References

1. Bilimoria KY, Liu Y, Paruch JL, Zhou L, Kmieciak TE, Ko CY, et al. Development and evaluation of the universal ACS NSQIP surgical risk calculator: a decision aid and informed consent tool for patients and surgeons. *J Am Coll Surg*. 2013;217:833-42.e833.
2. Chudgar N, Yan S, Hsu M, Tan KS, Gray KD, Molena D, et al. The American College of Surgeons surgical risk calculator performs well for pulmonary resection: a validation study. *J Thorac Cardiovasc Surg*. 2022;163:1509-16.e1.

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Commentary: Numbers will tell their own story

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In the realm of lung cancer, we collaborate with oncologists and health professionals from other disciplines to determine the best personalized care pathways for any individual patient. The conversation will often come down to the question of risk versus benefit. Is the risk of operation too high, and should we recommend nonsurgical treatment instead? The answer is almost always a story, told by a surgeon or a radiation oncologist, tainted by the most recent experience, or the most memorable one, where a patient did well or did not do well.

This is unlikely to be the case for much longer. In this issue of the *Journal*, Chudgar and colleagues¹ validate the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) surgical risk calculator in a population of patients undergoing lung cancer resection. In a retrospective sample of 2154 patients from the Society of Thoracic Surgeons database, they compare the projected risk of complications, based on the calculator, to the real outcomes after surgery. They find that the calculator performs very well in predicting the probability of the aggregate complication rate, serious complications, and

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CENTRAL MESSAGE

The American College of Surgeons Surgical Risk Calculator is a good predictor of the risk of lung cancer surgery in high-volume centers and an important tool enabling us to make the patient a partner in the surgical decision.

most of the individual complications. In other words, if

any individual patient's demographic data are plugged into the calculator, the predicted risk of operation ends up being very close to the actual risk. Another example of how the crystal ball of big data can be used to aid decision making on the individual level.

Although this calculator has now been integrated in the decision making framework at the authors' home institution, whether centers with lower surgical volume are able to use this tool remains unclear. Because the risk calculator does not take into account hospital volume, this might not be possible to determine outside of a prospective trial. Many believe that volumes can be surrogates for overall team expertise in treating cancer. As such, it is also possible that the expertise of the authors' institution in optimal selection of patients for surgery may have resulted in good

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agreement with the calculator. This is another factor that could not be controlled for in the statistical analysis.

“Do not tell me a story about your numbers, your numbers will tell their own story” is an age-old adage of the corporate world. As we strive to become more data-driven, this work is an important tool for surgeons. However, numbers do not always tell the full story. The greater

importance of this work is that it enables us to finally make the patient an integral partner in the surgical decision.

Reference

1. Chudgar N, Yan S, Hsu M, Tan KS, Gray KD, Molena D, et al. The American College of Surgeons surgical risk calculator performs well for pulmonary resection: a validation study. *J Thorac Cardiovasc Surg.* 2022;163:1509-16.e1.