

# Fever in Immuno-compromised host

(atypical infections are common!)

## Cellular immunodeficient Defect

### Cell-mediated immunity (dysfunctional/inadequate T-cells)

(Caused by: Chronic steroid use,  
organ transplants, HIV,  
congenital defect)

- Pneumonia
- CNS infection
- Disseminated herpes zoster
- Fungi: aspergillus, candida, PJP,  
mucor (mucor not seen in Alta, but  
yes in humid zones)
- Parasite: toxoplasmosis (esp  
symptomatic in immuno-  
suppressed people)

### Neutropenia, or neutrophil dysfunction

(Caused by: innate defect with  
phagocytic cell adhesion,  
chemotaxis, phagocytosis, and  
oxidative killing – catalase-  
positive organisms = biggest  
cause)

- Apthous ulcer
- Perirectal ulcer
- Abscess
- Soft-tissue and visceral  
infection
- Peridontal disease

## Structural immunodeficient Defect

(hypo/asplenia)

- encapsulated bacterial  
infections
- Bacteremia/septic shock

## Protein immunodeficient Defect

### Complement Deficiency

- bacteremia/septic  
shock
- Pneumonia
- Encapsulated  
bacteria infections
- lupus

### Hypo- gammaglobulinemia

- Recurrent sino-pulmonary  
infections (sinusitis,  
pneumonia, bronchitis)
- Encapsulated bacterial  
infections
- Chronic diarrhea (Giardia,  
campy, crypto)
- Enteroviral (echovirus)  
chronic meningitis

### Catalase-negative bacteria: SHE

- Streptococcus
- Hemophilus influenzae
- Enterococcus

### Catalase-positive bacteria:

- Most common: Staph aureus and E. coli
- Pseudomonas spp, Klebsiella, Candida,  
Nocardia, Aspergillus

### Encapsulated bacteria: SHINS

- Streptococcus pneumoniae (aka pneumococcus)
- Hemophilus Influenzae
- Neisseria
- Staphylococcus