Comparison of Bivalirudin vs Heparin for Maintenance Systemic Anticoagulation During Adult and Pediatric Extracorporeal Membrane Oxygenation

**Study objective**
Compare heparin vs. bivalirudin for anticoagulation in pediatric and adult patients requiring ECMO support

**Design**
Retrospective, single-center, chart review

**Cohorts**
- Heparin: 65 Pediatrics, 223 Adults
- Bivalirudin: 24 Pediatrics, 110 Adults

**Demographics**
- Bivalirudin Group: 84% VA-ECMO

**Results**
- ↓ Mortality among adults Treated with bivalirudin (OR 0.39, p < 0.01)
- ↓ Need for transfusion in the 1st 24 hours in pediatrics Treated with bivalirudin (OR 0.28, p = 0.02)
- No difference in composite circuit intervention or oxygenator/pump change out rate (p = 0.07)

**Conclusion**
Bivalirudin demonstrated feasibility, safety, and improved in-hospital mortality in adults and reduced transfusions in pediatrics compared to heparin as an anticoagulant for ECMO