Heparin-induced Thrombocytopenia

- **Pathogenesis of HIT**
  - heparin binds to a protein on inactivated platelets (PF-4) -creating heparin PF-4 complex
  - the complex is immunogenic in some individuals
    - IgG binds to the complex and activates the platelets
    - **Widespread activation of platelets** - forming clots throughout the body
      - usually venous clots -- DVT, PE, cerebral veins
      - arterial thrombosis -- less common in HIT
  - Platelets are consumed --> lowering the platelet count
  - **Thrombocytopenia develops 1-2 weeks after starting heparin**
    - unless someone has already been treated with heparin previously

- **Diagnosis**
  - decrease in platelet count 1-2 weeks after starting heparin
  - ELISA assay -- detects IgG antibodies
  - Serotonin release assay

- **Treatment**
  - stop giving heparin or heparin products
    - UFH, LMWH (Enoxaparin/Dalteparin)
  - start anticoagulation with a non-heparin product
    - 1st line --> **Argatroban** -- direct thrombin inhibitor
      - the patient has a thrombotic event -- 3-6 months tx
      - no thrombotic event-- anticoagulation until platelet levels normalize

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