



Talking risk; ChatGPT-Assisted risk stratification in robotic retrorectus (eTEP) hernia repair: Feasibility and Early Outcomes.

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INTRODUCTION

The role of artificial intelligence (AI) has been expanding and already exists as a powerful tool to aid medical decision making.

Robotic extended totally extraperitoneal (eTEP) approach to retrorectus hernia repair is a relatively new technique without extensive data regarding safe patient selection, presenting an opportunity for the application of AI adjunct analysis.

Our study aims to assess the **utility and feasibility of using AI to help risk stratify patients who underwent robotic retrorectus hernia repair via eTEP approach.**

METHODS AND PROCEDURES

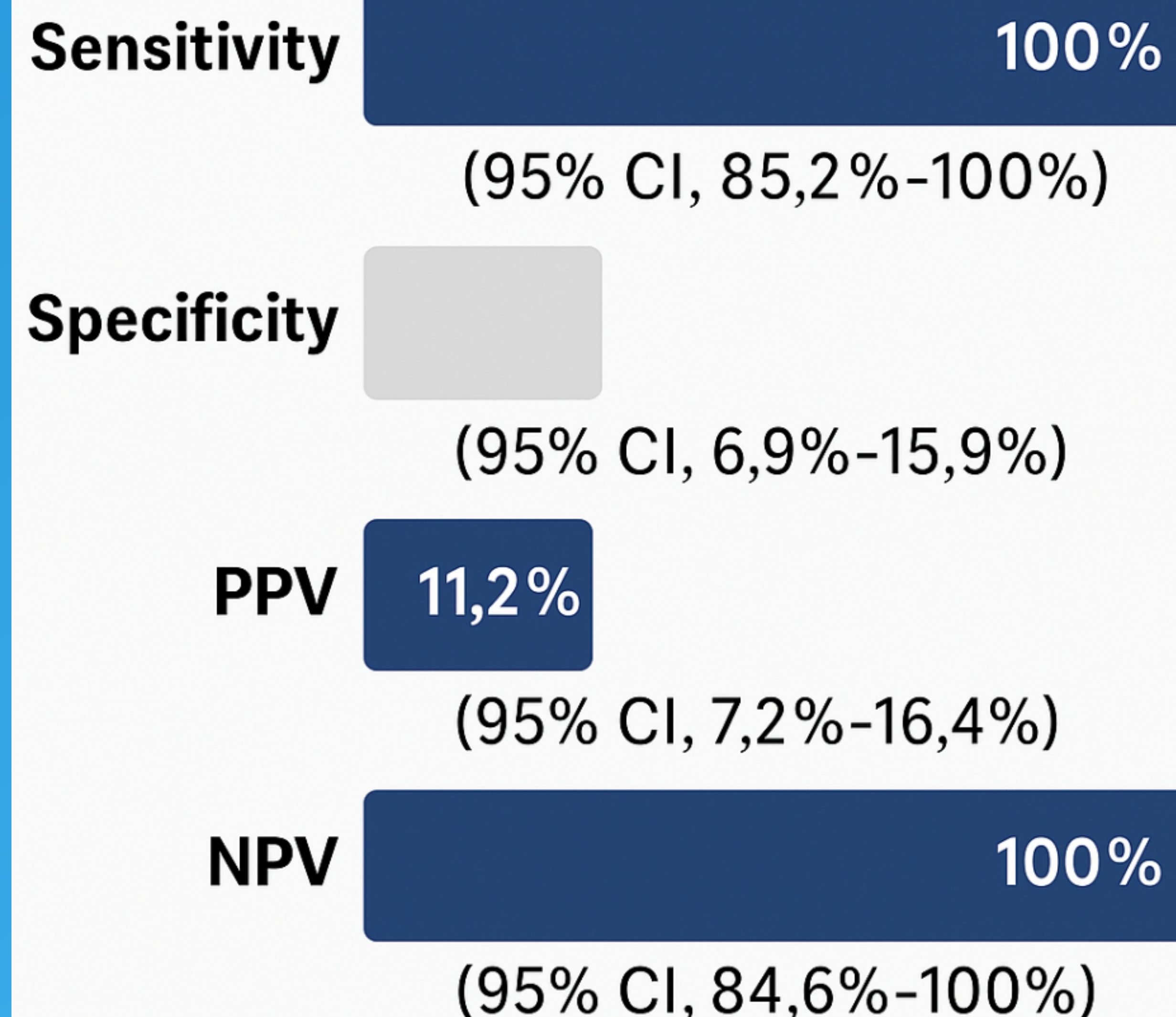
A **retrospective analysis** was performed of **227 robotic eTEP retrorectus hernia repairs performed between Aug 2019 and April 2025** at an academic center with a designated abdominal wall fellowship.

Variables collected include: **age, sex, ASA class, BMI, hernia size, operation performed, type of mesh placed, pre-operative albumin, smoking status, and any documented post-operative complications.**

ChatGPT 5 was used to create a risk calculator for patients undergoing robotic eTEP and collected data was anonymized, **generating risk stratifications and predicting likelihood of post-operative complications** for each patient.



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RESULTS

The ChatGPT rendered risk calculator classified patients into low risk (n = 22) and moderate-high risk (n = 205).

Patients stratified as low risk did not experience a complication, whereas 11.2% of patients in the moderate-high risk category sustained post-operative complications (n=23, P = 0.14).

Sensitivity was 100% and specificity was 10.8%. PPV reported at 11.2% (95% CI, 7.2%-16.4%) and NPV reported at 100% (95% CI, 84.6%-100%).

CONCLUSION

AI-assisted risk stratification **reliably identified patients unlikely to experience early complications**, creating a promising 'rule-out' tool for perioperative counseling and triage

Prospective validation, threshold calibration, and multicenter testing are needed before widespread clinical adoption, where AI could complement—not replace—surgeon judgement.