Hematologic Toxicities

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Hematologic toxicities

• Common treatment complication for both hematological and non-hematological drugs

• May lead to dose reduction or discontinuation

• Vary in timing and severity (CTCAE grade). Shift tables used in clinical trials to account for baseline counts
Spectrum

• May affect: WBCs, RBCs, platelets or the coagulation system
  – Cytopenias: anemia, leucopenia, thrombocytopenia
  – Cytosis: leukocytosis, polycythemia, eosinophilia
  – Thrombo-embolic events

• Type of toxicity depends on specific effect of drug
Drug-Induced Hematologic Syndromes

- Mediated by a variety of mechanisms. Drugs can induce almost entire spectrum of hematologic disorders including:
  - Immune & Non-immune Hemolytic Anemia
  - Thrombotic microangiopathies (TMAs)
  - Hypercoagulability - arterial & venous thrombosis
  - Myelodysplasia & acute myeloid leukemia (AML)