Q&A column, 3/18

Editor: Frederick L. Kiechle, MD, PhD

Submit your pathology-related question for reply by appropriate medical consultants. CAP TODAY will make every effort to answer all relevant questions. However, those questions that are not of general interest may not receive a reply. For your question to be considered, you must include your name and address; this information will be omitted if your question is published in CAP TODAY.

Submit a Question

Q. Our pathology group has an unusual case of residual squamous cell carcinoma of the lung in a lobectomy specimen after chemotherapy. The lung shows a hilar scar (1.7 cm) involving the lung parenchyma and the peribronchial adipose tissue. In the scar there is residual carcinoma (0.4 cm) that focally is involving the peribronchiolar adipose tissue around the lobar bronchus. The focus is located at 0.3 cm of the final surgical resection margin of the bronchus. Because the tumor involves peribronchiolar adipose tissue, is it considered outside the lung (extension outside the lung)? Since the tumor is in the mediastinal fat around the bronchi and had to invade the viscera pleura to invade the peribronchial adipose tissue, would the tumor stage be ypT2a? Or T3 since it is invading part of the mediastinal fat? Or should it be pT1?

A. If invasion beyond the visceral pleural elastic layer, which may be better visualized on an elastic Van Gieson (EVG) stain, can be demonstrated in this scenario, the tumor would be up categorized to ypT2a. However, a perceptible visceral pleural elastic layer sometimes may not be evident in the region around a lobar bronchus. It is certainly the case that a visceral pleural elastic layer is not always apparent in the hilar region, as the visceral pleural reflection at the hilus is sometimes incomplete.1 While the *International Association for the Study of Lung Cancer Staging Manual in Thoracic Oncology* provides guidance on pneumonectomy specimens and advises categorizing tumors that invade but do not extend beyond the hilar fat surrounding the main bronchus as pT2a unless other features dictate a higher T category, it does not specifically address soft tissue invasion in the region around a lobar bronchus in lobectomy specimens.2 Given this, if penetration through the visceral pleural elastic layer cannot be demonstrated in tumors that invade soft tissue in the region around a lobar bronchus, general TNM staging rules should be used to assign T category, meaning a pT1 tumor would not be up categorized. An important element to include in this scenario is response to neoadjuvant therapy. The percentage of remaining viable tumor should be estimated by comparing the size of residual viable tumor to the size of a surrounding fibrotic tumor bed (if there has been a response) and may be reported as greater or less than 10 percent viable tumor.

1. Otsuka H, Ishii G, Yoshida J, et al. Tumor invasion of extralobar soft tissue beyond the hilar region does not affect the prognosis of surgically resected lung cancer patients. *J Thorac Oncol.* 2010;5(10):1571–1575.
2. Goldstraw P, executive ed. *International Association for the Study of Lung Cancer Staging Manual in Thoracic Oncology.* Orange Park, Fla.: Editorial Rx Press; 2009.

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Q. Our laboratory is transitioning from a rapid plasma reagin to a specific treponemal test for syphilis screening. Several obstetricians have resisted the change, citing the value of the RPR for finding cases of antiphospholipid antibodies in pregnant women. While there are case reports of patients with aPL antibodies discovered with a false-positive RPR, I do not find much data on the performance of an RPR as a screen for clinically significant antiphospholipid or anticardiolipin antibodies during pregnancy. Is there good literature to support this practice? Are there reasons to prefer an RPR over a specific enzyme immunoassay for syphilis screening in pregnant patients?

A. Health care providers who order laboratory tests and those who perform the tests need to work together to identify the optimal testing approach for their patients. Both the traditional algorithm and the reverse algorithm for syphilis screening are used and accepted in medical practice. Some may want to use a highly specific syphilis test to avoid false-positive results, such as a treponemal antibody test that is employed as the first component of the reverse algorithm screen. Some have proposed that positive RPR results that are not specifically associated with a syphilis infection can be used as a criterion to help diagnose nonsyphilis autoimmune conditions.1 If a hypercoagulable state due to autoimmunity is a clinical concern, then it is medically appropriate to screen for this condition using tests other than RPR that are more sensitive in detecting the condition.

1. Hochberg MC. Updating the American College of Rheumatology revised criteria for the classification of systemic lupus erythematosus. *Arthritis Rheum*. 1997;40(9):1725.

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