# Sex-based differences in outcomes following Bankart repair

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INTRODUCTION: Bankart repair is commonly performed for shoulder instability. Differences in outcomes among male and female patients are not well characterized. The present study sought to characterize 90-day surgical outcomes and healthcare utilization, as well 2-year need for manipulations and reoperations, among male and female patients undergoing Bankart repair.

METHODS: The PearlDiver M170 database was queried for patients undergoing Bankart repair. Male and female patients were matched 1:1 on age, Elixhauser Comorbidity Index (ECI, a measure of overall comorbidity burden), and surgical approach (arthroscopic or open).
Ninety-day adverse events, emergency department (ED) visits, readmissions, physical therapy (PT) utilization, and total healthcare reimbursements in the 90 days postoperatively were compared by multivariable analyses. Also compared were 2-year rates of ipsilateral shoulder manipulation and revision procedures.

RESULTS SECTION: Of 149,024 patients undergoing Bankart repair, 33.9% were female. Female patients were on average older (mean age 35.7 vs 32.2 years), have greater comorbidity burden (ECI 2.1 versus 1.5), and more likely to have arthroscopic surgery (95.8% versus 95.34.7%) (<0.001 for all). After matching, there were 48,806 male and 48,806 female patients, with the above-noted differences no longer significant (p=1.000 for all).

Female patients had significantly higher 90-day odds of any adverse event, minor adverse events, urinary tract infections (OR 7.12) and ED visits (OR 1.34), but lower odds of cardiac events (OR 0.35) and acute kidney injury (OR 0.53). Within 90-days of surgery, there were no differences in rate of PT utilization or overall healthcare reimbursements.  Within 2-years of surgery, female patients had higher odds of manipulation (OR 2.39) and revision (OR 1.23) (Figure 1).

DISCUSSION: Following Bankart repair, the current study identified sex-based differences in 90-day and 2-year outcomes.  These findings may help guide surgical counseling, postoperative care, and management pathway development.  Further research is necessary to elucidate drivers of these differences.

SIGNIFICANCE/CLINICAL RELEVANCE: Differences in postoperative outcomes are demonstrated among male and female patients, suggesting a need for tailored perioperative monitoring and optimization and further research to elucidate causes.
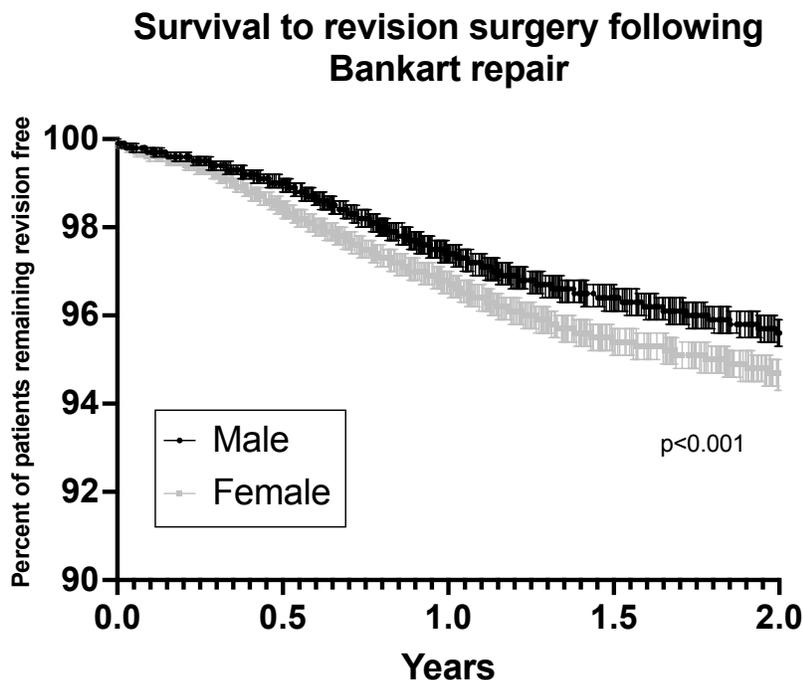
Figure 1. Kaplan Meier survival curve of 2-year survival to revision following primary arthroscopic or open Bankart repair in female and male patients. Survival is significantly different by log-rank test (p<0.001).