



# >> Sepsis <<



**Definition:** Life-threatening organ dysfunction caused by dysregulated immune response to infection

## Epidemiology

- 1 million cases per year in the United States
- **30-50% mortality rate**
- 50% cases due to Gram (-) bacteria

### Common sources of infection

- Lungs, abdomen, urinary tract, SSTI

### Risk factors

- Neonate, >65 y.o., CKD, diabetes, cirrhosis, cancer, HIV, transplant patient

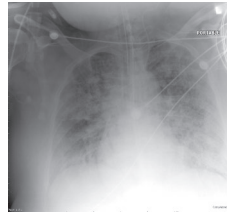
## Evidence of Organ Dysfunction

- **Pulmonary:** Hypoxemia on ABG labs
- **Renal:** Oliguria, elevated Cr
- **Hepatic:** Elevated AST/ALT and bilirubin
- **Cardiac:** Hypokineses seen on echo
- **Coagulopathy:** DIC, thrombocytopenia
- **Lactic acidosis** due to widespread hypoperfusion of organs



Purpuric lesions

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## Sepsis

SOFA score assesses severity  
qSOFA score (>2 = worse prognosis) →

- RR >22/min
- Altered mentation
- Systolic BP <100 mm Hg

## Septic Shock

- SOFA score >2
- Vasopressor requirement to have MAP >65 mm Hg
- Lactate >2 mmol/L

## Multiple Organ Dysfunction Syndrome



## Clinical Manifestations

**\*\*Requires prompt diagnosis\*\***

- Fever, chills, or hypothermia
- Altered mental status
- Tachycardia, tachypnea, hypotension
- Petechiae or purpuric lesions
- **Ecthyma gangrenosum** seen in *Pseudomonas* spp. infections
- May progress to multi-organ failure (ie, ARDS, AKI, adrenal insufficiency)

## Diagnosis & Management

### Diagnosis

- 2016 SCCM/ESICM task force criteria (eg, SOFA scoring system)
- Blood, sputum, and urine cultures
- Culture of abscess drainage, if applicable

### Treatment

- Admission to the ICU; source control
- **Prompt initiation of broad-spectrum antimicrobial therapy**
- Fluid resuscitation and vasopressors
- Ventilation or dialysis as needed