Extra-cardiac vascular disease (ECVD) is increasingly common in patients undergoing coronary artery bypass graft (CABG) surgery. Limited data is available on the association between ECVD, vein graft failure (VGF) and clinical outcomes following CABG.

**Methods:** Using the Project of Ex Vivo Vein Graft Engineering via Transfection IV (PREVENT-IV) trial database (n=3,014), we classified patients as having ECVD or not having ECVD. One-year angiographic and 5-year rates of death, MI or revascularization were compared using Kaplan-Meier estimates. Adjustment for baseline variables was performed using logistic regression for angiographic follow-up and Cox regression for clinical follow-up.

**Results:** Patients with ECVD (n=634, 21%) were older, more commonly female, and had more comorbidities. Internal mammary use was lower and graft quality was worse in patients with ECVD. Duration of surgery and intensive care length of stay were similar. Although 1-year VGF rates were similar (OR: 1.2, 95% CI: 0.96-1.6, p=0.1), patients with ECVD had higher rates of death, MI or revascularization following CABG compared to patients without ECVD, which increased with time from baseline. (Figure 1; adjusted 5-year HR 3.0, 95% CI:2.0-4.4, p<0.001).

**Conclusion:** ECVD is common and associated with worse clinical outcomes following CABG surgery. This higher risk is not due to more vein graft failure. The mechanism behind the risk associated with ECVD in patients undergoing CABG surgery deserves further investigation.