

<u>Session/Poster#</u>	<u>Presenter</u>
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Risk Factors and Thirty-Day Postoperative Outcomes in Osteonecrosis Patients Undergoing Total Knee Arthroplasty

Introduction: There is a paucity of literature reporting risk factors for unfavorable thirty-day postoperative outcomes of patients with osteonecrosis of the knee (ON) undergoing total knee arthroplasty (TKA). This study aims to evaluate risk factors for ON patients undergoing TKA and their impact on postoperative outcomes.

Methods: A retrospective analysis of the American College of Surgeons National Surgical Improvement Program database (2008 -2016) was conducted. Patients undergoing TKA were isolated and matched into ON and non-ON cohorts using 1:1 propensity score matching (PSM) based on gender, age, and BMI. Patient demographics, preoperative risk factors, perioperative period, and overall postoperative outcomes (complications, reoperation, readmission, or in-hospital mortality) were compared between the two cohorts. Regression models were used to evaluate if risk factors were independent predictors of adverse events.

Results: 225,475 patients undergoing TKA were identified. PSM yielded 302 patients, stratified into ON and non-ON TKA cohorts (both, n=151). Chronic obstructive pulmonary disease (COPD) and bleeding disorders occurred at higher rates within the ON cohort compared to the non-ON cohort. Operative time, length of hospital stay, and overall postoperative outcomes were statistically comparable between the two cohorts (all, $p>0.05$). Regression models showed none of the researched preoperative risk factors to be predictive of postoperative outcomes (all, $p>0.05$).

Conclusion: No data was found to support the studied risk factors correlated with significantly different postoperative TKA outcomes when comparing ON patients to non-ON patients. This includes COPD and bleeding disorders, which were present at higher rates in the ON cohort. Further research is warranted to better understand an existing relationship between risk factors and negative postoperative outcomes of ON patients undergoing TKA in order to mitigate post-op complications.