Hypothermic Oxygenated Machine Perfusion in Extended Criteria Donation Liver Transplantation

Organ preservation in extended criteria donation (ECD) livers using:

- **End-ischemic hypothermic oxygenated machine perfusion (HOPE)** ("Intervention")
- **Static cold storage (SCS)** ("Control")

**Multicenter randomized controlled trial**

- **Serum peak ALT levels**
  - HOPE: 47% reduction
  - SCS

- **90-day comprehensive complication index**
  - HOPE (32, IQR = 12–56)
  - SCS (52, IQR = 35–98) (P = 0.021)

**ICU stay duration**

- **HOPE**
  - 5 days
  - IQR = 4–8
- **SCS**
  - 8 days
  - IQR = 5–18

- **P = 0.045**

**Hospital stay duration**

- **HOPE**
  - 20 days
  - IQR = 16–27
- **SCS**
  - 30 days
  - IQR = 23–62

- **P = 0.002**

**End-ischemic HOPE significantly reduces early allograft injury and improves post-transplant outcomes using ECD livers from brain dead donors**

**Czigany et al. (2021)**

Hypothermic oxygenated machine perfusion (HOPE) reduces early allograft injury and improves post-transplant outcomes in extended criteria donation (ECD) liver transplantation from donation after brain death (DBD): results from a multicenter randomized controlled trial (HOPE ECD-DBD)