

## The Value of Surgeon's Intuition Compared with a Standardised Risk Calculator



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According to a study published in the Journal of the American College of Surgeons, a team of researchers investigated whether preoperative surgeon intuition could be an independent predictor of 30-day postoperative complications. However, the results demonstrated that its predictive power was not as strong when compared with the standardised surgical risk calculator.

When deciding what type of surgery to perform, surgeons weigh many different factors, including medical history and current health status. As well, a physician's intuition, including training, past experiences and their gut feeling about a patient, is known to play a key role in their assessment and decision-making.

Senior study author Gabriel A. Brat, said, "The integration of the explicit, the intangible, and experience together form what we call surgeon intuition. Surgeons with a certain level of training and experience will have relatively similar intuition in certain cases".

"However, intuition is dynamic. It depends on the characteristics of the provider. One surgeon can see one patient and believe one thing about that patient's outcome, and another surgeon can see the same patient and predict a different outcome".

The team aimed to quantify the value of intuition in predicting outcomes among surgical patients. The objective was to discover whether it could be used in risk prediction in a similar way that the ACS NSQIP Surgical Risk Calculator is used, which calculates patient-specific postoperative complication risks.

Between 2021 and 2022, the team surveyed general surgeons at Beth Israel Deaconess Medical Center before surgery, asking them to predict 216 patient's likelihood of having a negative outcome. They used the results to develop a new algorithm that predicts postoperative outcomes using surgeon preoperative intuition alone.

In a separate model, the team collected NSQIP data on 9,182 patients who underwent general surgery between 2017 and 2022. They then analysed the clinical data calculated by the NSQIP Risk Calculator to predict the patient outcomes.

They found preoperative surgeon intuition was an independent predictor of postoperative complications, however surgeon intuition in predicting a complication was less accurate than the ACS NSQIP risk calculator. Lastly, the intuition of more experienced surgeons in predicting the outcomes of patients was more accurate when compared to the intuition of less experienced surgeons.

Dr. Brat summarised, "The value of surgical intuition for preoperative prediction was not improved by including human intuition in the model and this suggests that, at least for most presurgical prediction, the information that is gathered by the NSQIP Risk Calculator is better at predicting those outcomes than the gut feeling that surgeons have when looking at patients".

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