

<u>Session/Poster#</u>	<u>Presenter</u>
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Effect of Dialysis on Postoperative Outcomes of Lower Extremity Amputations in CKD5/ESRD Patients: Should We Dialyze First?

Introduction: Kidney failure, often requiring dialysis, is a common comorbidity in those undergoing lower extremity amputations. Whether to dialyze patients before surgical lower extremity amputation is debated and data is limited on its benefits and risks.

Methods: The American College of Surgeons National Surgical Quality Improvement Program database was queried for lower extremity amputations between 2008 and 2016. Patients were identified with end stage renal disease or stage 5 chronic kidney disease via a glomerular filtration rate less than 15. 1:1 propensity score matching was used to control for gender, age, and estimated probability of morbidity. Patient demographics, comorbidities, and 30-day postoperative outcomes were collected. Univariate and multivariate logistic regression analysis were used to assess risk for postoperative complications with or without preoperative dialysis.

Results: 547 patients who did or did not undergo preoperative dialysis were identified, of which 61.4% were male, 52.4% Caucasian, 42.5% African American; the average age was 63.3 years. Patients who did not receive dialysis had higher postoperative complication rates ($p < 0.001$). The most reported was bleeding requiring transfusion ($p = 0.005$) followed by renal ($p < 0.001$), pulmonary ($p < 0.001$), and sepsis-related ($p = 0.037$) complications. The two cohorts did not differ in readmission, reoperation, or mortality rates (all $p > 0.204$). Multivariate logistic regression analysis found that not receiving preoperative dialysis is an independent predictor of high risk for any post-operative complication ($p = 0.001$), particularly renal ($p < 0.001$), pulmonary ($p = 0.001$), and septic shock ($p < 0.001$).

Conclusion: Preoperative dialysis decreased the rate of most postoperative complications seen in patients with ESRD/CKD5, notably renal. While there was no change in mortality or reoperation, the decreased risk of adverse events and severe complications warrants consideration of preoperative dialysis.