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# Predictive App Enables Hernia Repair Patients to Visualize Outcomes

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Surgical researchers have developed an online tool to help patients undergoing ventral hernia repair visualize how their results will be affected by factors such as weight gain, smoking cessation and various surgical techniques.

The tool, called the Outcomes Reporting App for CLinical and Patient Engagement (ORACLE), was developed by examining 10,690 ventral hernia repair cases within the Americas Hernia Society Quality Collaborative database, a registry of 46,000 patients with hernia to which 325 U.S. surgeons presently enter data.

“The objective of the tool is to have patients not just take responsibility for good outcomes, but to know that some of their lifestyle behaviors contribute to both good and bad outcomes postoperatively, and to have surgeons make sure that the expectations are realistic for the patient,” lead author Ivy Haskins, MD, a general surgery chief resident at George Washington University, in Washington, D.C., said in a press release.

The new tool has the ability to predict five significant outcomes for surgeons and patients regarding the future of the operation, whereas current apps can only predict one or two outcomes, Dr. Haskins explained. ORACLE provides predictive data for the following outcomes: risk for surgical site infection within 30 days of the operation; 30-day risk for a recurrent ventral hernia requiring another operation; 30-day risk for unplanned hospital readmission; one-year risk for hernia recurrence; and length of hospital stay. Furthermore, the predictive models can be printed, enabling patients to visualize risk factors and review outcomes after leaving their clinic appointments.

“The ability to print the predictive models is one of the strengths of our tool,” Dr. Haskins said. “This [feature] allows the patient to review their predictive risks even after leaving their clinic appointment. We hope that seeing, side-by-side, how their risk for postoperative outcomes changes based on their ability to lose weight, quit smoking, and make other behavior modifications will further facilitate patient activation.”

Launched in October 2017, the online tool has been accessed over 1,500 times. Patients and surgeons can access ORACLE at [www.ahsqc.org](http://www.ahsqc.org).