Who Should Perform Rapid or On-Site Assessment of Thyroid Fine-Needle Aspirations?

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The reasons for performing on-site or immediate assessment of adequacy with fine-needle aspiration (FNA) include higher rates of adequacy, fewer patient complications (fewer passes and procedures may be needed), and conducting proper triage of specimens and patients. Less commonly addressed reasons include fellowship and residency training (our fellows and residents believe this to be one of the most important aspects of their cytology training) and interphysician communication (on-site interpretation of FNAs may allow some pathologists to become better acquainted with clinical colleagues and hospital staff in general, and provide them with helpful information for specific cases).

A number of articles addressing the importance of on-site or rapid assessment of FNA specimens have been published and most attest to its usefulness. Articles addressing its usefulness have been far from perfect, and even as an advocate of the procedure I do not find the literature overwhelmingly convincing. Often a number of uncontrolled factors may be playing a role in the final adequacy assessments in some studies, eg, the aspirates in one group have been performed at a different physical location or by different physicians or are of different anatomic sites or disease states, etc, than those of the other group. We interpret almost all FNAs performed in our hospital on site, but not those performed at an outside endocrinology clinic, and know that the outside clinic has, in the end, a higher rate of adequacy for their thyroid FNAs than our hospital radiology service. We do not believe this argues against on-site or immediate assessment, but it certainly argues that many factors contribute to the adequacy of FNA specimens.

How to perform on-site or rapid assessment of FNAs is also debated and most argue for a best fit for the individual practice. Staff pathologists, fellows, and/or residents may actually review all or select FNAs; the samples may be brought quickly back to the pathologists’ offices for interpretation while the patient is undergoing the procedure; telepathology may be used, etc. Each method allows for some benefits.

Two articles in this month’s journal deal with who performs the on-site or immediate assessment of the FNA. Both of these articles deal in particular with thyroid aspirates. This is important for at least a couple of reasons. First, adequacy guidelines have been published for thyroid FNA and are relatively simple. Second, although adequacy assessment is important with thyroid aspirates, assessing for special studies or performing patient triage is infrequent with thyroid FNA. For example, in my experience, flow cytometry or other ancillary testing is less commonly needed with thyroid FNA specimens than with FNAs from other sites.

As with most cytopathologists, I have worked closely with cytotechnologists and have no difficulty with the results shown by Olson et al. Their study showed that their cytotechnologists performed similarly to their cytopathologists in on-site evaluations of adequacy. Although both groups were confronted with similar specimens, the authors note that “…cytotechnologists had less exposure to inexperienced operators….” Unfortunately, Olson et al do not describe what criteria they used for calling aspirates adequate, less than optimal, and inadequate. Nor is it stated whether the interpretations were made on a number of different passes and what exactly happened after each of the interpretations. Instead, the authors state that each procedure was given a final adequacy evaluation. Was this done on-site? If so, why were procedures discontinued that had specimens that had been deemed inadequate?
The data are nonetheless convincing and confirm the findings of Burlingame et al., specifically for thyroid FNA. Over the past few years our laboratory has seen the requests for on-site interpretation soar, and we have discussed the possibility of cytotechnologists rather than pathologists assessing some thyroid FNAs for adequacy. I believe this article will be helpful for justifying this switch. For us, because our fellows and residents perform most of our on-site and rapid assessments, billing is not an issue (more on billing below).

It may be argued that cytotechnologists do not have the breadth of medical training of pathologists and that this may be a disadvantage with on-site or rapid interpretation. Here, I believe the well-defined nature of the assessment allows for most cytotechnologists, perhaps after some additional training and experience, to perform well at the task. I point out that cytotechnology training is, in fact, rigorous and that cytotechnologists have been shown to perform better than pathologists at some anatomic pathology tasks. For example, it is well known that they are superior at screening Pap tests. A few years ago I was involved in a project in which the original interpretations of Pap tests by cytotechnologists were compared with those made by pathologists, and neither group showed superior skill relative to the final histologic findings of Burlingame et al., specifically for thyroid FNA.

Indeed, many cytotechnologists have much more experience and skill with thyroid FNA specimens than their pathologist counterparts. Renshaw discusses a rather worrisome change in the world of billing. It appears that endocrinologists and any other physicians can now charge a professional fee for performing a rapid or on-site assessment of an FNA specimen. Renshaw argues persuasively that this is a laboratory test and that laboratory methods must be used, and therefore the mandates of the Clinical Laboratory Improvement Amendments should be followed. He points out that there is no mandate for this, however. The endocrinologist (or whomever) is not required to participate in any quality assessment program that will undergo rigorous inspection and the typical safeguards of a College of American Pathologists–inspected cytology laboratory will likely not be in place here. He also points out that many physicians (more every day) have no training in microscopy.

This is, of course, startling, and one is left cynical about the nature of billing and the role professional societies play in lobbying for billing rights and fees. Even the most wide-eyed optimist here must admit that there is little justice, either distributive or retributive, for the system in its entirety. While I find this particular example offensive and believe our own professional societies should take a stand against it, we all should wonder how well we as a group of physicians do here. We certainly argue for better remuneration for grossly underpaid activities when they are common (such as the Current Procedural Terminology [CPT] code 88172 here in question), but we do little to reign in our own excessive fees or create a truly just fee structure. Furthermore, while we are quick to identify others’ potential conflicts of interest, we are not as quick to identify our own conflicts. With regard to thyroid FNA, how often have we raised the question of whether pathologists who perform ultrasound-guided FNAs might be prone to collect more samples from more sites because they will get to interpret them?

Who should, then, perform on-site or immediate assessment of thyroid FNAs? I believe cytotechnologists can perform this task adequately. Regardless of billing, I am skeptical about allowing physicians other than pathologists to perform the task, and I entirely sympathize with Renshaw’s concerns.

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References