**Abstract Body:**

**Objectives:** For the open treatment of juxtarenal aortic aneurysms (JRAA), some argue for the removal of all proximal aneurysmal aorta to prevent future degeneration while others deem it unnecessary. This study sought to compare perioperative and long-term outcomes of two different approaches to JRAA.

**Methods:** Patients who underwent open JRAA repair from 2007-2015 at our institution were reviewed and stratified by operative technique: plication of the aneurysm cuff with graft sewn up to the renal arteries (PLI) versus a beveled anastomosis with left renal artery bypass (LRB). Patients who underwent additional mesenteric bypasses were excluded. Primary outcomes included death and decline in renal function. Univariate and Kaplan-Meier analysis were performed.

**Results:** 199 patients were identified: 56% PLI (n=112) and 44% LRB (n=87). The majority
were male (68%), Caucasian (89%), and smokers (58%). Mean age was 71.5±8.5 years. LRB was more likely to have chronic kidney disease (28% vs 13%, p=.007) and larger pre-operative proximal neck diameters (29 vs 25 mm, p<.001). LRB had longer post-operative length of stay (LOS) (10.8 vs 8.3 days, p=.022), longer operative times (5.4 vs 3.9 hours, p<.001), and higher operative blood loss (1.9 vs 1.6 liters, p=.04). Overall 30-day mortality was 2% (n=4), with no difference between cohorts. There were no differences in peri-operative complications except for the development of acute kidney injury (AKI), which was more common in LRB (29% vs 14%, p=.012). Over 3-year follow-up, there was no difference in anastomotic aneurysmal degeneration or sac growth. In the long-term, LRB was more likely to develop an occluded left renal artery (20% vs 0%, p=.004) and right renal artery stenosis (29% vs 3%, p=.002). However, neither group was more likely to have a decline in renal function (PLI 23% vs LRB 25%, p=.84). There was no difference in 5-year mortality (p=.721).

**Conclusions:** The technique of removing all proximal aneurysmal aorta with a beveled anastomosis and left renal artery bypass was not protective against aneurysmal growth, nor was a difference seen in renal function decline or mortality. Furthermore, LRB led to longer LOS and operative times with increased risk of AKI. In an era when less open aortic repairs are being performed, it is reasonable to consider the PLI technique in the treatment of JRAA.

**Author Disclosure Block:**