There is a lot of politics when it comes to regionalization. Surgeons and surgical teams are not happy to give up a part of their practice and skill set as hospitals become regionalized. We must be sensitive to these issues and help to alleviate these frustrations. But, at the end of the day, it should be the patient who comes first. How many of us would order the foie gras at a restaurant that sold fewer than 10 orders of foie gras a year?

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Commentary: Going beyond the volume–outcomes concept: The case for regionalization in thoracic surgery

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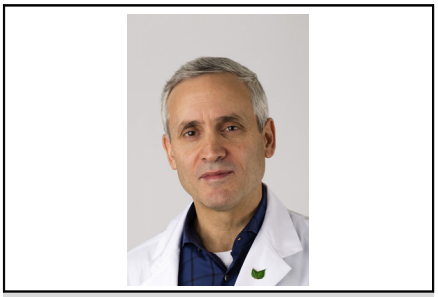

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CENTRAL MESSAGE

Regionalization in thoracic surgery seems to be associated with better patient outcomes, unrelated to increase in surgeon/hospital volumes.

How do we improve patients' outcomes? This question continues to challenge surgeons and nonsurgeons alike. A well-established dogma is that greater volumes, performed by specific surgeons or a center, will lead to improvement in outcome. Some convincing analyses have established this concept,[1] which was later validated by other observations in North America and beyond.[2] In thoracic surgery, there is some evidence that greater volumes might lead to a better outcome,[3] but this concept was challenged by other observations, and no standardization exists. Moreover, volumes are not all that matters, and there is no clear definition as to what is the minimal number of resections below which a thoracic surgeon will compromise patients' outcomes. The concept of regionalization is not new and was proposed before, although implementation has been, for the most part, sporadic and not well analyzed. The province of Ontario in Canada has identified the need for regionalization, performed many in-depth systematic review-based analyses, and then implemented it in thoracic, vascular, and hepatobiliary surgery and has since been instrumental in maintaining quality outcome measurements and validating them.[4]

In this review at the *Journal*, Dr Darling, who had a major role in this initiative and continues to oversee it, is providing us with convincing evidence as to the benefits of that approach.[5] In Ontario, it is feasible, associated with better outcomes, can be monitored with clear quality assurance parameters, and leads to widespread best-standard care for our patients, combined with a real multidisciplinary team approach. Having experienced that move first hand, I am convinced that this concept works, and very well. As is

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the case with every good study or review, the current one also brings up many inevitable questions. (1) How do you define quality? Is it in-hospital and 30- and 90-day mortality? Length of stay? Complications? How about readmissions and readmissions' outcomes? Can they be captured? Most national and society-based databases are not granular enough to capture these. While not presented in the current review, these data are captured in Ontario and seems to support the beneficial effect of regionalization. (2) What about the quality of the surgery itself? Rates of R0 resections, number of lymph nodes sampled/dissected, time to recurrence, and site of recurrence? Percentage of patients eligible for postoperative adjuvant treatment who actually received such treatment? Cancer Care Ontario, which until recently regulated quality of care for every cancer patient treated in this province, has mandated and monitored all of those as well as many additional quality parameters, and several other organizations (notably the French National cancer plan) have gone through similar pathways, with an impressive improvement on several parameters.[2] However, such level of regulation and monitoring is not widespread elsewhere and might be impossible to implement on a regional/national level. (3) How do you define a minimal number of resections per surgeon or hospital beyond which it won't meet the bare standard? Ontario has done it after a significant preliminary work, but it might not be applicable to the United States or Europe, where the number of resections might be very small for many remote centers, and a tight on-site or nearby relationship with a comprehensive cancer center is not always feasible. (4) Most importantly, how generalizable is such an approach? In the Canadian single-payer system, it is feasible (although it took time and a dedicated government-led budget and expert leadership expertise) and can be relatively easily monitored. However, In the United States, implementing such a process is tremendously more complex and might be virtually impossible on a national level. However, several very encouraging US reports indicate that it is, in fact, possible to activate this process regionally, with excellent outcomes on large scale and less fragmentation in patients' care.[6] Altogether the concept of regionalization seems valid and feasible to implement in other, less-homogenous health care systems and will likely result in a better overall patients' care. Dr Darling's excellent report details the principles and benefits of thoracic surgery regionalization and should serve as a template for those organizations and institutions seeking improved patient outcomes.

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