Immune-related adverse events (irAEs) are side effects that occur as a result of the immune system being activated against healthy body tissues. This can happen when the immune system is overactivated, leading to toxicities that affect the body. The precise mechanism behind these toxicities is not fully understood.

**Immune Checkpoints**
These are proteins on the surface of cancer cells that prevent the immune system from attacking them. By inhibiting these proteins, the immune system is activated against the cancer cells.

**Immune checkpoint inhibitors**
These are medications that work by blocking immune checkpoints, such as CTLA-4 and PD-1/PDL-1, which prevent the immune system from attacking cancer cells. They include:
- **CTLA-4 Blockers**
- **PD-1 Blockers**
- **PDL-1 Inhibitors**

**Grade 3 or 4 irAEs**
These are severe side effects that require medical attention.

**Mild (Grade 1)**
- **Clinical Assessment**
  - FBC, U & E's, LFT's, blood glucose, cortisol and TFT's
  - Vital signs and NEWS
- **Treatment**
  - Commence oral prednisolone 1mg/kg/day + PPI
- **Actions**
  - Withhold treatment until G1/resolution
  - Discuss with network lead specialist
  - Monitor symptoms daily with imaging/investigations as indicated

**Moderate (Grade 2)**
- **Clinical Assessment**
  - As per mild (grade 1)
  - Daily bloods
  - Daily weight
  - Regular vital signs
  - Fluid balance
  - Exclude other causes (infections)
- **Treatment**
  - IV methylprednisolone 2mg/kg/day + PPI
  - IV hydration (if indicated)
  - Consider increasing to 4mg/kg/day if clinical improvement is unsatisfactory
  - If evidence of infection consider ABX as per local protocol
- **Actions**
  - Discontinue treatment
  - Liaise with network lead specialist
  - Monitor symptoms daily with imaging/investigations as indicated

**Severe or Life-Threatening (Grade 3 + 4)**
- **Admit patient**
  - Investigations:
    - As per moderate (grade 2)
    - Daily bloods
    - Daily weight
    - Regular vital signs
    - Fluid balance
    - Exclude other causes (infections)
  - Treatment:
    - IV methylprednisolone 2mg/kg/day + PPI
    - IV hydration (if indicated)
    - Consider increasing to 4mg/kg/day if clinical improvement is unsatisfactory
    - If evidence of infection consider ABX as per local protocol
  - Actions:
    - Discontinue treatment
    - Liaise with network lead specialist
    - Monitor symptoms daily with imaging/investigations as indicated

**Review patient daily, if no improvement within 72 hours, seek specialist advice for further advice and management.**

**Symptoms: WORSEN**
- Symptoms: Resolve or Improve to Mild
- See steroid tapering guidance

**PERSIST or WORSEN or RELAPSE**

**Interrupt SACT immunotherapy until discussed with Acute Oncology Team. Please contact on-call oncology/haematology team for advice. Ensure that Acute Oncology/Haematology team are informed of admission.**