Selected Citations

1. Higher volume was linked with lower mortality for pancreatectomy, esophagectomy, liver resection and pelvic exenteration, but most strikingly for esophagectomy and pancreatectomy. Low volume was strongly associated with excess mortality. For esophagogastrectomies, there was a fourfold decrease, and for pancreatectomies, a twofold decrease. The data support the hypothesis that when complex surgical oncologic procedures are provided by surgical teams in hospitals with specialty expertise, mortality rates are lower. (Begg et al. Impact of hospital volume on operative mortality for major cancer surgery. *JAMA*. 1998;280:1747-1751.)

2. Five years post-surgery, 44% of patients who had lung cancer resection at the highest volume hospitals were alive, compared to 33% who had the operation at the lowest volume hospitals. Post-operative complications were also lower at the highest volume hospitals (20%), compared to the lowest volume hospitals (44%). (Bach et al. The influence of hospital volume on survival after resection for lung cancer. *NEJM*. 2001; 3:181-188.)

3. This study of 46,951 lung resections found that overall, odds of death were reduced by 17% at teaching hospitals versus non-teaching hospitals, except for the highest volume institutions. (Meguid et al. Are surgical outcomes for lung cancer resections improved at teaching hospitals? *Ann Thorac Surg*. 2008;85:1015-1024.)

4. Both hospital- and surgeon-specific procedure volume predict outcomes following colon cancer resection, but hospital volume may exert a stronger effect. The study concludes that efforts to “optimize the quality of colon cancer surgery should focus on multidisciplinary aspects of hospital care” rather than solely on surgical technique. (Schrag et al. Surgeon volume compared to hospital volume as a predictor of outcome following primary colon cancer resection. *J Surg Oncol*. 2003;83:68-78.)

5. Review of imaging studies by a multidisciplinary tumor board resulted in changes in interpretation for 45% of patients and changes in surgical management for 11%. Review of pathology resulted in changes for 29%. Overall, second evaluation of patients by a multidisciplinary tumor board led to changes in surgical management for 52% of patients evaluated. (Newman et al. Changes in surgical management resulting from case review at a breast cancer multidisciplinary tumor board. *Cancer*. 2006;107:2346-2351.)
6. In a meta-analysis of 19 studies of lung cancer surgery, researchers found that high volume hospitals had lower postoperative deaths compared with lower volume hospitals, and thoracic and cardiothoracic surgeons had lower risks of mortality compared to general surgeons. There was a greater association of lower mortality with high volume centers as opposed to individual surgeons, suggesting that the system and team involved in the post-operative care are important. (von Meyenfeldt et al. The relationship between volume or surgeon specialty and outcome in the surgical treatment of lung cancer: A systematic review and meta-analysis. *J Thoracic Oncol.* 2012;7:1170-1178.)