Author has nothing to disclose with regard to commercial support.

RESULTS IN PATIENTS UNDERGOING REOPERATIVE RESECTION?

To the Editor:

I enjoyed the recent article by Smeltzer and colleagues,¹ “Survival Impact of Postoperative Therapy Modalities According to Margin Status in Non–Small Cell Lung Cancer Patients in the United States” in the August 2017 issue of *The Journal of Thoracic and Cardiovascular Surgery*. The article raised several questions.

Patients reported on in this study had positive margins and were treated with postoperative radiation therapy, chemotherapy, or both. Was the decision to leave a positive surgical margin always a result of poor pulmonary function precluding further resection, or were other factors involved (eg, negative margin according to frozen section determined to be positive on permanent section)?

The question of further treatment for those patients who have positive resection margins is often a subject at institutional tumor boards. Radiation is usually favored, because most patients refuse reoperation. Are data available for patients with incompletely resected early-stage non–small cell cancer who underwent reoperative resection? What was the interval between operations, was there any evidence of increased local recurrence, and what was long-term survival in this cohort?

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Reference

1. Smeltzer MP, Lin CC, Kong FS, Jemal A, Osarogiagbon RU. Survival impact of postoperative therapy modalities according to margin status in non–small cell lung cancer patients in the United States. *J Thorac Cardiovasc Surg*. 2017;154:661-72.e10.

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THE IMPORTANCE OF R0 Reply to the Editor:

In their original article, Smeltzer and colleagues¹ used the National Cancer Database to validate our current National Comprehensive Cancer Network guidelines on adjuvant modalities for incompletely resected non–small cell lung cancer (NSCLC). In contrast to what might be expected from these current guidelines, Smeltzer and colleagues¹ demonstrated that postoperative radiotherapy was associated with a significantly worse survival outcome for patients with incompletely resected early-stage NSCLC than for those not treated. Two critical considerations were raised in a subsequent Letter to the Editor: (1) the reason for positive margins and (2) the outcomes of patients undergoing reresection for a positive margin. Whereas neither of these considerations may be sufficiently addressed by the current data set of the National Cancer Database, several points deserve mention.

Incomplete resection for NSCLC is estimated to occur in 5% to 15% of pulmonary resections, and this event is associated with a significant detriment to overall survival of these patients.² In general, a variety of biologic (grade/stage), anatomic (tumor location), physiologic (pulmonary reserve), and technical (pathologic evaluation) factors can be responsible for the occurrence of a positive margin. In an earlier analysis of 5335 positive margins (4.7%) among 112,998 pulmonary resection in the National Cancer Database by the same group, factors associated with incomplete resection included squamous histologic type, high tumor grade, advanced pathologic stage, and tumors overlapping more than a single lobe.³ Whereas it is also possible that noncongruence between frozen and final pathologic section analyses underlies some of the positive margins, false-negative rates of frozen section are generally less than 5%.⁴ It is therefore likely that a variety of etiologies for incomplete resection are present in this data set.

In their original article, Smeltzer and colleagues¹ excluded patients undergoing repeated resection for positive margins to investigate adjuvant treatments for those with positive margins. They also cite the relatively small numbers of patients in the database who underwent reresection.¹ Understanding the outcomes of patients with incompletely resected early-stage NSCLC who undergo reresection is critical to the formulation of evidence-based management guidelines. On our review of the literature, no studies directly comparing reresection with other adjuvant therapies could be identified. In the absence of these data, extrapolation of results from studies comparing R0 and R1/2 resections to patients with incompletely resected early-stage NSCLC seems fair, and each of these studies demonstrates improved long-term survival with complete resection.^{2,3} Taking these data together with the