

Study finds cancer mortality rate disparity based on hospital ratings

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A new paper in the *JNCI Cancer Spectrum*, published by Oxford University Press, finds that the mortality rates for complex cancer procedures differ greatly between one-star hospitals (10.4%) and five-star hospitals (6.4%).

The safety of complex cancer surgeries varies widely across hospitals in the United States, with as much as a four-fold difference in hospital [mortality rates](#), volume of patients, hospital experience, and surgeon training. Researchers have previously suggested that a large-scale shift of patients away from high-risk hospitals could meaningfully reduce mortality rates for complex cancer surgeries. Yet there are numerous challenges to matching patients with hospitals that are best suited to perform a specific procedure. In particular, hospital volumes and surgery-specific performance data are not readily available to patients and providers.

Researchers examined the Center for Medicare and Medicaid Services' "Star Rating" system, which serves as a guide for patients to compare the quality of each hospital's care (one-star = lowest to five-star = highest). This system is based on 62 measurements (e.g. mortality, readmissions, patient experience), but is not specific to any medical operation or patient population. Despite this fact, researchers found that the ratings correlate with quality and safety across many patient care scenarios, including the risk of mortality after complex cancer surgery.

A total of 105,823 patients underwent complex cancer procedures at 3,146 hospitals between 2013 and 2016. Eligible patients were over 65 years old with a diagnosis of cancer of the lung, colon, stomach, esophagus, or pancreas. This group captures an estimated 80% of all high-risk cancer surgeries.

The mortality rating over a 90-day period correlated with the star system, with the greatest

difference observed between the 1-star (10.4%) and 5-star (6.4%) hospitals. However, these rates varied by [surgery](#) type.

These findings are consistent with prior studies that have found that the Center for Medicare and Medicaid Services' [star rating](#) system correlates with surgical [mortality](#). And yet, the overall effectiveness of this system in choosing hospitals for complex cancer surgeries appears to be modest (84 lives per year), relative to other proposed strategies.

"For complex cancer care, choosing the right hospital may be as important as choosing the right treatment," said Daniel Boffa. "In order for patients to select the best hospital for their situation, they need access to understandable information regarding the safety and quality of [hospital](#) care. Unfortunately, the CMS star-rating system, while clear and easy to access, does not appear to distinguish the safest from the least safe hospitals with enough separation to reliably guide cancer patient choice for complex surgical care."

More information: Marianna V Papageorge et al, Navigating by Stars: Using CMS Star Ratings to Choose Hospitals for Complex Cancer Surgery, *JNCI Cancer Spectrum* (2020). [DOI: 10.1093/jncics/pkaa059](#)

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