

No Benefit in **Robotic Sleeve Gastrectomy** in High-Risk Patients Compared to Lap: Analysis of **9 Years MBSAQIP** and **More Than Half a Million** Patients



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Background

While robotic SG (RSG) offers potential technical advantages over the laparoscopic approach (LSG), its benefits in high-risk patients remain unclear, particularly regarding postoperative complications and healthcare utilization.

Methods

- Retrospective analysis of the MBSAQIP database including patients from **2015 to 2023** who underwent primary SG.
- The primary outcome was a composite overall postoperative complication.
- Multivariable logistic regression was used to adjust the ORs.
- High risk patients** were defined as patients with ASA classification 3 to 5.



Mean age
42.4 years
Female 79.7 %

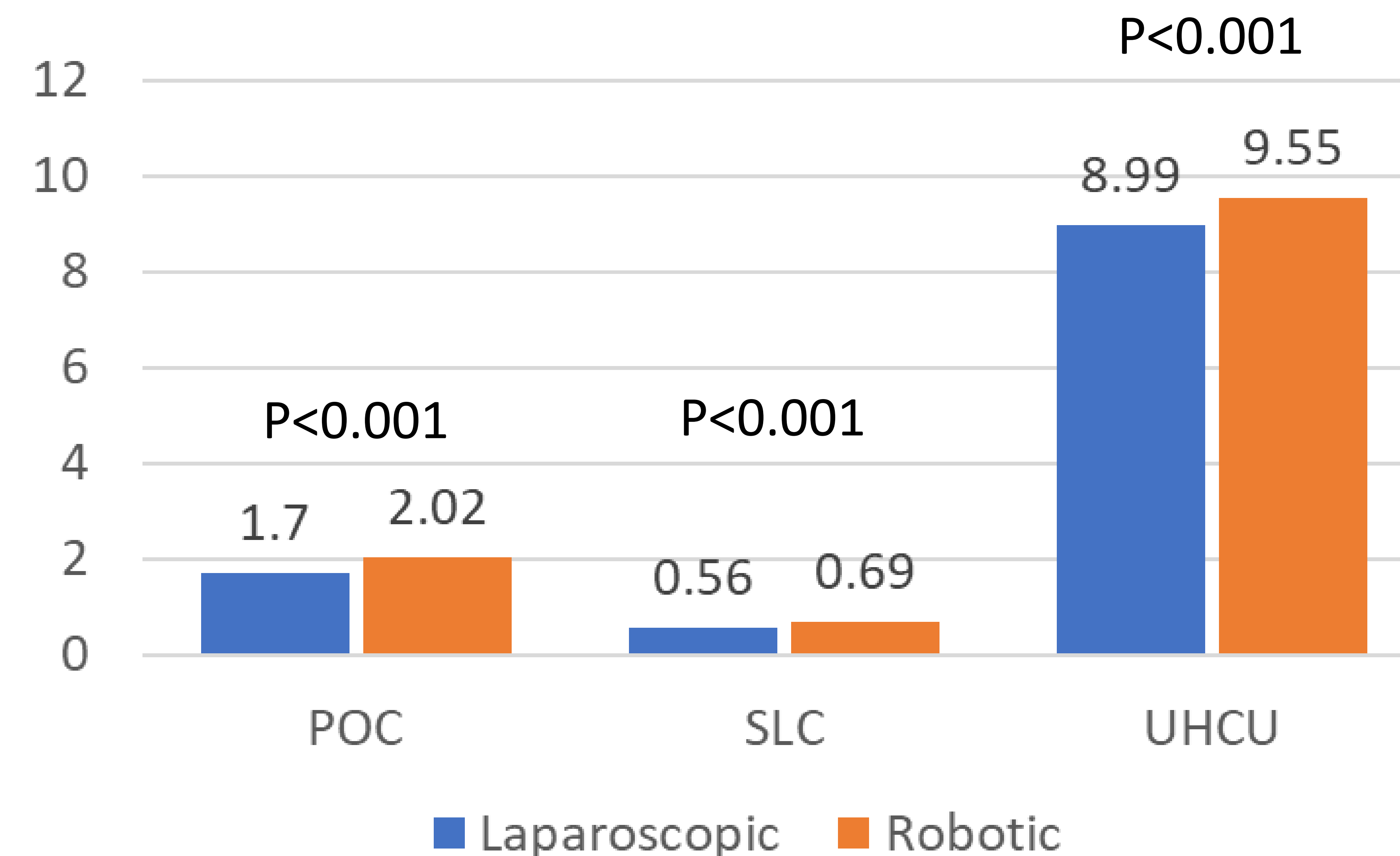
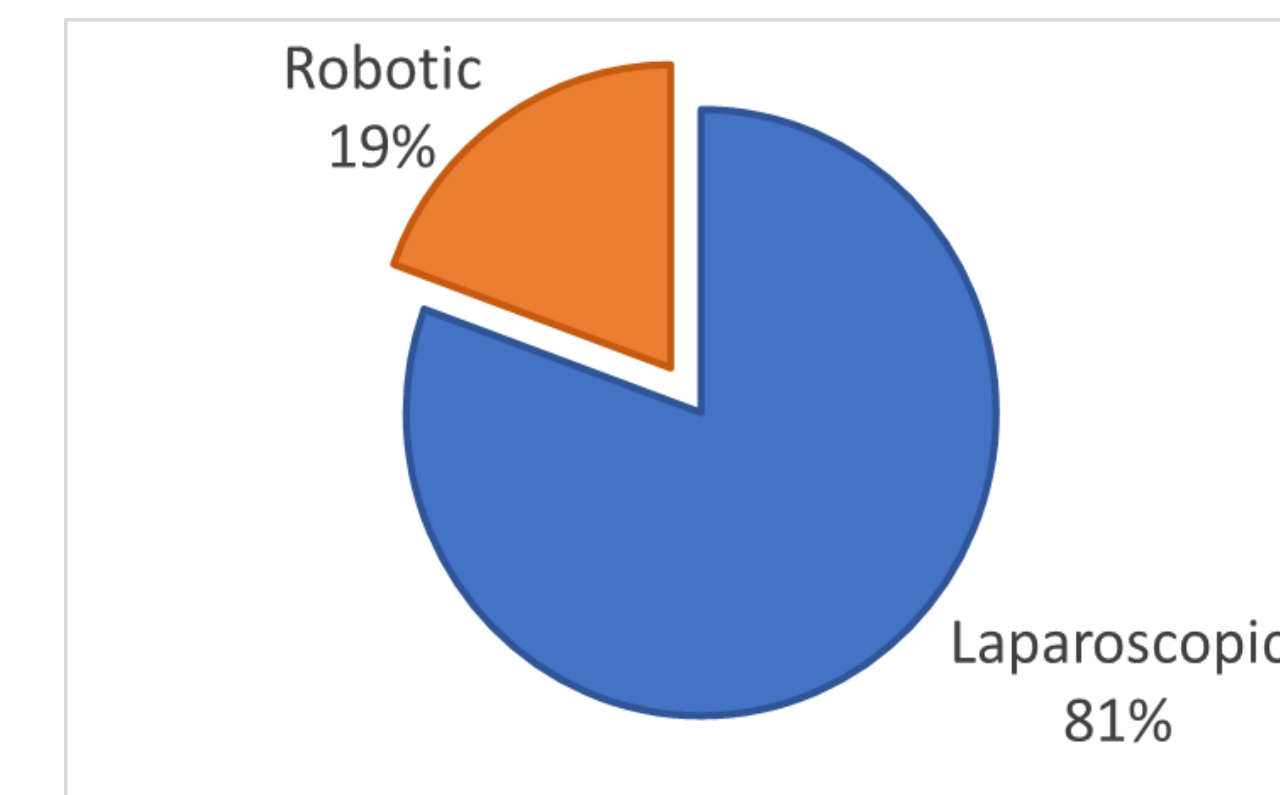


Mean BMI
45.3

Results

A total of 567,199 patients undergoing primary SG were studied. High-risk patients comprised 77.4% of the cohort (**n=437,741**).

High risk primary SG cases



Combined overall postoperative complications (POC)= SSI, PNA, prolonged mechanical ventilation, AKI, Cardiac arrest, CVA, MI, PE, Postoperative sepsis, blood transfusion, DVT, Wound disruption.

Staple Line complications (SLC)= leak or gastrointestinal bleeding requiring transfusion

Unplanned healthcare utilization (UHCU)= Within 30 days unplanned ICU admission, emergency department visit, reoperation, hospital readmission, and unplanned procedural intervention.

Conclusion

In this large national cohort of high-risk patients, RSG was associated with slightly higher rates of overall postoperative complications, staple line complications, and unplanned healthcare utilization compared with LSG, with no difference in mortality, suggesting **no clear clinical benefit of the robotic approach in this population.**

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