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References

1. Lancellotti P, Moura L, Pierard LA, Agricola E, Popescu BA, Tribouilloy C, et al. European Association of Echocardiography. European Association of Echocardiography recommendations for the assessment of valvular regurgitation. Part 2: mitral and tricuspid regurgitation (native valve disease). *Eur J Echocardiogr*. 2010;11:307-32.
2. Acker MA, Parides MK, Perrault LP, Moskowitz AJ, Gelijns AC, Voisine P, et al. Mitral-valve repair versus replacement for severe ischemic mitral regurgitation. *N Engl J Med*. 2014;370:23-32.
3. Borger MA, Alam A, Murphy PM, Doenst T, David TE. Chronic ischemic mitral regurgitation: repair, replace or rethink? *Ann Thorac Surg*. 2006; 81:1153-61.
4. Rabbah JPM, Saikrishnan N, Siefert AW, Santhanakrishnan A, Yoganathan AP. Mechanics of healthy and functionally diseased mitral valves: a critical review. *J Biomech Eng*. 2013;135:021007.

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THE ROLE OF LYMPHATIC INVASION IN THE MANAGEMENT OF PATIENTS WITH T1N0M0 PULMONARY ADENOCARCINOMA

To the Editor:

We read with interest the article by Mimae and colleagues¹ about the role of the lymphatic invasion (LI) at specimen examination in predicting prognosis in patients with clinically assessed T1N0M0 lung adenocarcinoma.

Mimae and colleagues¹ based their investigation on the evidence that some patients with clinically assessed T1N0M0 (6.7%) showed positive pathologic lymph node metastasis even though both computed tomographic and positron emission tomographic findings were negative at preoperative staging. Predictably, analysis of the clinical outcomes confirmed that patients with pN(+) disease had an higher positive rate of

LI and a lower prognosis than those with pN(−) disease.

Mimae and colleagues¹ also found that LI was a prognostic factor in patients with both pN(+) and pN(−) patients and, surprisingly, that there was no difference in prognosis between patients with pN(+) LI(−) disease and those with pN(−) LI(+) disease. These results could be explained if we were to admit the following: (1) that in pN(+) LI(−) cases, the tumor had a “slight” LI missed at the examination of the specimen slices, and (2) that LI, when present, is already a sign of malignant cells spreading even if nodal involvement has not been reached or revealed. Mimae and colleagues¹ therefore concluded that if LI status can classify clinical T1N0M0 into good or poor prognosis groups, it should be considered in the selection of patients who need adjuvant therapy.

We agree with Mimae and colleagues¹ and suggest a role for LI in the surgical strategy choice. Indeed, many cases of recurrence in patients with stage IA disease, particularly after limited resections,² could be explained by LI status. It is a common opinion³ that the high rate of recurrences in sublobar resection should be mainly ascribed to inadequate resection margins. In fact, according to the results of Mimae and colleagues,¹ in cases of LI only lobectomy allows the entire lobar lymphatic pathway removal, avoiding the spread of malignant cells. Limited resection should be considered adequate only in cases of N(−) LI(−) disease; unfortunately, however LI cannot be determined preoperatively or intraoperatively. These findings thus may limit the role of sublobar resection in patients with N0 disease.

We conclude by congratulating Mimae and colleagues¹ for their study.

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References

1. Mimae T, Tsutani Y, Miyata Y, Yoshiya T, Ibuki Y, Kushitani K, et al. Role of lymphatic invasion in the prognosis of patients with clinical node-negative and pathologic node-positive lung adenocarcinoma. *J Thorac Cardiovasc Surg*. 2014;147: 1820-6.
2. Baisi A, De Simone M, Cioffi U, Raveglia F. Should pulmonary lobectomy be replaced by sublobar resection in patients with stage I non-small cell lung cancer? *J Thorac Cardiovasc Surg*. 2014; 147:1997-8.
3. Kent M, Landreneau R, Mandrekar S, Hillman S, Nichols F, Jones D, et al. Segmentectomy versus wedge resection for non-small cell lung cancer in high-risk operable patients. *Ann Thorac Surg*. 2013;96:1747-54.

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Reply to the Editor:

We are grateful for the letter we received from Baisi and colleagues regarding our study¹ and delighted by their thoughtful insight into our results. As they described in the letter, the main point of our study was that lymphatic invasion (LI) is a predictive prognostic factor in patients with pN(+) and pN(−) clinical T1N0 lung adenocarcinoma. In addition, the recurrence-free survival curves of pN(+) LI(−) and pN(−) LI(+) tumors did not significantly differ. Thus, not only pN(+) LI(−/+), but also pN(−) LI(+) might indicate the presence of micrometastases. A pN(−) LI(+) lung adenocarcinoma does not always strictly correspond to localized disease. Therefore, patients with pN(−) and LI(+) tumors should be considered candidates for adjuvant therapy.

The suggestion about the role of LI status in the choice of surgical strategy is important. Although both wedge resection and segmentectomy are classified as limited resection, segmentectomy differs from wedge