



Comparison of Complication Rates for Head and Neck Reconstruction Across Multiple Jaw Pathologies



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Background

- Medication-related osteonecrosis of the jaw (MRONJ) and osteoradionecrosis (ORN) have higher complication rates than benign lesions following reconstruction
- Reconstructive surgeries with these disease processes often lead to more severe and chronic problems than those with malignant cancers
- Socioeconomic factors have a well-established impact on surgical outcomes

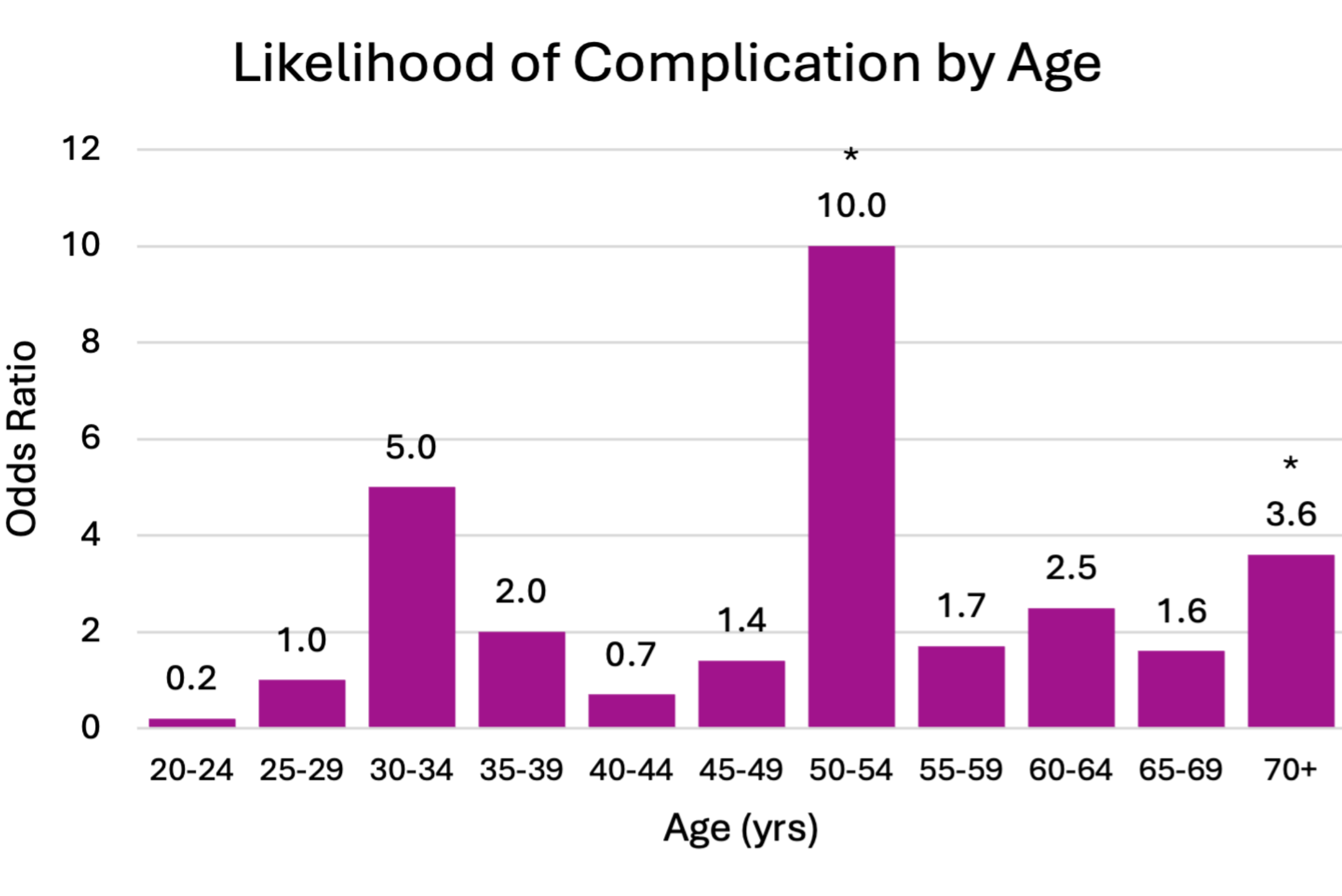
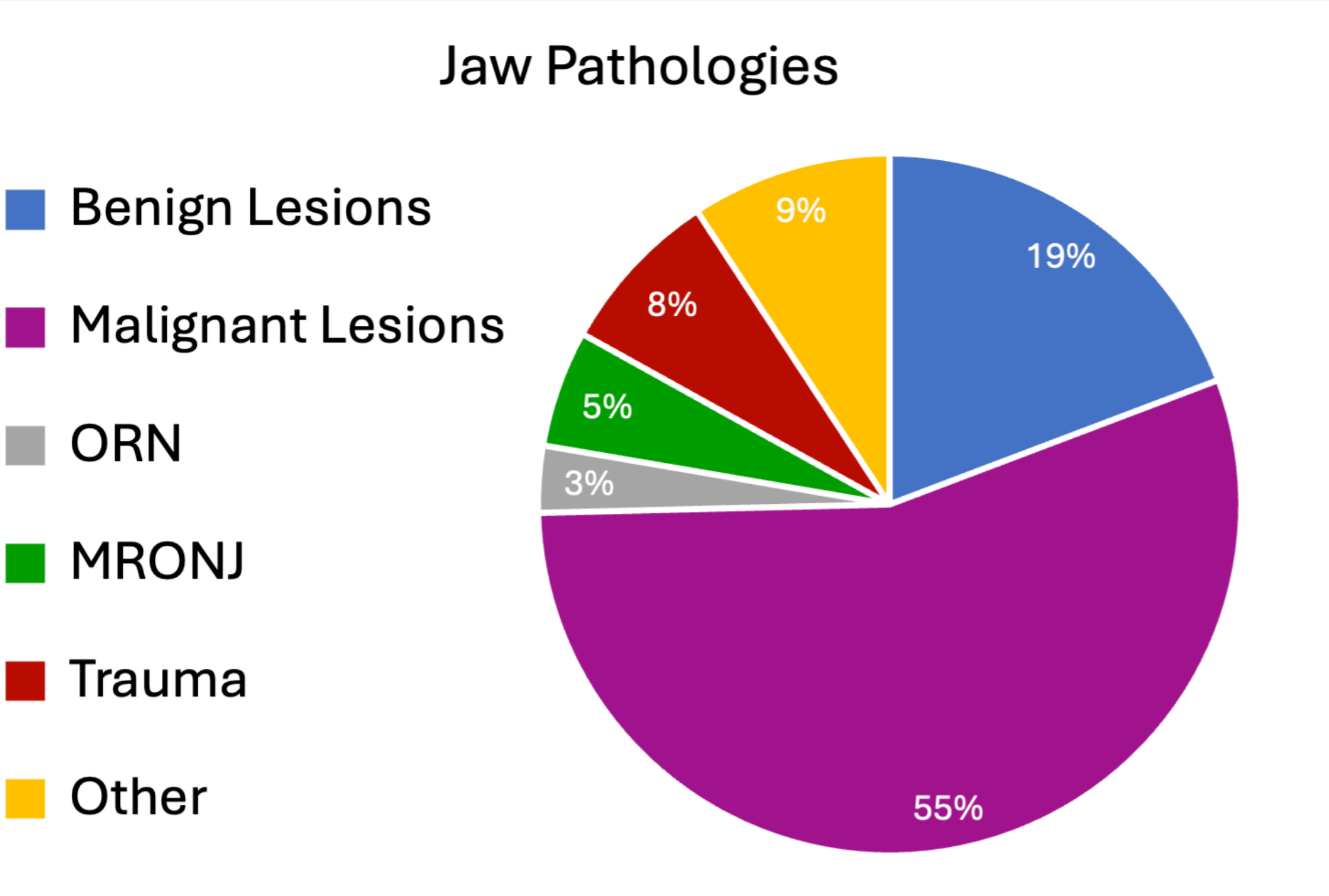
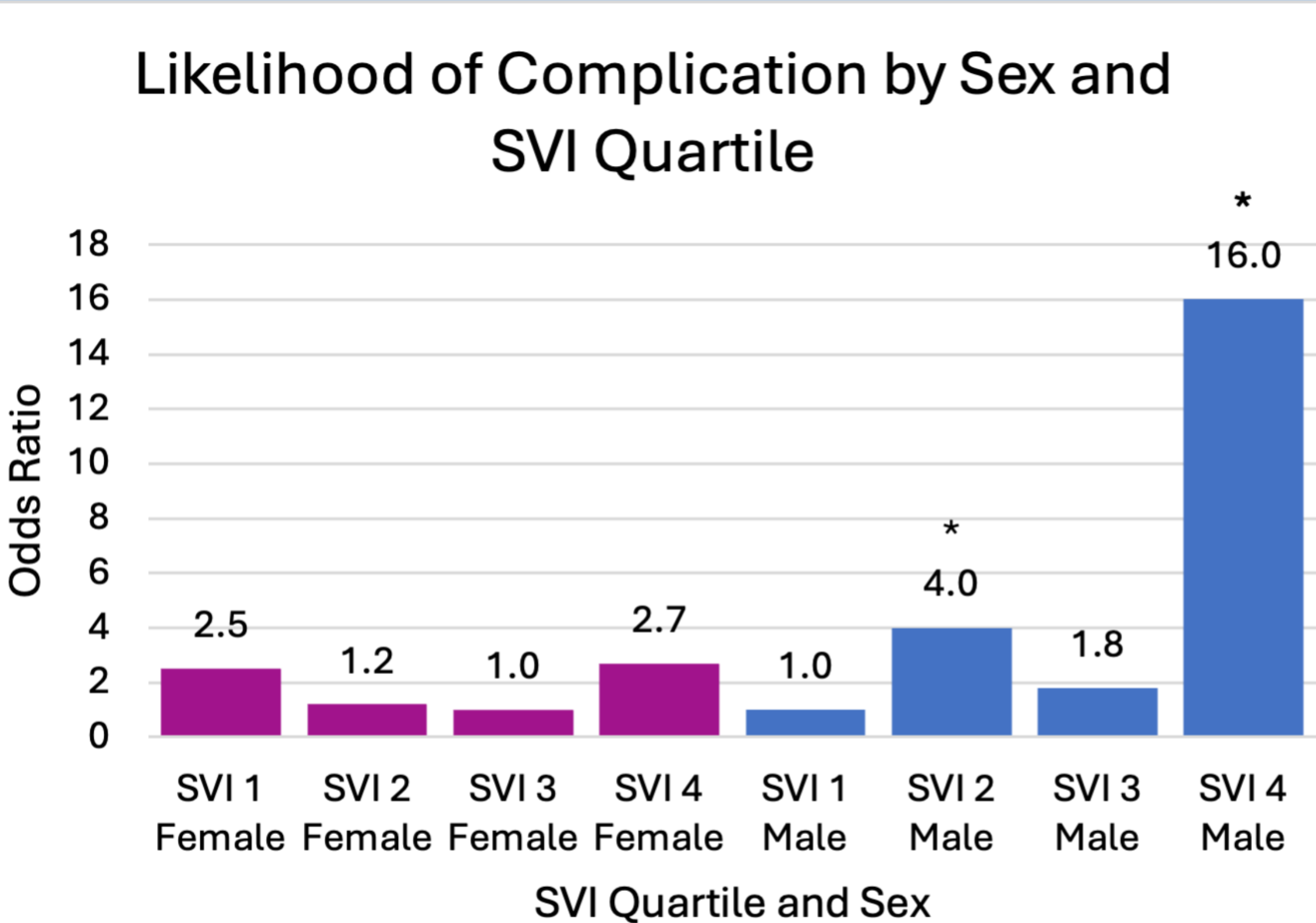
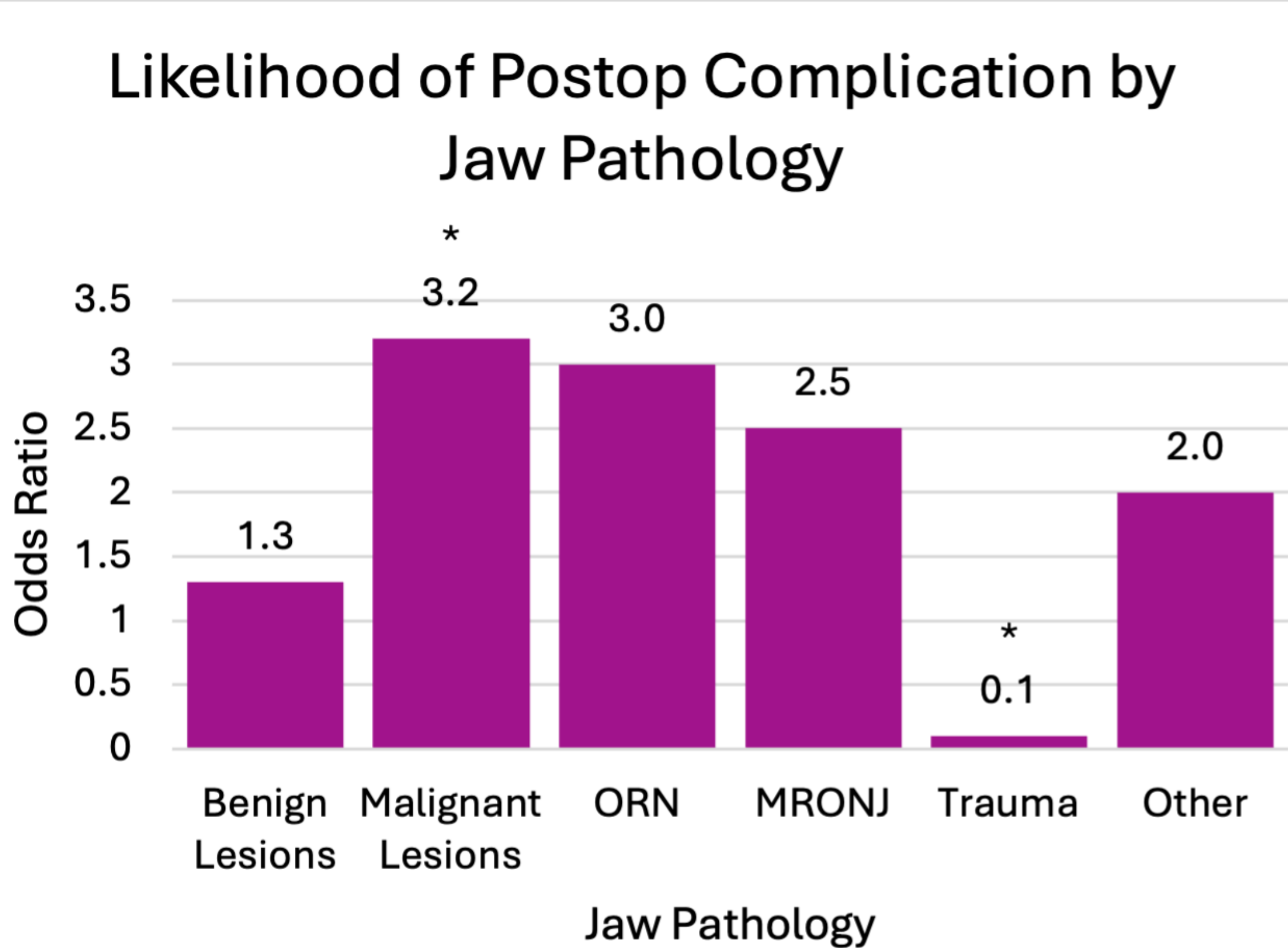
Purpose

- Examine complication rates following head and neck (H&N) reconstruction across multiple disease processes
- Identify factors that impact complication rates

Methods

- Retrospective review of patients who underwent H&N reconstruction at single institution from 2016-2024
- Jaw pathology types included: Benign Lesions, Malignant Cancers, MRONJ, ORN, Trauma, and Other
- Outcomes were compared between groups based on race, age, sex, jaw pathology type, and social vulnerability index (SVI) quartile
- Chi-square, Fisher exact tests, logistic regression, and ANOVA/post-hoc tests were used to assess significance ($p < 0.05$)

Results



* Denotes statistically significant comparison ($p < 0.05$)

Discussion

- Patients with malignant lesions are 3.2 times more likely to develop post-op complications, while those with traumatic pathologies have significantly lower odds of complications ($OR=0.1$)
- Male patients had significantly higher odds of post-op complications ($OR=2.2$)
- The age groups of 50-54 yrs and 70+ yrs had higher likelihood of complications ($OR=10.0$ and 3.6 , respectively)
- SVI quartile 4 patients had significantly higher odds ratio for post-op complications ($OR=6$), particularly male patients in this quartile ($OR=16$)
- There were no significant differences in complications by patient race

Conclusions

- Malignant lesions, male sex, and higher SVI quartile all increase risk of complications in H&N reconstruction
- Predictive models that account for both clinical and socioeconomic risk factors could improve perioperative decision making and postoperative care planning



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