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Commentary: Surgical standardization in mesothelioma trials

Valerie W. Rusch, MD, FACS

In this issue of the *Journal*, Hasegawa and colleagues¹ report the results of a small, multicenter, single-arm, Phase II clinical trial testing the use of neoadjuvant chemotherapy followed by surgical resection in selected patients with malignant pleural mesothelioma (MPM). In essence, this study corroborates the experience reported in earlier trials of similar design showing the feasibility of preoperative chemotherapy followed by surgical resection using extrapleural pneumonectomy (EPP), pleurectomy/decortication (P/D), or extended pleurectomy/decortication (EPD).^{2,3}

Perhaps the most important aspect of this study is the rigor of the approach to surgical resection and to documentation of surgical outcomes. Once it became recognized that EPP was associated with a greater morbidity and mortality relative to P/D or EPD, with a potential survival benefit seen only in younger patients with node-negative epithelioid

Valerie W. Rusch, MD, FACS

CENTRAL MESSAGE

This study establishes an important bar in terms of technical quality and surgical reporting in clinical trials.

tumors,^{4,5} the thoracic surgical community shifted to performing lung-sparing operations (P/D or EPD). Relative to EPP, these procedures are subject to greater variability in the type of resection because of the heterogeneity in tumor extent that occurs in MPM and a lack of standardization in surgical technique. Since the historical term P/D was too vague a description for lung-sparing operations, the IASLC (International Association for the Study of Lung Cancer) MPM Staging and Prognostic Factors Subcommittee proposed using the term EPD to describe parietal pleurectomy with or without visceral pleural removal (decortication) plus resection of the diaphragm and/or pericardium and retaining the term P/D to describe pleurectomy and decortication only.⁶ This nomenclature was widely adopted but remains insufficient to describe the variations in the extent of lung-sparing operations which in turn influence surgical risk and outcomes, particularly in the context of multimodality treatment. The IASLC MPM subcommittee,

From the Department of Surgery, Memorial Sloan Kettering Cancer Center, New York, NY; and American College of Surgeons, Chicago, Ill.

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Address for reprints: Valerie W. Rusch, MD, FACS, Memorial Sloan-Kettering Cancer Center, 1275 York Ave, New York, NY 10065 (E-mail: ruschv@mskcc.org).

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including some of the authors of this multicenter study, is currently developing a more granular nomenclature to describe the extent of resection, the potential extent of residual tumor at the end of the operation, and to propose a template for a standardized electronic operative report. Data elements being gathered by the IASLC MPM subcommittee in preparation for the Ninth edition of the international staging system already require extensive details regarding the details of the operation performed since these may influence long-term outcomes.

This study by Hasegawa and colleagues sets an important bar in surgical trial design in MPM. Detailed descriptions of the operation and educational sessions provided guidelines for participating surgeons, many of whom were relatively inexperienced in these long, complex, and potentially morbid procedures. Surgical videos were used to verify the extent of resection. Surgical details were carefully collected and an internationally accepted system for adverse event reporting was used to record post-operative complications. A reproducible surgical end point, MCR (macroscopic complete resection), was used as the primary end point. Consequently, although the trial was small, the results were high quality. The authors

should be congratulated on the high standards established in this study.

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