Commentary: Invasive mediastinal staging for lung cancer—Quality gap, evidence gap, both?

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Central Message

Mounting evidence of suboptimal care delivery motivates efforts to increase guideline adherence in treating patients with lung cancer.

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Low and variable rates of invasive mediastinal staging form the basis of a perceived gap in the quality of lung cancer care.¹⁻³ A recent prospective study of individuals with suspected or confirmed nonmetastatic lung cancer staged by computed tomography and positron emission tomography showed that 74% had at least one guideline-recommended indication for invasive mediastinal staging⁴—suggesting that previously reported rates (21%-34%) are lower than they should be. What remains missing is high-level evidence linking process to outcome. The clinical basis for this link is that accurate mediastinal staging leads to more appropriate treatment selection, which in turn leads to better patient outcomes. A decade ago, researchers showed that the use of more staging tests was associated with better survival.⁵ Use and appropriateness are not synonymous, however, and the process-outcome relationship was likely confounded by unmeasured factors related to treatment selection and provider characteristics. As a consequence, questions about a process-outcome link remain.

In this month's *Journal*, Osarogiagbon and associates⁶ provide further evidence of a quality gap. First, they demonstrated a persistent underuse of invasive mediastinal staging nearly 2 decades after this finding was first reported. Second, they showed that dedicated thoracic surgeons perform invasive mediastinal staging more frequently than both general surgeons and board-certified cardiothoracic surgeons without a dedicated thoracic practice. This relationship has been observed in another regional study,⁷ but it was not seen in a previous national study linked to the American Board of Thoracic Surgery Diplomates database.⁸ On balance, these findings suggest that dedicated board-certified thoracic surgeons do a better job of staging lung cancer, but significant room for improvement remains for all types of surgeons. Finally, Osarogiagbon and colleagues⁶

showed—for the first time—a relationship between invasive mediastinal staging and better survival among patients with a guideline-recommended indication for invasive staging.^{9,10} They were able to demonstrate this relationship independent of provider characteristics associated with better outcomes.^{8,11-13} The most important limitation of their work is that their population was restricted to patients with resected lung cancer. As a consequence, there remains legitimate uncertainty about a causal relationship between guideline-concordant invasive mediastinal staging and better patient outcomes. Limitations notwithstanding, Osarogiagbon and colleagues⁶ have provided new information that bolsters concerns regarding the quality of lung cancer staging.

This new body of evidence facilitates and further motivates several national efforts to improve the quality of lung cancer care. For instance, the American Cancer Society National Lung Cancer Roundtable has assembled a task group charged with finding ways to increase rates of guideline-concordant invasive mediastinal staging, and it is currently developing a national survey to understand facilitators of and barriers to invasive staging.¹⁴ The Thoracic Oncology Network and Quality Improvement Committee of the American College of Chest Physicians developed and validated a quality metric for invasive mediastinal staging on the basis of feasibility and relevance.¹² Recently, the Society of Thoracic Surgeons General Thoracic Database modified its data collection form in a manner that would

allow such quality measurement. These efforts represent opportunities to improve care delivery and survival for patients with lung cancer.

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