Letters to the Editor

The Radiologist's Role in Tumor Staging

From
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Editor:

I read with interest the editorial by Dr Glastonbury and colleagues in the January 2016 issue of *Radiology* (1). Much of what they state in their cleverly titled and impassioned editorial seems incontrovertible. For example, the interpreter of a neck computed tomographic (CT) scan or magnetic resonance (MR) image in the setting of head and neck cancer must certainly comment on the status of the lymph nodes. I join the authors in believing strongly in the additional responsibility of specifically including information necessary for staging. In this example, without knowing that nodal size greater than 6 cm upstages to N3 for many head and neck sites, the interpreter might not include that specific information in their report. The primary source of controversy in the head and neck radiology community lies in the appropriateness of the radiologist assigning an explicit stage. The authors mention some of the troubling issues, specifically the inclusion of non-imaging findings in staging criteria (eg, vocal cord fixation in glottic carcinoma). But other issues exist. What if the reader evaluating the MR image feels convincingly that the neck is N0, but the interpreter of the positron emission tomography (PET)/CT scan believes it to be N1? What if the mucosal extent of a tumor observed by the surgeon, notoriously difficult to accurately assess at imaging, puts the lesion in a different T stage than what the radiologist can see? You can argue that all disparities will ultimately be resolved at the tumor board, and that is the heart of my objection. The point of the tumor board is just that: to integrate all available information, of which the radiology report is just one important piece, and to come up with a consensus final clinical stage ("cTNM"). This has been working effectively at my institution for years and, I know, at many others. No one will argue against the radiologist providing as much relevant information as possible. I would, however, argue that no individual component of the staging process should give the impression to a reader of being a stand-alone arbiter of final stage. And I think we must also acknowledge institutional differences in workflow and the possibility that, as long as all appropriate information is available in the radiology report, there may be more than one acceptable way to present it.

Disclosures of Conflicts of Interest: disclosed no relevant relationships.

Reference

1. Glastonbury CM, Bhosale PR, Choyke PL, et al. Do radiologists have stage fright? Tumor staging and how we can add value to the care of patients with cancer. Radiology 2016; 278(1):11–12.

Response

From
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Dr Shatzkes makes an important point, that it is not necessarily the role of the radiologist to assign a specific TNM stage. She is correct that determination of the formal clinical stage

depends on integration of all diagnostic information. The American Joint Committee on Cancer (AJCC) Cancer Staging Manual, 7th edition (1), defines clinical stage as follows: "Clinical staging incorporates information obtained from symptoms; physical examination; endoscopic examinations; imaging studies of the tumor, regional lymph nodes, and metastases; biopsies of the primary tumor; and surgical exploration without resection." However, although imaging is only one source of information, it provides essential clinical staging information for most solid tumors, and for many it provides the most relevant information.

We agree with Dr Shatzkes that a tertiary hospital tumor board, such as hers, is the best place to present expert opinions of imaging and pathologic information combined with the physical examination findings in order for oncologists to assign each patient's cTNM and/or pathologic stage (pTNM) or the recurrent tumor stage (rTNM) or post-therapy stage (yTNM). Ideally, all cancer patients across the country would be part of this process, which could potentially be at multiple time points in their disease course.

Our opinion piece (2) was a call to make use of AJCC/Union for International Cancer Control staging tables so that information critical to accurate tumor staging would be provided in imaging reports. Stating in the impression the T, N, and M categories would be a very reasonable approach, although it was not our express point. The imaging report should include specific staging information that the oncologist is seeking or indicate that the image is indeterminate for that specific question. We believe that structured reporting would be an excellent tool for making this task significantly easier, particularly for the general imager who is reporting images across multiple body sections but also for the subspecialized imager who deals with a complex staging system.

Although the AJCC defines a separate explicit pathologic stage, there is no analogous separate imaging stage. Thus, it is not incumbent on the radiologist to provide an imaging stage, but rather to provide all necessary staging information, which ideally would include stating what the T, N, and M categories would be based on the imaging findings.

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References

1. Edge S, Byrd DR, Compton CC, et al. AJCC cancer staging manual. 7th ed. New York, NY: Springer-Verlag, 2010.
2 Glastonbury CM, Bhosale PR, Choyke PL, et al. Do radiologists have stage fright? Tumor staging and how we can add value to the care of patients with cancer. Radiology 2016; 278(1):11–12.

Two-Slice-Touch Rule in Meniscal Tear

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Editor:

We read with interest the article by Dr Kumm and colleagues in the January 2016 issue of *Radiology* entitled "Natural History of Intrameniscal Signal Intensity on Knee MR Images: Six Years of Data from the Osteoarthritis Initiative" (1). After the longitudinal cohort study for 6 years, the authors concluded that increased linear intrameniscal signal intensity is highly likely to progress to a degenerative meniscal tear. In their study, Dr Kumm and colleagues applied the imaging diagnostic criteria known as the "two-slice-touch" rule. According to the two-slice-touch rule, increased signal intensity in meniscus indicates a tear if two or more magnetic resonance (MR) images of a meniscus have distortion or signal intensity to the meniscal surface (2). Figure 3 in the article includes sagittal intermediate-weighted fat-saturated MR images in a patient in whom increased linear intrameniscal signal intensity progressed as a meniscal tear. That figure shows a horizontal meniscal tear in the posterior horn of the medial meniscus, as indicated by an arrowhead. However, we found the arrowhead quite confusing. Normal meniscal morphology is characterized by its triangular shape and a sharp central tip (3). The meniscus is located between the articular surface of condyles of femur and tibia plateaus, and the peripheral portion of medial meniscus is firmly attached to the joint capsule (3). The arrowhead in the third image of figure 3 indicating the meniscal tear looks like it is pointing to the peripheral portion of the medial meniscus rather than the femoral or tibial surface of the meniscus, which means "the tear" does not fulfill the two-slice-touch rule. Can the authors explain the details and the meaning of the arrowhead in the third MR image of figure 3?

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References

1. Kumm J, Roemer FW, Guermazi A, Turkiewicz A, Englund M. Natural history of intrameniscal signal intensity on knee MR images: six years of data from the osteoarthritis initiative. Radiology 2016;278(1):164–171.
2. De Smet AA, Tuite MJ. Use of the "two-slice-touch" rule for the MRI diagnosis of meniscal tears. AJR Am J Roentgenol 2006; 187(4):911–914.
3. Resnick D, Kransdorf MJ. Internal derangements of joints. In: Bone and joint imaging. 3rd ed. Philadelphia, Pa: Elsevier Saunders, 2005; 949–905, 952.

Response

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