ORGAN TOXICITY IN ONCOLOGY DRUGS-IMMUNE CHECKPOINT INHIBITORS

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Immune Checkpoint Inhibitors

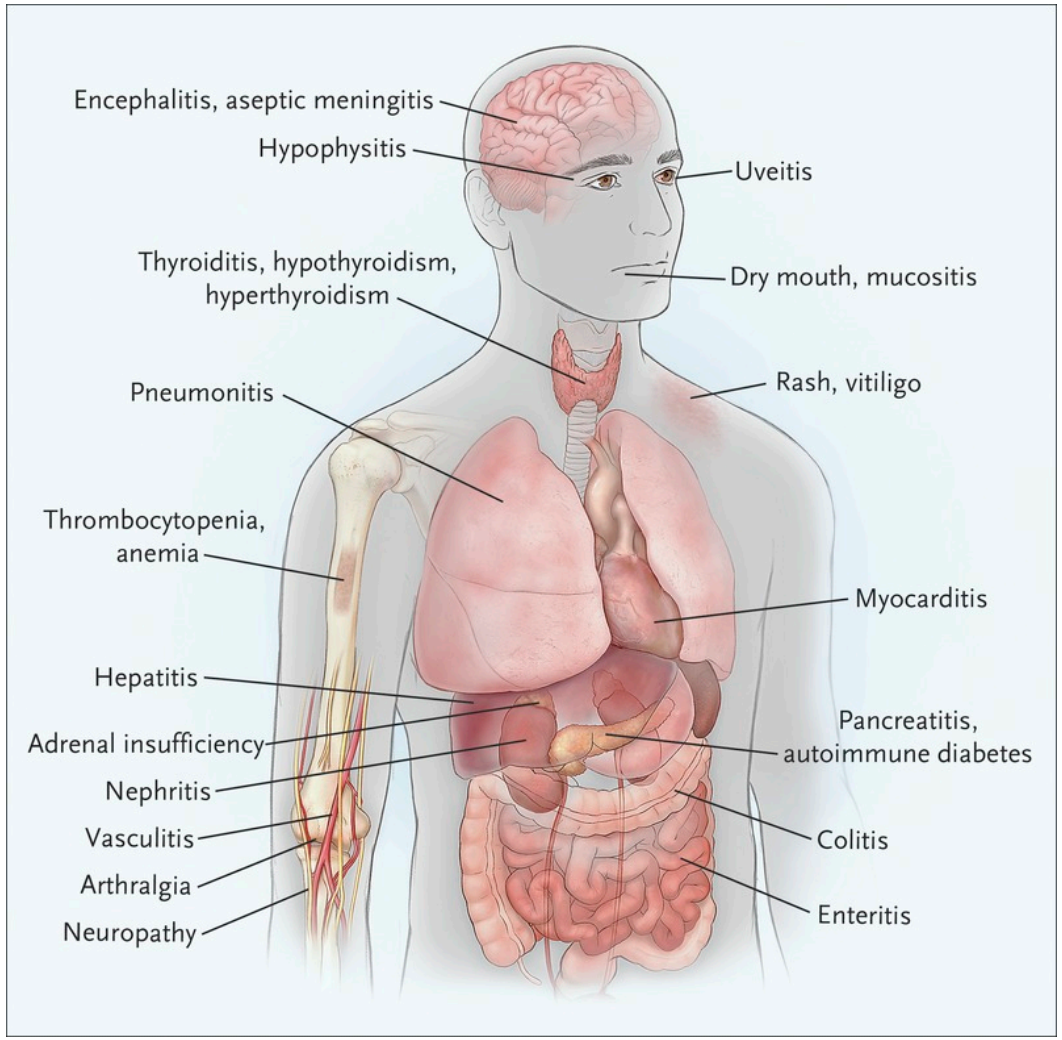
- Immune checkpoint blockade enhances antitumor immune response

- Rapidly expanding area of drug development
  - several approved immune checkpoint inhibitors (anti-CTLA-4, anti-PD-1, anti-PDL-1) for a variety of oncology diseases

- Immune-mediated adverse reactions occur with all drugs in this class

Immune-Mediated Adverse Reactions (imARs)

- Unique spectrum of adverse reactions
- Can affect any organ system
  - Pneumonitis, colitis, hepatitis, endocrinopathies, nephritis, dermatologic toxicities
- Vary in timing and severity
- Similar in presentation and management across drugs



(NEJM 2018; 378:158-68)

Management Considerations

- Benefit-risk assessment
- Management requires multi-specialty teams
- Treatment often includes:
  - Immune suppression (e.g. glucocorticoids) for non-endocrine imARs
  - Hormone replacement for endocrine imARs
- Areas of interest:
  - Retreatment after imAR, immune-suppression regimens, predictive factors, treatment of patients with baseline immune-mediated diseases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