

No Difference in Long-Term Recurrence Rates After Paraesophageal Hernia Repair with Mesh vs Cruroplasty Alone, Using Medicare Data

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INTRODUCTION

- The utility of mesh use during laparoscopic paraesophageal hernia is widely debated
- The impact of mesh on long-term recurrence remains unknown
- Current evidence is limited by:
 - Short-term patient follow-up
 - Single institution studies
 - One randomized control study which represents ideal circumstances
- We leveraged existing Medicare data to evaluate outcomes of mesh placement following paraesophageal hernia repair, up to 10-years

METHODS

- Using the 20% sample of the Medicare data, we identified 18,325 fee-for-service beneficiaries between 2011-2022, receiving index elective minimally invasive paraesophageal hernia repair (CPT: 43281 vs 43282)
- Primary outcome metric was operative recurrence up to 10 years after surgery
- Secondary outcomes included:
 - 30-day operative recurrence
 - Complications
 - Mortality
- Used Royston-Parmar survival model to assess the adjusted time-dependent recurrence rates

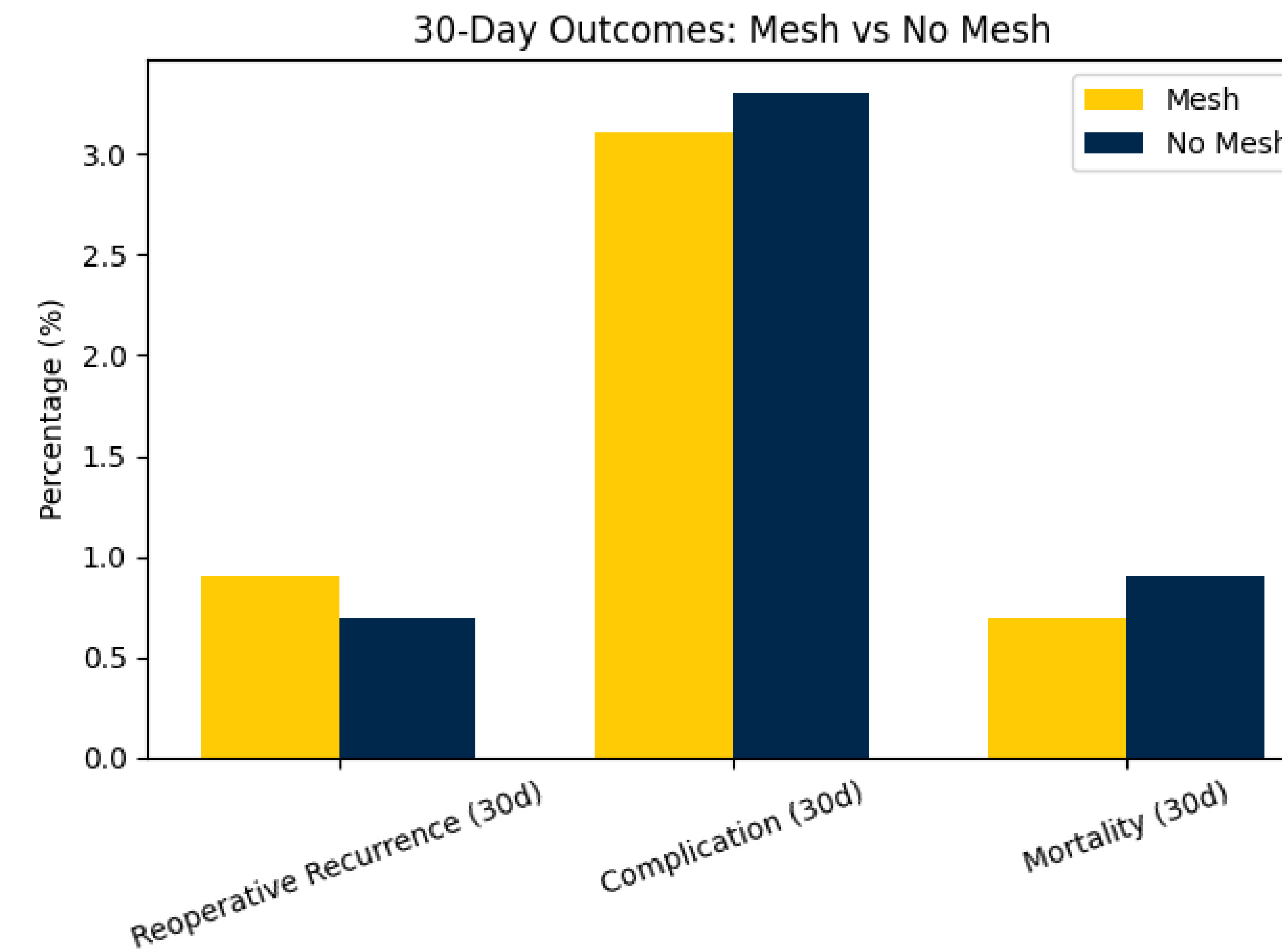
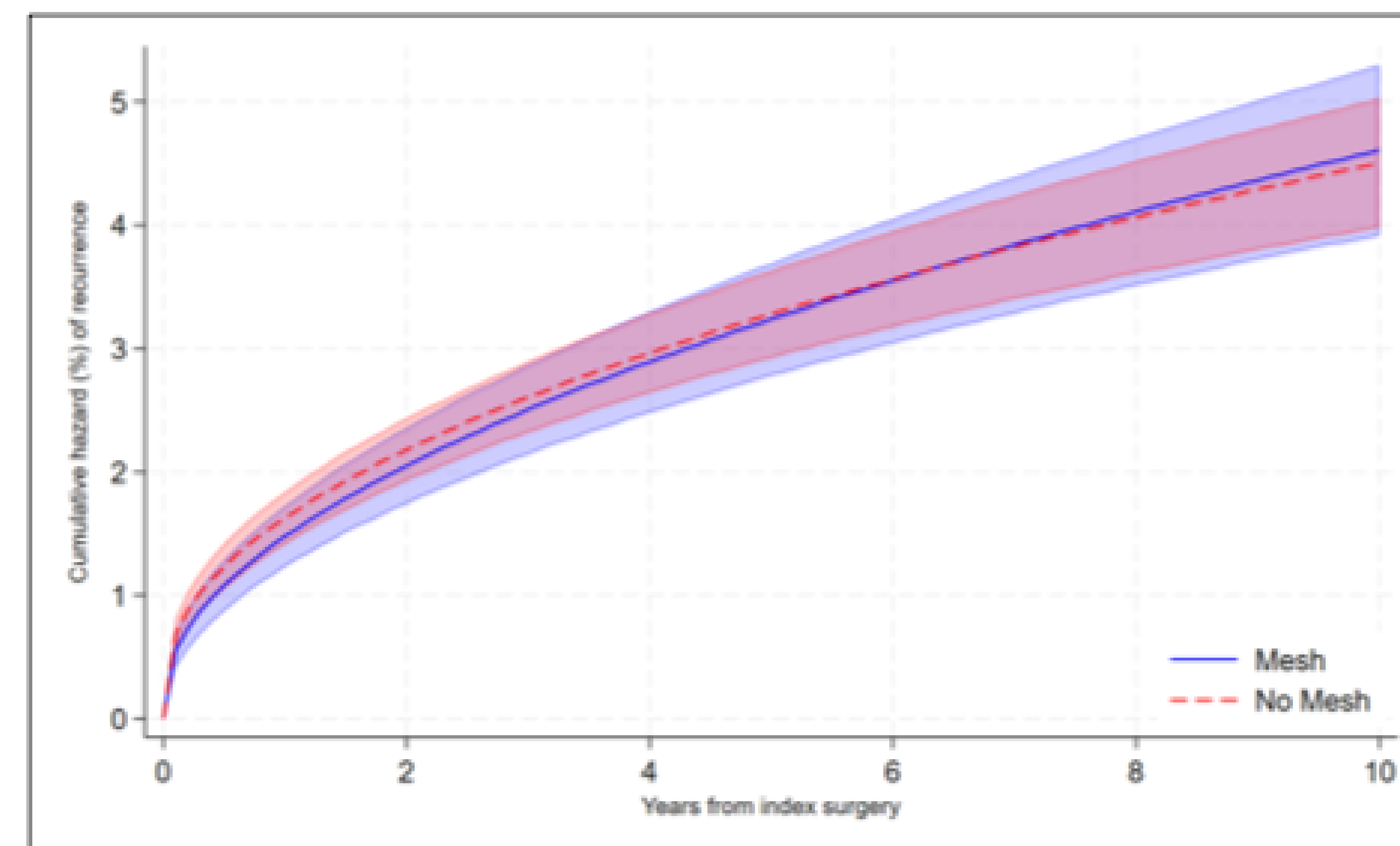


Figure 1. Adjusted reoperation rates up to 10 years post laparoscopic paraesophageal hernia repair. Medicare 20%, fee-for-service, 2011-2022.



Note: adjusting for diagnosis, comorbidity, and demographic factors.

RESULTS

- The majority of the 18,325 patients were female (78.9% vs 79.1%, $p=.76$)
- Average age was 68 years old
- Mesh placed in older (71.1 vs. 66.1), and Caucasian patients
- Mesh was placed 35.6% of the time
- At 30-days, no difference in mesh vs non-mesh with:
 - Reoperative recurrence (0.9% vs. 0.7%, $p<0.05$),
 - 30-day complication (3.1% vs 3.3%, $p=0.49$)
 - Mortality (0.7% vs 0.9%, $p=0.13$) (**Figure 1**)
- Reoperation rates up to 10 years between groups were 3% vs 2.8%, $p=0.37$ (**Figure 2**)
- Time to reoperation was longer in the mesh group (784.9 vs. 659.2 days) but not statistically significant ($p=0.07$).

CONCLUSIONS

- Mesh is being placed in more than 1/3rd of cases
- No difference in short or long-term outcomes
- Mesh may extend time to recurrence, though not statistically significant
- There is no clear benefit of mesh based on this data
- Consideration should be used when placing mesh, as it is likely being over-utilized
- Limitations:
 - Unknown hiatal hernia size at index procedure
 - Unknown mesh type placed

REFERENCES

