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Reference

- Takahashi K, Yamaguchi S, Kobayashi S, et al. Effects of aging on regional cerebral blood flow assessed by using technetium Tc 99m hexamethylpropyleneamine oxime single-photon emission tomography with 3D stereotactic surface projection analysis. *AJNR Am J Neuroradiol* 2005;26:2005–2009

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A thyroid nodule will be incidentally discovered in 10%–60% of adults imaged for other reasons. The overwhelming majority of these lesions will be of no pertinence to the well-being of the patient.¹ This unfortunate discovery may, however, initiate a sequence of events that includes additional imaging studies and biopsies. These investigations are in turn not totally reliable and, short of surgical resection, cannot fully eradicate the implicit concern for the presence of a malignancy. Thyroid cancers are by comparison much less common, with an incidence of 1–10/100,000.² They are usually associated with an indolent course and a good prognosis—life expectancy is little affected in most cases—and, to the best of our knowledge, no one has shown that early diagnosis and treatment in asymptomatic patients imaged for other clinical complaints is beneficial. Thus, the radiologist reporting every nodule he or she encounters may unnecessarily impose on society an excessive financial burden as well as psychological impact on the patients and innumerable surgical resections of questionable justification. Nevertheless, this is just what has been proposed in a recent editorial.³ Had consequences been benign, we could leave such practice run its course, destined to extinction by its own contradictions, but the problems generated are not trivial and deserve a vigorous response.

Our claim is that, through the search for evidence and the clarification of ethical priorities, we can avoid such contradictions and lay foundations of the practice of radiology on firmer ground.

We have long been in an era of scientific medicine. Although we understand the discomfort associated with the suggestion of pretending to be selectively blind to incidental findings, no one has shown the benefits of purposefully screening patients for them. Until evidence is available, the claim that such screening is a responsibility is scientifically false. If an “absolute responsibility” exists, it is to sort out pertinent facts and findings from irrelevant anecdotes in a global, comprehensive assessment of the situation in an effort to come up with the relevant diagnosis and the appropriate treatment of the clinical complaint at hand.

This discussion could be duplicated with other incidental findings, whether they are discovered in the pituitary or adrenal glands or in almost any organ with which nature has provided human beings. Incidentalomas are a persistent problem that increases in frequency with the availability and quality of imaging. To emphasize a duty to screen for incidental findings in an aging population could divert medical care and expenses toward futilities while the risk of favoring iatrogenia on an exponential scale is real.

It may be surprising that one would mandate to search for these false alerts diligently, “no matter what the intended purpose of the study,” without even a mention of some concern regarding the patient’s consent. As far as we know, radiologists have no special waiver to intrude into one’s personal physical and psychological integrity, unless one assumes that any patient who agrees to have his or her carotid evaluated for a potential stenosis is automatically consenting

to be flagged at by the discovery of anomalies, even those that have no proven relevance and about which no one knows for sure what to do. The editorial imposes on us an “absolute responsibility” to do prevention in these cases, but requirements for preventive actions are that the risks of iatrogenia will be low and potential benefits will be proved by a valid trial. Although medicine only has an obligation of means, prevention has an obligation of results. Can we reasonably assume that any rational patient, had he or she been informed of the poor accuracy of imaging in the diagnosis of a malignancy, would have submitted to a screening test he or she had not asked for, to later be stuck against his or her will with a difficult decisional dilemma? This assumption is probably false.

The justification for this “absolute responsibility” to search for thyroid nodules, the editorial argues, is “our priority for reading films over other practitioners and, therefore, the claim for primary reimbursement for that interpretive service.”

First, being paid for doing something as a justification for doing it is not appropriate for physicians. Second, common sense could tell us that “services” that are erroneous in most of the 15%–60% of patients who are flagged are unlikely to be welcomed. Not only is reimbursement a fallacious justification of screening for thyroid nodules, but it is also a type of practice that may justify questioning the judgment of radiologists and the utility of their services.

How is such an ethical and scientific drift possible? The editorial repeatedly demonstrates confusion regarding the objects of the radiologist’s loyalty, mingling “justification for reimbursement” and “responsibility to the patient,” or blending “protection of the patient and physician interests.” In this era of fast-evolving practices, reserving time to reflect about the ethical priorities we are willing to espouse may solve apparent dilemmas of modern imaging. To clarify our opinions regarding the points raised by the editorial, rigid loyalty to the image, no matter what the consequences for the subject, is appropriate for technicians; a practice focused on medical legal concerns is bad medicine; a defense of irrelevant interpretive services can be perceived as corporatism and collaboration with “needy doctors” as quackery. There is no question in our minds that we must offer first and foremost our loyalty to our patients. Then we should practice a scientific medicine. If we stick to these simple principles, we believe our financial compensation will be appropriate and in accordance to our dedication. Our “professional status” would be better supported, and retribution perhaps better assured, by promoting the search for scientific evidence that our services are valuable.

The “inescapable responsibility” of physicians is to ensure that their actions entail more good than harm. Advocates of imaging as screening tests for thyroid malignancy should (1) design the trial that would show the clinical benefit of flagging nodules, aiming at early diagnosis and treatment of asymptomatic cancers present in a very small proportion of these; (2) apply for ethical approval of their institution; (3) obtain informed consent from each subject; and (4) deliver positive clinical results that outweigh complications of this practice before recommending with any authority screening or follow-up imaging plans. For now, at the time of diagnostic studies performed for other indications, unless they present malignant characteristics in a clinical context that is relevant, we feel it is safe for radiologists and clinicians morally concerned about the consequences of their actions, and best for patients, to ignore these misleading thyroid nodules.

References

- Hegedus L. Clinical practice: the thyroid nodule. *N Engl J Med* 2004;351:1764–71

2. Ain KB. Papillary thyroid carcinoma: etiology, assessment, and therapy. *Endocrinol Metab Clin North Am* 1995;24:711–60
3. Mancuso AA. Oh #*\$%#! Another pesky incidental thyroid nodule! *AJNR Am J Neuroradiol* 2005;26:2444–45

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Reply:

Dr. Raymond raises several reasonable medical, ethical, and socioeconomic issues that should be debated in public.

Notwithstanding the outcome of such debate, it remains my firm and personal opinion, which cannot be altered by such debate, that it is the absolute obligation of an interpreting physician to report any finding on a study that may significantly affect the patient's life, because diagnostic radiologists have no legal, moral, or ethical mandate to perform what could be reasonably be viewed as a unilateral informed consent process by withholding such observations.

What is actually done after discovery of these nodules is something that would benefit from continued evidence-based analysis and resulting guidelines such as that contained in a recent consensus editorial by the Society of Radiologists in Ultrasound.¹

My editorial does not in any way advocate screening the thyroid in low-risk population. The inclusion of the thyroid on these imaging studies actually becomes "de facto screening." Good and unintended bad outcomes from such "de facto screening" may occur. This is part of life and part of our evolving practice of medicine as it currently exists.

I hope that everyone who interprets imaging studies will do their very best, within the bounds of their own conscience, to conduct themselves responsibly in taking care of the patients referring clinicians entrust to us. That ultimately is what the patients trust and expect us to do.

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Reference

1. Frates MC, Benson CB, Charboneau JW, et al. **Management of thyroid nodules detected at US: Society of Radiologists in Ultrasound Consensus Conference Statement.** *Sonogr Radiol* 2005;237:794–800