MRSA (carbuncle or abcess, IVDU, previous MRSA, failed initial treatment, immunocompromised) add:
      - Bactrim 160/800 mg BID x 7 days for patients < 70 kg or 320/1600 mg BID x 7 days for patients > 70 kg.
    - For anti-inflammatory effect on induration, consider empiric ibuprofen 800 mg TID x 5 days in patients < 50 years of age with no impairment of renal function

- MODERATE
  - Cellulitis with signs of systemic infection (HR > 100, SBP < 90, RR > 20), also consider in patients with poorly controlled co morbidities (heart failure, diabetes, hypertension, etc).
  - OUTPATIENT MANAGEMENT:
    - Keflex 500 mg QID x 7 days
    - Clindamycin 300-450 mg TID x 7 days if penicillin allergic
    - If concern for MRSA (carbuncle or abcess, IVDU, previous MRSA, failed initial treatment, immunocompromised) add:
      - Bactrim 160/800 mg BID x 7 days for patients < 70 kg or 320/1600 mg BID x 7 days for patients > 70 kg.
    - For anti-inflammatory effect on induration, consider empiric ibuprofen 800 mg TID x 5 days in patients < 50 years of age with no impairment of renal function
    - Does patient meet any of the following criteria?
      - Outpatient treatment failure
      - Significant lower extremity edema or venous insufficiency
      - WBC > 15,000; Albumin < 3
      - Lactate > 2
      - History of liver or kidney disease
    - NO → Inpatient management:
      - Nafcillin / oxacillin 1-2 g or cefazolin 1 g
      - Clindamycin 600 mg if penicillin allergic
      - Concern for MRSA?
        - Vancomycin 20 mg/kg, OR
        - Linezolid 600 mg, OR
        - Bactrim 160/800 mg BID x 7 days for patients < 70 kg, OR
        - Bactrim 320/1600 mg BID x 7 days for patients > 70 kg.
      - Inpatient management:
        - Standard sepsis workup (blood cxs, IV fluids, etc)
        - Broad spectrum Abx:
          - Vancomycin 25 mg/kg + Zosyn (weight-based per pharmacy)
          - Meropenem is penicillin allergic
        - Concern for Clostridium / necrotizing fasciitis? (Pain out of proportion to exam, crepitus, hx of trauma/diabetes/immunocompromise, rapid progression)
          - Clindamycin 600-900 mg + Vancomycin 20 mg / kg + Zosyn (weight based per pharmacy)
        - See NECROTIZING FASCIITIS PATHWAY
    - YES → Consider ED Observation

- SEVERE
  - Cellulitis that meets "moderate" in-patient criteria + toxic appearance or altered mental status + signs of septic shock with lactate > 4
  - Inpatient management:
    - Standard sepsis workup (blood cxs, IV fluids, etc)
    - Broad spectrum Abx:
      - Vancomycin 25 mg/kg + Zosyn (weight-based per pharmacy)
      - Meropenem is penicillin allergic
    - Concern for Clostridium / necrotizing fasciitis? (Pain out of proportion to exam, crepitus, hx of trauma/diabetes/immunocompromise, rapid progression)
      - Clindamycin 600-900 mg + Vancomycin 20 mg / kg + Zosyn (weight based per pharmacy)
    - See NECROTIZING FASCIITIS PATHWAY

**Disclaimer:** Cellulitis in atypical areas such as the hands, feet, or face is not included in this algorithm as these disease entities often require different treatment and specialty consultation.