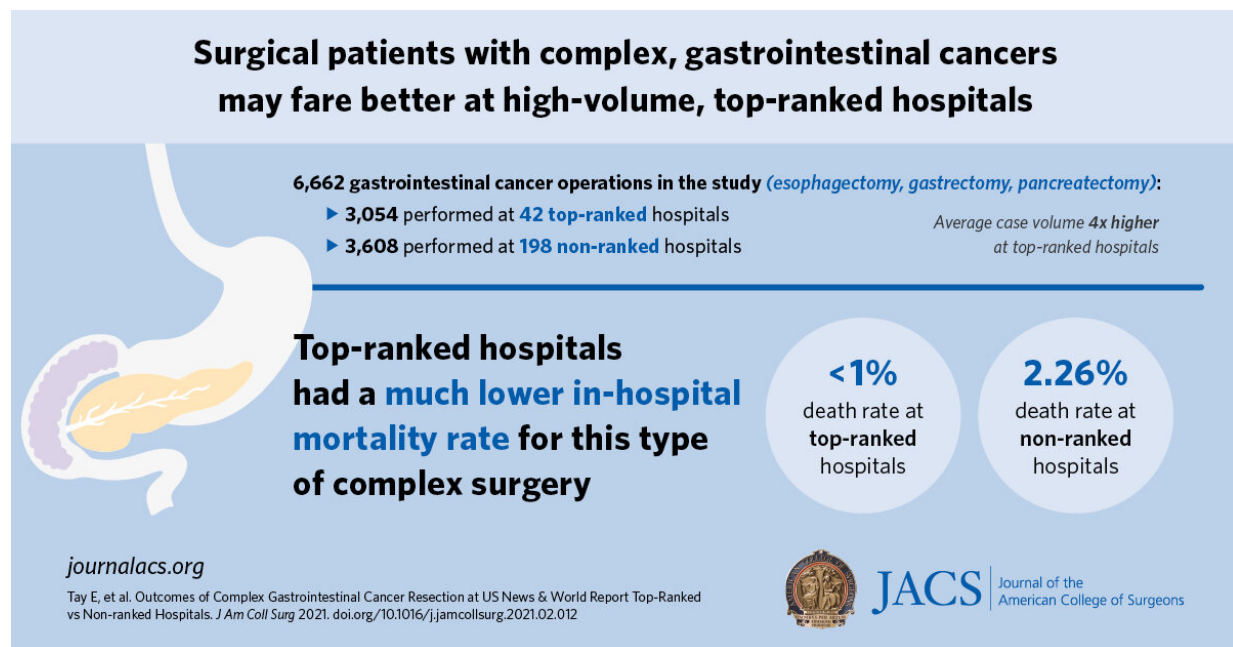


# More is better, when it comes to case volume, for complex gastrointestinal cancer surgery

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Outcomes of Complex Gastrointestinal Cancer Resection at US News & World Report Top-Ranked vs Non-ranked Hospitals. Credit: American College of Surgeons

A new study reinforces the principle that "practice makes perfect" when it comes to complex GI cancer operations. Patients whose procedures for gastrointestinal malignancies were performed by a surgical team at a hospital ranked as one of America's "best" by *U.S. News & World Report* were nearly two and half times more likely to survive the operation than

those who had the same procedure done at an unranked hospital. These new research findings are published online in advance of print on the website of the *Journal of the American College of Surgeons*.

Every year, *U.S. News & World Report* releases a list ranking the top 50 hospitals for specialty and overall care. These rankings, made available to the public, are based on measures in [patient outcomes](#), [patient experience](#), care-related factors, and expert opinion.

The annual issue plays a role in guiding [patients](#) and providers to high quality health care centers. Still, the reliability and accuracy of these rankings for high-risk gastrointestinal surgery is not known.

"Our study demonstrates the *U.S. News & World Report* ranking is a very appropriate resource," said study coauthor Ninh T. Nguyen, MD, FACS, chair, department of surgery, University of California, Irvine. "Now that we've actually done this analysis, we see the ranking does make sense when you look at surgical case volume and other related issues. Patients who seek surgical care at the top-ranked hospitals actually fare better, particularly if they are treated for the complex surgical conditions examined in this study."

## Study details

Using data from the Vizient clinical database, the researchers assessed 6,662 patients who underwent elective esophagectomy, gastrectomy, or pancreatectomy for malignancies in 2018 at U.S. academic centers and their affiliated community hospitals. The study findings include the following:

- Of the 6,662 gastrointestinal cancer operations performed, nearly half (3,054) were performed at 42 top-ranked hospitals,

compared with 3,608 performed at 198 non-ranked hospitals.

- The average annual case volume for these high-risk conditions was four times higher at top-ranked hospitals, compared with non-ranked hospitals (72 cases versus 18 cases).
- Compared with non-ranked hospitals, top-ranked hospitals had a much lower in-hospital death rate. Specifically, that rate was almost 1 percent at top ranked hospitals compared with 2.26 percent at non-ranked.
- Top ranked hospitals had a lower in-hospital mortality index compared to non-ranked hospitals (0.71 versus 1.53). A score of less than 1 means less patients died than expected based on their characteristics and preexisting comorbidities, and a score of more than 1 means more patients died than expected.
- For patients who developed serious complications after their operations, top-ranked hospitals had a much lower in-hospital death rate compared with non-ranked hospitals (8.19 percent versus 16.79 percent).

"Anastomotic or pancreatic leaks are a serious postoperative complication that can be associated with an exceedingly high risk of death. Based on our study findings, surgical teams at top-ranked hospitals are likely better at detecting and managing these serious complications, and more likely to save patients from dying from the complication," Dr. Nguyen said. "For patients, that means if you had your operation performed at a non-ranked center, you are 2.35 times more likely to die than if you had it performed at a top-ranked hospital."

## **Benefits for high- and low-risk patients**

After the researchers factored in patient characteristics such as severity of illness, the death rates were still, on average, lower in the high-volume, ranked hospitals versus non-ranked hospitals.

"When we think of top-ranked hospitals, we imagine these hospitals would perform better for patients who are higher risk, older, or have more comorbidities, but our analysis also examined outcomes based on severity of illness, and we found that even younger, low-risk patients fare better when they go to a top-ranked hospital," Dr. Nguyen said. "So even if you are healthy, and you're dealing with a complex GI condition requiring surgical resection, you are probably better off also obtaining care at a top-ranked hospital."

## Accurate decision-making data empowers patients

"Deciding where to go for treatment is a collaborative decision that should be made between the patient and their physician. But one of the resources you can use is the annual *U.S. News & World Report* list," Dr. Nguyen said. "These are complex GI operations with a much higher risk of mortality. Therefore, you really want to go to a hospital where the [surgical team](#) performs a lot of these operations."

**More information:** Erika Tay, MD et al. Outcomes of Complex Gastrointestinal Cancer Resection at US News & World Report Top-Ranked vs Non-Ranked Hospitals. *JACS* March 19, 2021 DOI:[doi.org/10.1016/j.jamcollsurg.2021.02.012](https://doi.org/10.1016/j.jamcollsurg.2021.02.012)

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