Letters to the Editor

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Discordance about the Use of the Term *Minimal Fat Angiomyolipoma*

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Editor:

Histologic examination is the standard of reference for the diagnosis of the diseases. Accurate diagnostic criteria should be used in the correlation studies between histologic and radiologic findings; consequently, only histologic findings may be considered a conclusive diagnosis. In the current World Health Organization (WHO) classification of renal neoplasms (1), two histologic subtypes of angiomyolipoma (AML) have been reported: classic and epithelioid AML. Other histologic variants, such as oncocyctic and cystic AML, have been described. Lane et al (2) defined monophasic AMLs as those composed predominantly ($\geq 95\%$) of smooth muscle (monotypic leiomyomatous variant) or fat (lipomatous variant). This distinction is not reported in the WHO classification or in surgical pathology textbooks of current consultation (3,4). In the histopathology literature, the terms *fat-pure AML* or *AML with minimal fat* have not been reported. This terminology is used by radiologists and could not be accepted as a conclusive diagnosis because the histologic examination has not been performed and the entity of neoplastic single components is unclear. We read with great interest the article by Dr Hindman and colleagues in the November 2012 issue of *Radiology* (5). Dr Hindman and colleagues wrote that "[f]at content of 25% or less per high-power field has been described in AMLs

that contain minimal amount of fat at the histopathologic level." They cited as reference the study by Milner et al (6), who referred to minimal fat AMLs as "fat-pure AML" and based their definition on radiologic findings and not on findings at the histopathologic level. The percentage of adipose component is not specified in the definition used by Milner et al. In conclusion, AML with minimal fat is not a histologic subtype. The use of this term should be avoided. The citation of Milner et al is not correct. We propose that minimal fat AMLs should be referred to as AMLs, with the exact percentage of fat content indicated. Only a complete histologic examination of the whole lesion may establish the exact fat content.

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Response

From

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Many medical terms currently in use are not included in the International Classification of Diseases of the WHO but are widely accepted because they define a specific problem or scenario in clinical practice and can be used to help guide appropriate management. AML with minimal fat is such a term. The presence of visible fat at imaging has served as a practical guide for avoiding surgical intervention for suspected renal cancers. Yet, the absence of visible fat at imaging is more ambiguous and leads to unnecessary surgeries (1).

We agree that AML should be the preferred term for pathologic reports, irrespective of the amount of fat in the lesion. We believe that applying the WHO classification for AMLs to imaging reports creates gaps in the context of guiding clinical practice. Although most urologists are quite familiar with the imaging appearance and description of “classic” AMLs, the imaging features of AMLs containing minimal fat are probably not as widely recognized. The use of just AML in radiology reports for those masses lacking visible fat can be confusing to urologists, who expect and search for the classic appearance of a fatty mass.

Milner et al (2) specifically addressed the issue of AMLs containing minimal amounts of fat on imaging studies, as the title of their article indicates. In their article, “fat poor cases were defined as the failure of preoperative imaging to demonstrate fat within a lesion, thus making it unsuspected at surgery done for

presumed renal cell carcinoma due to an enhancing mass” (2). In the Results section, the authors indicated that, with this definition, 92% of the AMLs without visible fat at imaging had less than 25% fat per high-field-strength power at histopathologic examination. It is based on this important observation that we defined the histopathologic criteria in our study. In this regard, our approach was based on objective data and validates the results of Milner et al.

The term *AML with minimal fat* may not be recognized by the WHO, but its use reflects the pathologic findings and can avoid misinterpretations in everyday clinical practice. This approach is analogous to the use of the term *lipid-poor adenoma*, which is applied to a subset of adrenal adenomas without detectable lipid content at imaging and widely accepted in the medical and surgical literature (3,4). The term is practical in the context of clinical practice because it can facilitate appropriate management decisions.

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Density and Breast Cancer Risk

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Editor:

Breast density has been very much in the public eye due to recent laws regarding mandatory reporting in letters sent to patients about the results of mammography. In some jurisdictions, a comment on the need for additional screening after mammography is also required. The recent article by Hooley et al in the October 2012 issue of *Radiology* (1) describes the experience of an academic practice performing breast ultrasonography (US) in response to the first of now several density laws.

We respectfully disagree with statements related to breast density that appear in an accompanying editorial by Drs D’Orsi and Sickles in the same issue (2). Drs D’Orsi and Sickles state that the percentage by volume of radiologically dense tissue in the breast “... cannot be accurately estimated by orthogonal two-dimensional images....” This statement is incorrect. The image signal (optical density on a film or pixel value on a digital image) in mammography is dependent, in a known way, on the thickness and composition of the breast and the characteristics of the x-ray tube output and detector. By calibrating the imaging system and determining the thickness of the compressed breast, the composition, that is, density, can be inferred even from a single view (3–7).

Drs D’Orsi and Sickles also pose the following question: “Does a woman classified as not having dense breasts visually, and thus at lower risk for breast