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Localized Renal Masses: Comment on Recent American Urological Association Guideline

To the Editor.—Localized renal masses are increasingly being detected as incidental findings during imaging studies and the clinician must decide to excise, ablate, follow, or perform limited tissue sampling for diagnosis. A guideline on management of localized renal masses was published in 2009 by the American Urological Association (AUA).[1] In 2014, the AUA assembled a group of experts to update the guideline, focusing primarily on evaluating and managing clinically localized masses in adults suspicious for renal cell carcinoma.[2] The expert panel that updated the guideline included members of the AUA and representatives from the College of American Pathologists (CAP), the Society of Urologic Oncology, the American College of Radiology, the American Society of Nephrology, the Endourological Society, and the Society of Interventional Radiology.[2]

In March 2017, the AUA requested the CAP's formal endorsement of the updated guideline. The CAP appointed a small group of pathologists (the Endorsement Review Panel) to review the AUA recommendations and provide their opinion to the CAP Council on Scientific Affairs and Board of Governors. After review and discussion, the CAP endorsed the AUA guideline with one comment concerning the method of solid renal mass sampling. Item 13 in the guideline states that for patients with solid renal masses who elect renal mass biopsy, "multiple core biopsies are *preferred* over fine-needle aspiration" (FNA) [italics added].[2] We originally submitted our endorsement comment to the AUA Practice Guidelines Committee and to the *Journal of Urology*, but the 1-year limit on letters related to published articles had lapsed by the time of submission.

Renal mass sampling is usually performed percutaneously under computed tomography or ultrasound guidance, by core biopsy and/or FNA biopsy. In reference to the accuracy of FNA, the only study cited in the AUA guideline is one by Patel et al,[3] which reported a sensitivity of 62.5%. Several recent studies on FNA of kidney masses have been published that show the diagnostic performance to be far superior to that found in the AUA guideline, albeit generally somewhat inferior to core needle biopsies.[4–7] For example, in the systematic review and meta-analysis of diagnostic accuracy of percutaneous renal tumor biopsy performed by Marconi et al,[4] the sensitivity and specificity of diagnostic core biopsies were 99.1% and 99.7%, compared with 93.2% and 89.8%, respectively, for FNA. Core needle biopsy and FNA are ideally performed together because the 2 methods are complementary; occasionally only the FNA will be diagnostic, whereas the core biopsy is nondiagnostic.[8] Diagnostic yield for FNAs of the kidney is operator dependent, and the yield may be low if the radiologist is not adept at performing FNA. Some pathologists perform touch imprints from core biopsies, which confirms the adequacy of diagnostic material in biopsies.[9]

The recommendation preferring core biopsies over FNA was rated as a moderate recommendation with low strength of evidence (grade C). In the AUA nomenclature, this means that better evidence is likely to change the estimate of its effect; such recommendations are not considered practice standards. The AUA guideline acknowledged the limitation of its assessment of FNA based on inclusion criteria of the systematic review.[2] Many pathology practices analyze both kidney FNA and core biopsy; therefore, we recommend, based on the updated evidence, that core biopsy *and/or* FNA be performed at the discretion of the radiologist and pathologist.

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Malignant Mesothelioma and Its Nonasbestos Causes

To the Editor.—Attanoos and colleagues[1] reviewed the literature concerning nonasbestos causes for malignant mesothelioma. They concluded that most mesotheliomas not clearly attributable to asbestos exposure are spontaneous. Their review did not consider a common occult form of asbestos exposure arising from the use of talcum powders. In 1976, Rohl et al[2] analyzed consumer talcums and reported that 10 of the 20 products (50%) analyzed contained tremolite and anthophyllite. Blount[3] reported asbestiform tremolite contamination of the ore used in a popular baby powder. Gordon et al[4] found asbesti-

form tremolite and anthophyllite in a popular body powder, and Anderson et al[5] found anthophyllite fibers in the same brand.

Statista[6] (Hamburg, Germany), a market research company, reported that some 100 million Americans used body and baby powders in the years 2011 to 2017. It is possible to draw inferences about the prevalence of exposures to talcum powders in subjects with mesothelioma by querying the database of lung asbestos fiber-burden measurements compiled by Victor Roggli, MD (Duke University Medical Center, Durham, North Carolina).

Fiber-burden measurements were made on 566 subjects (female, n = 75; 13%) with pleural mesothelioma. Talc fibers were detected in 332 of 491 (68%) of the men and 62 of 75 (83%) of the women. The detection of tremolite was significantly associated with the presence of talc ($P < .001$) as was the detection of anthophyllite ($P = .002$). The presence of talc and associated amphiboles was more common in women than it was in men (odds ratio, 3.24; 95% CI, 1.65–6.35). This would be expected if women were more likely to be users of baby and body powders than men were.

Lung burdens of talc and its amphibole contaminants are markers of exposure to talc-containing dusts. In addition to talc exposures from talcum powders, there has been occupational and hobby exposure to industrial talc in the United States, but the number of persons with exposures to industrial talc is small compared with the 100 million users of baby and body powders.

I conclude that:

1. The use of body and baby powders is common in the United States. Consumer surveys found that about one-third of the population used those powders between 2011 and 2017;
2. Measurements of retail talc products have found amphibole asbestos contamination of those products;
3. A large series of measurements of asbestos fiber burdens in patients with pleural mesothelioma has found the presence of talc to be common, exceeding 65% among both men and women;
4. Women were more than twice as likely as men were to have talc in their tissues, compatible with the hypothesis that women were more likely to be users of baby and body powders. Without accounting for amphibole asbestos exposures arising from the use of baby and body powders, it is not possible to conclude, as Attanoos and colleagues have done, that "In North America few mesotheliomas in women at any site are attributable to asbestos exposure."[1(p753)]

It is my opinion that, without accounting for those occult asbestos exposures, it is inappropriate to conclude that "most mesotheliomas not clearly attributable to asbestos exposure are spontaneous (idiopathic)."[1(p753)]

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Overdiagnosis of Thyroid Cancer: The Children in Fukushima Are in Danger

To the Editor.—I am writing this letter because I was inspired by the editorial by Vicki J. Schnadig, MD.[1] The children in Fukushima, Japan are in danger. In the thyroid screening program of the Fukushima Health Management Survey (FHMS), more than 200 children have received a diagnosis of thyroid cancer by ultrasonography (US) and fine-needle aspiration cytology, and most of them have already undergone surgery.[2] The number is still increasing because there has been no change in the screening program since 2011. We must reconsider the natural history of thyroid cancer. There are 2 major theories about thyroid carcinogenesis: fetal cell carcinogenesis and early-onset multistep carcinogenesis.[3] It should be noted that in both theories, early detection of thyroid cancer in children can be harmful because of either overdiagnosis or diagnosis too early.

Only a limited number of residents of Fukushima realize the risk of overdiagnosis in thyroid US screening because Fukushima Prefecture provides little information on possible negative effects of this program. Furthermore, the US examination is performed as one of the school programs.[4] Thus, even though the local government insists that the participation of residents is voluntary, most of the children and their parents regard it as mandatory. In fact, the rate of participation by schoolchildren is more than 90%.

Only a few Japanese experts have reported on the possible harm caused by the FHMS, and there has been no recommendation to stop thyroid screening from related academic societies.[5] This might be due to the following 2 reasons: First, the FHMS, which was planned by chief Japanese experts, was started as a large national project with a budget of up to $1 billion. Currently, there is an awkward atmosphere, with Japanese experts not willing to talk about the harm caused by this project. Second, as also happened in the case of Korea, numerous experts still do not understand the concept of overdiagnosis. They can see no harm in the early detection and treatment of cancer. Some say, "This should not be called overdiagnosis, since the FHMS helps to reduce the anxiety of residents." Others say, "The harm caused by US thyroid screening in Fukushima is very limited, since the procedures are carried out with care."

Overdiagnosis of thyroid cancer in Fukushima has occurred in the younger generation. The harm is more serious than that which occurred in Korea. The children who receive a diagnosis of thyroid cancer are regard-