If your car was broken, would you take it to a garage that fixed less than 10 cars a year?

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The traditional definition of perioperative mortality is at 30 days postintervention. Numerous publications in various different disciplines have recently demonstrated that 30-day mortality rates do not sufficiently capture death related to the procedure in specific subsets of patients and causes of death. In this issue of the *Journal*, Pezzi and colleagues[1] examined 114,905 patients who had undergone major pulmonary resection for lung cancer in 1233 hospitals from the US National Cancer Data Base over a 5-year period and looked at 30-day, conditional 90-day, and 90-day mortality, and their relationship to hospital volume.

In this cross-sectional study, the 90-day mortality (5.4%) was approximately double the 30-day mortality (2.8%). Low hospital volume for major pulmonary resection was significantly associated with increased 30-day, conditional 90-day, and 90-day mortality. Hospitals performing less than 30 resections per year had a more than 3% unadjusted 30-day mortality compared with 1.7% in those performing more than 90 cases per year. This is not surprising. Regionalization of lung cancer care to high-volume centers[2,3] and high-volume surgeons[4] has been shown to decrease perioperative morality and even long-term mortality. The majority of studies looking at hospital and surgeon volume and mortality rates examined perioperative mortality using the 30-day definition. An important point to keep in mind when reading the article is that high and low volume were defined using what most thoracic oncologists would consider very, very low volume (<10 and <30 cases per year, respectively). Nine percent of resections were performed in hospitals with an annual surgical volume of less than 10 cases per year, 45% of cases were performed in hospitals performing less than 30 cases per year, and the median annual volume was very low at 33 cases per year.

Superior mortality outcomes in lung cancer surgery are related not only to surgeon volume but also to hospital expertise, hospital resources, dedicated and specialized nurses, physiotherapists, respiratory technicians, specialized equipment, multidisciplinary oncology teams, surgeon training, specialized thoracic anesthesiologists, thoracic surgery intensive care expertise, teams of surgeons who are able to cover call and deal with complications 24 hours a day, 7 days a week, 365 days a year, and experienced house staff and fellow coverage.[5-7] These elements are difficult to isolate because of the complex interplay among them. To include all of these important elements in a hospital, a large volume of pulmonary resections are necessary to attract surgeons and allied health professionals and allow for a hospital or payer system to have a positive return on its investment.

So, if your car was broken, would you take it to a garage that fixed less than 10 cars a year? There is no question that the regionalization of the surgical care of lung cancer would be an effective way to improve patient outcomes and probably decrease costs. The question remains, is the regionalization of lung cancer care practical, feasible, and politically possible?

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