Figure 1. Vascular damage to saphenous vein harvested for coronary artery bypass grafting. Representative micrographs are shown of conventional (*CONV*) and no-touch (*NT*) preparations of the same vein from a patient undergoing bypass grafting. The *top panels* show the general structural differences where the adventitia is removed from the conventional vein segments and, as a result of saline distention, the intimal folds seen in the “no-touch” vein are absent and the vessel wall thickness is reduced (elastic-van Gieson staining). The *middle panels* indicate a continuous lining of endothelial cells (CD31 immunostaining) in a “no-touch” vein segment, whereas there are regions of endothelial denudation in the conventional sample (*arrow*). The *bottom panels* show ultrastructural changes to the vasa vasorum at the adventitial/medial border where a microvessel is contracted and there is clumping of red blood cells in the conventional sample, whereas in “no-touch” veins the lumen is open. Original magnifications: *top panels* $\times 20$, *middle panels* $\times 100$, *bottom panels* $\times 3000$. *L*, Lumen.

3. Souza DSR, Johansson B, Bojö L, Karlsson R, Geijer H, Filbey D, et al. Harvesting the saphenous vein with surrounding tissue for CABG provides long-term graft patency comparable to the left internal thoracic artery: results from a randomized longitudinal trial. *J Thorac Cardiovasc Surg.* 2006;132:373-8.
4. Mehta D, Izzat MB, Bryan AJ, Angelini GD. Towards the prevention of vein graft failure. *Int J Cardiol.* 1997;62(Suppl 1):S55-63.
5. Gottlob R. The preservation of the venous endothelium by “dissecting without touching” and by an atraumatic technique of vascular anastomosis. *Minerva Chir.* 1977;32:693-700.
6. Tsui JC, Dashwood MR. Recent strategies to reduce vein graft occlusion: a need to limit the effect of vascular damage. *Eur J Vasc Endovasc Surg.* 2002;23:202-8.

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Restaging patients with N2 (stage IIIa) non-small cell lung cancer after neoadjuvant chemoradiotherapy: A closer look at redo mediastinoscopy *To the Editor:*

On the basis of the data obtained by the analysis of 93 locally advanced cases of non-small cell lung cancer clinically restaged after induction therapy, Cerfolio and coworkers¹ conclude that when repeat positron emission tomography (PET)/computed tomography (CT) is adopted either in the staging or restaging process, the percentage decrease in maximum standardized uptake value (maxSUV) of the primary tumor and involved lymph nodes is predictive of pathology, but pathologic assessment is still required because persistently high maxSUV “does not equate to residual cancer.” We commend the authors for their valuable study. Along the line of discussion, Cerfolio and coworkers state that “repeat mediastinoscopy often is inaccurate and potentially dangerous, especially after chest irradiation” and that endoscopic ultrasonography-guided fine-needle aspiration (EUS-FNA) biopsy, despite being more precise and accurate, is “available only in few centers.” We would like to amicably address the authors on this point on the basis of our own personal experience and confidence with redo mediastinoscopy. Pathologic reassessment of the mediastinum is strongly advisable in the setting of induction therapy for locally advanced non-small cell lung cancer because persistent N2 disease heralds a poor prognosis.

Shortly after the introduction of mediastinoscopy, redo procedures were considered to be technically impossible be-

TABLE 1. Results of redo mediastinoscopy after induction chemotherapy compared with results of PET/CT¹⁻⁵

Author, year	No. of patients	IT	Morbidity (%)	Mortality (%)	Sensitivity (%)	Specificity (%)	Accuracy (%)
Cerfolio and coworkers, 2006 ¹ (PET/CT study)	93	CT-RT	0	0	62	88	79
Pitz and coworkers, 2002 ²	15	CT	0	0	71.4	100	87
Rami-Porta and coworkers, 2003 ³	24	CT	0	0	83	100	91
Stamatis and coworkers, 2005 ⁴	165	CT-RT	2.5	0	74	100	93
De Waele and coworkers, 2006 ⁵	32	CT (26) CT-RT (6)	3.1	0	71	100	84

IT, Induction therapy; CT-RT, chemoradiotherapy; CT, chemotherapy.

cause of the scar tissue developing after the first intervention. However, in subsequent years, they were shown to be technically feasible also after induction chemotherapy. The most recent updated series of redo mediastinoscopy after induction chemotherapy are summarized in Table 1²⁻⁵ and compared with the overall results of restaging by means of PET/CT in the study of Cerfolio and coworkers.¹ The latter data were extracted from Figure 2 and not reported as such by the authors. Published mortality and morbidity rates of redo mediastinoscopy are very low. Its main advantage consists of providing histologic evidence of mediastinal downstaging in contrast to the pure anatomic and histologic data given by means of PET/CT. Moreover, Cerfolio and coworkers advocate the use of maxSUV of the primary tumor and involved lymph nodes. In contrast to what its name suggests, maxSUV is not standardized among different PET scanners and centers, making comparison and adoption of the proposed values by other institutions impossible. Also, the high cost of PET/CT is not addressed by the authors.

The very interesting data coming from the EUS-FNA series pave the way for a constructive discussion. An alternative strategy to avoid redo mediastinoscopy consists of initial proof of mediastinal node involvement by means of EUS-FNA, followed by induction chemotherapy and, afterward, mediastinoscopy to evaluate mediastinal response. In this way a technically more demanding redo mediastinoscopy can be avoided by thoracic surgeons having no experience with this technique. We would appreciate the authors' comments on these remarks.

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References

1. Cerfolio RJ, Bryant AS, Buddhiwardhan O. Restaging patients with N2 (stage IIIa) non-small cell lung cancer after neoadjuvant chemoradiotherapy: a prospective study. *J Thorac Cardiovasc Surg.* 2006;131:1229-35.
2. Pitz CC, Maas KW, van Swieten HA, de la Riviere AB, Hofman P, Schramel FM. Surgery as part of combined modality treatment in stage IIIB non-small cell lung cancer. *Ann Thorac Surg.* 2002;74:164-9.
3. Rami-Porta R, Mateu-Navarro M, Serra-Mitjans M, Hernandez-Rodriguez H. Remediastinoscopy: comments and updated results. *Lung Cancer.* 2003;42:363-4.
4. Stamatis G, Fechner S, Hillejan L, Hinthnerhaner M, Krbek T. Repeat mediastinoscopy as a restaging procedure. *Pneumologie.* 2005;59:862-6.
5. De Waele M, Hendriks J, Lauwers P, Ortmanns P, Vanroelen W, Morel AM, et al. Nodal status at repeat mediastinoscopy determines survival in non-small cell lung cancer with mediastinal nodal involvement, treated by induction therapy. *Eur J Cardiothorac Surg.* 2006;29:240-3.

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Reply to the Editor:

Dr Cesario and colleagues have posed some important and interesting questions concerning the role of repeat mediastinoscopy after induction radiotherapy. We need to limit our comments to patients who have had radiotherapy because that is the real issue and not those who had chemotherapy alone. The authors state that "pathologic

reassessment of the mediastinum is strongly advisable," and we, as our article clearly outlines, agree. The table the authors show compares a clinical staging modality, positron emission tomography (PET)/computed tomography with a pathologic staging procedure (repeat mediastinoscopy). As we have preached and written, pathologic staging always trumps clinical staging,¹ and thus this comparison is unjustified. Repeat PET/computed tomography directs biopsies by providing targets for biopsy, as we clearly state. The question is as follows: What is the safest and most accurate way to achieve rebiopsy of previously cancerous N2 mediastinal lymph nodes after induction chemoradiotherapy? Although there is little doubt that repeat mediastinoscopy can be performed safely (as we have done several times ourselves), we do not recommend it on a national basis nor do we believe it is accurate in most surgeons' hands. The authors are biased by their own skill and might not realize that the vast majority of these patients are not seen by surgeons who have their type of expertise. If we send out the message that repeat mediastinoscopy after radiotherapy is safe and accurate or is "the standard of care," I fear the subsequent morbidity and even mortality that might ensue. A large number of patients in the United States with lung cancer receive their surgical care from less-experienced hands than those of Drs Granone, Schil, and Cesario. The message from our literature must take this fact into account. I do not believe that repeat mediastinoscopy after chest irradiation is safe or accurate in the typical center. In fact, although it might be safe in select hands, the accuracy is still in doubt. Careful analysis of the articles referenced by the authors' letter shows the relatively high morbidity for mediastinoscopy for those who had radiotherapy (not chemotherapy alone). Thus