

Safety of complex cancer surgery across US hospitals

New research suggests that patients undergoing complex cancer surgery at leading cancer hospitals in the USA have a lower risk of mortality within 90 days than patients having complex cancer surgery at affiliated hospitals that share the leading hospitals' brand.

Jessica R Hoag (Yale School of Medicine, New Haven, CT, USA) and colleagues did a cross-sectional study to evaluate perioperative mortality among 29 228 Medicare beneficiaries (aged >65 years) who underwent complex cancer surgery (colectomy, gastrectomy, pancreaticoduodenectomy, lobectomy, or oesophagectomy) between Jan 1, 2013, and Oct 1, 2016, in top-ranked cancer hospitals (according to the *US News and World Report*) and affiliated hospitals that shared their brand. Using hierarchical logistic regression, researchers measured patients' risk-adjusted 90-day mortality; they used standardised

mortality ratios to compare the relative safety of the hospitals.

17 300 (59%) of the patients had surgery at 59 top-ranked cancer hospitals and 11 928 (41%) at 343 affiliated hospitals. A higher 90-day mortality was observed at affiliated hospitals (odds ratio 1.40 [95% CI 1.23–1.59]; $p<0.001$); the odds ratio for colectomy was 1.32 (1.12–1.56; $p=0.001$) and that for gastrectomy was 2.04 (1.41–2.95; $p<0.001$). Top-ranked cancer hospitals had a greater relative safety than affiliated hospitals in 41 (84% [95% CI 73.1–93.3]) of 49 cancer networks studied. In a comparison of safety between each top-ranked hospital and each of its affiliates, 290 (84%) of 343 top-ranked hospitals outperformed affiliated hospitals.

Coauthor Daniel Boffa (Yale School of Medicine, New Haven, CT, USA) said: "Patients should not assume that

the safety of complex cancer surgery is the same across all hospitals within the network of a prestigious cancer hospital." Douglas Evans (Medical College of Wisconsin, Milwaukee, WI, USA), added: "Level of care is much more encompassing than perioperative mortality—and in oncology, it reflects the level of diagnostic, staging expertise, the optimal sequencing of anticancer therapies, when and if to include surgery, the ability to rescue from routine and less common toxicities, and much more." Rachel Adams Greenup (Duke Cancer Institute, Durham, NC, USA) commented: "Findings from [this study] suggest that until hospital-branding can ensure comparable quality care, regionalisation within high volume, subspecialty infrastructures remains important."

Manjulika Das



Godang/BSIP/Science Photo Library

Published Online
April 18, 2019
[http://dx.doi.org/10.1016/S1470-2045\(19\)30239-6](http://dx.doi.org/10.1016/S1470-2045(19)30239-6)
For the study by Hoag and colleagues see *JAMA Network Open* 2019; 2: e191912