Evidence for resection of sarcoma pulmonary metastases: More, but better?

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Soft-tissue sarcomas are relatively rare, but thoracic surgeons commonly see these patients because the lung is a frequent and often the only site of metastatic disease. Registries and noncontrolled retrospective studies suggest that pulmonary metastasectomy is beneficial, although randomized trials demonstrating improved long-term survival relative to other therapies have not been performed.¹⁻⁴ The study of Chudgar and colleagues⁵ in this issue of the *Journal* investigated outcomes after resection of soft-tissue sarcoma pulmonary metastases at the Memorial Sloan Kettering Cancer Center. Chudgar and colleagues⁵ updated a previous review by assembling a large cohort of 539 patients to identify patient, tumor, and treatment variables that have statistically significant associations with survival outcomes.

This study has several clinically relevant findings. Surgery was associated with relatively good median survival of almost 3 years (33.2 months) and a 5-year survival of 34%, which is especially impressive when considering that more than 25% of these patients with metastatic cancer had 5 or more pulmonary lesions. The quantitative data on the effects of histologic subtype, primary tumor size, tumor grade, and number of pulmonary metastases on survival also allow estimation of metastasectomy benefits for specific patients. In addition, a minimally invasive approach was found not to hurt in the study, and in fact it was associated with better outcomes than open surgery. This topic has been controversial, because an open approach allows better manual lung palpation that may avoid missing nodules and thus prevent an incomplete resection.⁶⁻⁸ Although extent of disease factors such as number, size, and location of metastases may have biased the results, the study findings are in tune with other evidence that a minimally invasive approach does not necessarily compromise long-term outcomes.⁹

Surgeons, however, must still consider these results cautiously. The study has a large cohort from an outstanding institution, but it is still retrospective and noncontrolled. The observed survival may be better than expected for a patient with stage IV sarcoma, but the study does not address

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Central Message

Survival is reasonable after sarcoma pulmonary metastasectomy, but recurrence is common. Histologic subtype, primary tumor size, tumor grade, and number of pulmonary metastases affect prognosis.

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the important, lingering question of whether metastasectomy was responsible for improving survival or was simply chosen for healthy patients with favorable disease characteristics.¹⁰ The sobering reality is that most patients still had recurrence relatively soon after complete pulmonary resection—63% of patients had recurrence in the lungs, and 74% of patients had recurrence at any site, with a median time to recurrence of only 6.8 months.

The study does support current clinical practice. Surgery may be associated with a high recurrence rate, but patients do not have a better therapeutic alternative. Many patients may also prefer an invasive therapy, even with some risk of significant morbidity, to a course of systemic therapy that also has questionable benefit and may affect quality of life for a longer period. In addition, aggressive resection of pulmonary disease may prevent or delay the unfortunate clinical situation in which patients have a large amount of symptomatic—and in many cases, immediately life-threatening—unresectable disease in the chest. Overall, surgeons can use this study to aid patient selection but also to support the clinical decision to pursue resection of soft-tissue sarcoma pulmonary metastases for patients judged to be appropriate surgical candidates.

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