

Quantifying the 'Assistant Effect' in Robotic-Assisted Radical Prostatectomy

Measures of Technical Performance

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Background

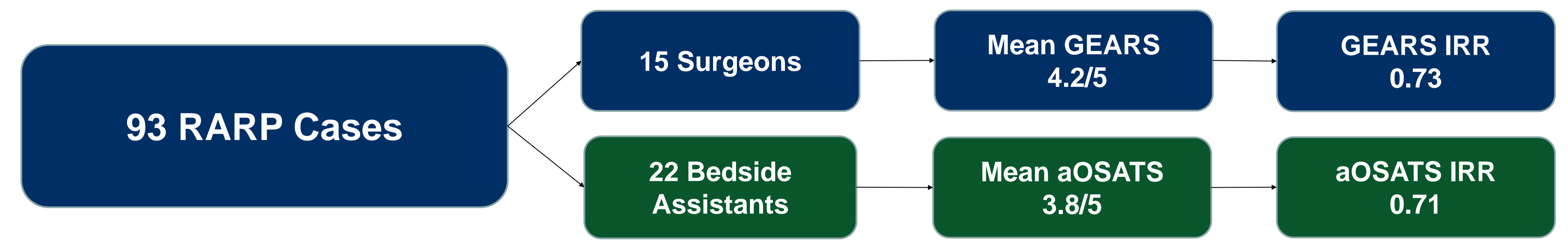
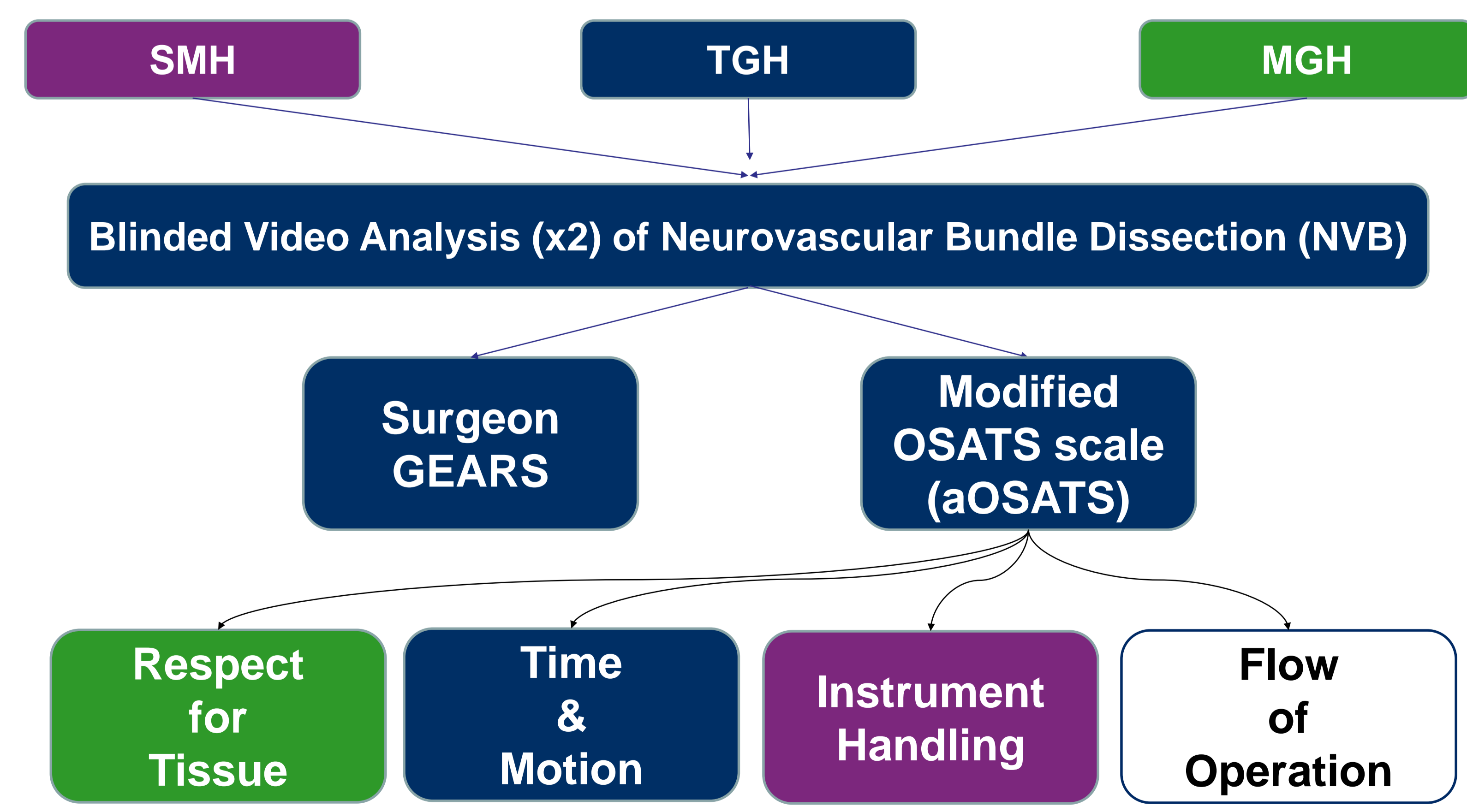
While robotic-assisted surgery (RAS) provides several advantages to the surgeon, it includes an increased reliance on the assistant role to complete important technical manoeuvres during a procedure. Despite the importance of this role, our ability to assess and understand the impact of the assistant's technical skill on the surgeon's performance during RAS remains limited.

Objectives

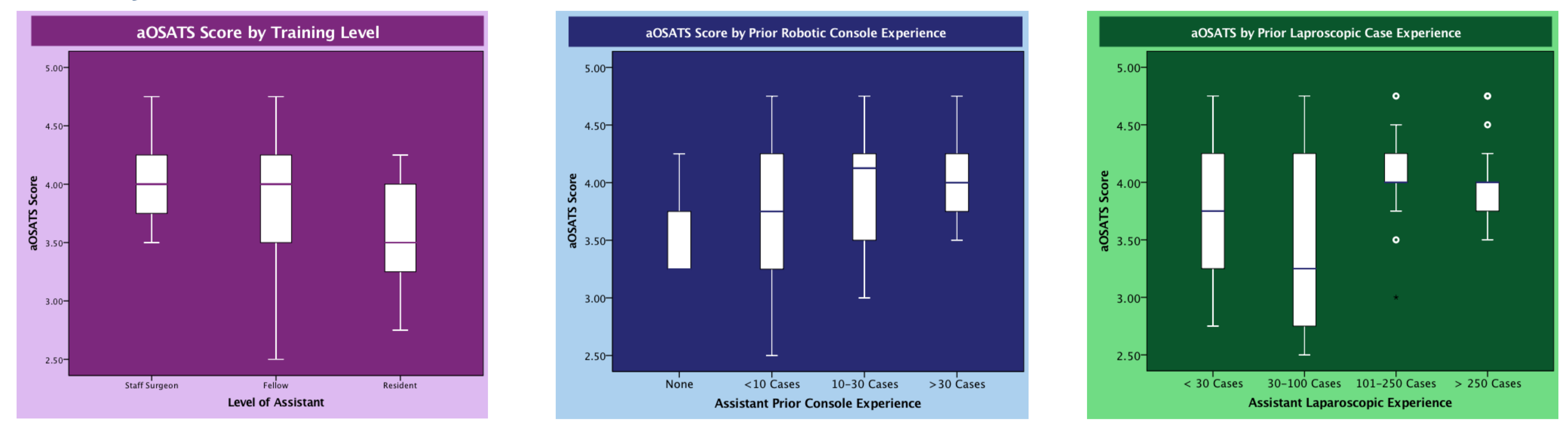
1. Provide validity evidence for a modified global rating scale, assessing bedside assistant skill in robotic surgery
2. Quantify the effect of assistant skill on surgeon technical performance during robotic-assisted radical prostatectomy (RARP)

Methods

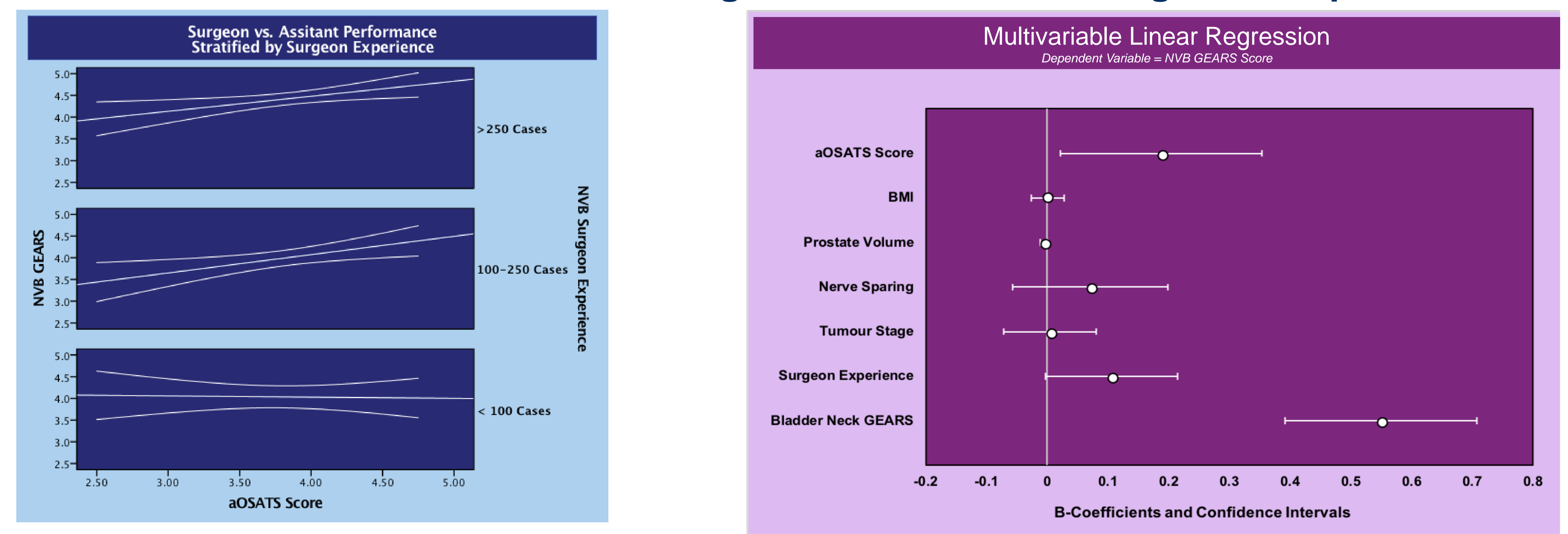
1. Video from RARP cases prospectively collected at 3 hospitals
2. Dissection of the prostatic pedicle and neurovascular bundle step (NVB) was selected for analysis
3. Each video rated by at least 2 expert analysts



Validity Evidence for aOSATS



Association between Assistant and Surgeon Performance during NVB Step



Conclusions

1. First study to investigate the relationship between assistant technical skill and surgeon performance during RARP
2. Validity evidence established for aOSATS tool – accuracy and reliability for assessing assistant skill in RAS
3. Surgeons with greater experience (> 100 cases) are disproportionately affected by technical ability of bedside assistant during NVB Step