

# Anemia of Chronic Inflammation

## Normochromic, normocytic anemia

### • Pathogenesis

- Immune-mediated dysregulation of iron homeostasis
  - **Hepcidin**
    - Produced in the liver in response to IL-6 & IL-1b
      - inhibits iron absorption in the GI tract
      - decreases the release of iron from macrophages
  - TNF-alpha, IL-1, and IFN-gamma reduce erythropoietin production
  - Reduced RBC production
  - Shortened RBC survival

### • Iron Panel Findings

- Low serum iron
- Low Transferrin (TIBC)
  - TIBC is usually elevated in iron deficiency anemia
- Ferritin is normal to increased
  - Ferritin is usually low in iron deficiency anemia

### • Other labs

- Elevated Hepcidin
  - Usually low in iron deficiency anemia
- Serum EPO is usually low
  - EPO is usually high in iron deficiency anemia
- Low reticulocyte count