

# Imaging Reveals Increasing Rate Of Incidental Thyroid Cancers

BY BRUCE JANCIN  
Denver Bureau

PHOENIX — The rate of thyroid cancers identified incidentally during nonthyroid imaging procedures is on the rise, Matthew T. Tallar said at a congress sponsored by the Association for Academic Surgery and the Society of University Surgeons.

These incidental thyroid cancers deserve to be taken seriously because they often present as late-stage malignancies, added Mr. Tallar, a medical student at the Medical College of Wisconsin, Milwaukee.

"Based on our data, we feel that incidental thyroid cancers are indeed clinically significant and that their diagnostic work-up and treatment should be the same as for palpable thyroid nodules," he said.

The overall incidence of thyroid cancer climbed 2.4-fold in the United States during 1993-2002. The reasons aren't fully known, but the trend has occurred in tandem with the greatly increasing use of diagnostic imaging studies throughout all of medicine. It is believed that much of the overall rise in thyroid cancer is attributable to a jump in nonpalpable thyroid cancers detected incidentally on cervical imaging studies done for nonthyroid indications, according to Mr. Tallar.

His review of all 102 patients operated on for thyroid cancer by endocrine surgeons at the Milwaukee medical center during 2001-2006 showed incidental thyroid cancer in 17%. Moreover, the proportion of thyroid cancers detected incidentally on nonthyroid radiologic studies increased over time. None of 19 cancers operated on in 2001 was detected incidentally, compared with 1 of 17 in 2002, 3 of 17 in 2003, 5 of 15 in 2004, 4 of 20 in 2005, and 4 of 14 in the first half of 2006.

Incidental thyroid cancers were found on MRI, CT, ultrasound, chest x-ray, and carotid duplex ultrasound. The imaging studies were conducted for evaluation of cervical neck pain, carotid arterial dis-

ease, voice change, pulmonary metastases, and postnephrectomy follow-up.

Papillary carcinoma was the pathology in 14 of 17 cases; follicular carcinoma was identified in 2 cases, and medullary carcinoma in 1. Overall, 10 patients had stage I cancer. Six had stage III and one had stage IVa disease, for a combined 41% prevalence of late-stage disease.

Audience members expressed interest in a related question: What proportion of incidentally detected thyroid abnormalities turn out to be cancer? Mr. Tallar replied that several large studies have recently addressed this very issue.

Radiologists at Lenox Hill Hospital, New York, reviewed all 225 dedicated thyroid sonographic studies they performed in a 6-month period and found that 16% were done to evaluate thyroid nodules earlier discovered incidentally on MRI, CT, or ultrasound performed for nonthyroid indications.

Of biopsied nodules in the incidental group, 17% proved to be cancer, an unexpectedly high rate compared with the 3% for nonincidental nodules—that is, nodules that were palpable or whose presence was signaled by laboratory abnormalities or symptoms of thyroid disease (*J. Ultrasound Med.* 2005;24:629-34).

One or more incidental thyroid abnormalities were identified in 165 of 2,004 consecutive patients undergoing carotid duplex ultrasound for evaluation of carotid arterial disease at Madigan Army Medical Center, Fort Lewis, Wash.

Among those patients with a thyroid abnormality on duplex ultrasound who went on to a dedicated thyroid ultrasound exam, 7.6% were eventually determined to have thyroid cancer (*Arch. Surg.* 2005;140:981-5).

The best approach to thyroid "incidentalomas" remains controversial. These experiences indicate an aggressive approach to evaluation is warranted, Mr. Tallar said. ■

## Consider Adding TSH Test to Thyroid Work-Up

CHICAGO — As the prevalence of thyroid nodules diagnosed on ultrasound increases, clinicians trying to decide whether to biopsy a particular nodule should consider adding a serum TSH test to their work-up, Dr. R. Brooke Jeffrey Jr. said at the annual meeting of the Radiological Society of North America.

At the moment, "what is driving our approach to thyroid diagnosis is money and patient hysteria," said Dr. Jeffrey of the department of radiology at Stanford (Calif.) University. In addition, the lack of clinical findings that indicate with certainty which nodules are more likely to be malignant contributes to a high biopsy rate.

Deciding which patients to biopsy is "a very contentious issue," he added, noting that different medical societies have issued conflicting guidelines. Though thyroid nodules are commonly detected, few thyroid cancers are diagnosed. But clinicians do not want to miss a cancer diagnosis, and thyroid biopsies can be lucrative.

A recent review indicated that thyroid cancer mortality has not changed in 30 years, despite the increased incidence of thyroid cancer, a result Dr. Jeffrey attributed to overdiag-

nosis (*JAMA* 2006;295:2164-7).

He also concluded that ultrasound, which has become much more widely available in the past 30 years, has not contributed to a decrease in mortality. Ultrasound gives information about many features of thyroid cancer, such as whether a mass is solid, hypoechoic, taller than it is wide, and whether it has microcalcifications and irregular margins. But because no single feature has a high sensitivity and specificity, clinicians cannot rely on ultrasound to rule out cancer, so they order biopsies.

However, recent data indicated that patients with clinically detected goiters and high normal TSH values had a higher incidence of thyroid cancer (*J. Clin. Endocrinol. Metab.* 2006;91:4295-301). By "combining ultrasound features and laboratory values, we might be able to come up with an algorithm," Dr. Jeffrey said.

Even if TSH levels prove useful, clinicians will still confront difficult issues when deciding whether to biopsy thyroid nodules: how long to track the nodules before biopsy and what sort of interval growth might indicate a benign or a worrisome condition.

—Sarah Pressman Lovinger

## Hashimoto's Thyroiditis Increases Risk of Thyroid Cancer Threefold

BY MITCHEL L. ZOLER  
Elsevier Global Medical News

PALM BEACH, FLA. — Patients with Hashimoto's thyroiditis had a threefold increased risk of also having a well-differentiated thyroid cancer as compared with other patients undergoing thyroid resection, based on a review of 802 patients treated at one center.

The review also found no link between Hashimoto's thyroiditis (HT) and thyroid lymphoma. Both findings diverge from prior reports by other groups, which documented a high lymphoma incidence but no increased rate of papillary or follicular thyroid cancers, Dr. B. Mark Evers said at the annual meeting of the Southern Surgical Association.

"It makes sense that there is an association between the inflammation of Hashimoto's thyroiditis and well-differentiated cancers,

as in the stomach and colon," said Dr. Evers, professor of surgery at the University of Texas, Galveston. "I'm not sure why we saw more [of an association] than the published literature."

"This is an important observation. It's discordant with most of the published literature," said Dr. Robert Udelsman, professor and chairman of surgery at Yale University, New Haven, Conn.

Dr. Evers and his associates reviewed all patients who had a thyroid resection at his institution during 1987-2002. The 802 patients included 155 patients with a well-differentiated thyroid cancer only, 52 with HT only, 43 with both thyroid cancer and HT, and 552 who underwent a resection for another reason, often for laryngectomy. Papillary cancers were 88% of all thyroid cancers, and follicular were another 7%.

Thyroid cancer was about three

times as common in patients with Hashimoto's thyroiditis as in those in the series without HT, "a strong link between inflammation and thyroid cancer," said coinvestigator Dr. Shawn D. Larson, a surgeon at the University of Texas, Galveston.

Further analysis showed no association between HT or thyroid cancer and age, gender, race, or tumor size or aggressiveness.

Comparison of the demographic and clinical profile of the thyroid cancer patients treated in the Galveston study with that of more than 22,000 thyroid cancer patients in a National Cancer Institute database showed that the Galveston patients were typical.

Two proteins involved in cell growth and inflammatory responses were elevated to similar levels in patients with Hashimoto's thyroiditis and those with thyroid cancers, Dr. Evers said. ■

## Observation Preferred for Benign Thyroid Nodules

SAN FRANCISCO — Routine thyroxine therapy for benign thyroid nodules is no longer recommended, Dr. Hossein Gharib said at Perspectives in Women's Health sponsored by OB.GYN. NEWS.

Thyroxine does not shrink most benign thyroid nodules. In those that do shrink, size increases if the drug therapy is stopped. Long-term thyroxine therapy can be costly and may contribute to hyperthyroidism over time in some patients, said Dr. Gharib, professor of medicine at the Mayo Clinic College of Medicine, Rochester, Minn.

Fine-needle biopsy, a reliable diagnostic tool when done by an experienced clinician, can determine if a thyroid nodule is malignant or benign. Malignant lesions should be treated by surgery. Goiters that are benign but large and symptomatic should be treated by surgery or

by radioactive iodine therapy, he said at the meeting. OB.GYN. NEWS is published by the International Medical News Group, a division of Elsevier.

Thyroid nodules are detectable by palpation in 5% of the U.S. population and by ultrasound in 50%. More than 100 million U.S. residents have thyroid nodules, and 300,000 new nodules are detected each year. In 95% of cases, thyroid nodules are deemed benign and can be followed by observation, said Dr. Gharib, who has no association with the companies that make the treatments he discussed.

The incidence of thyroid cancer peaks in women at around 12 cases per 100,000 women, between ages 30 and 50 years. In men, incidence peaks at around 8 per 100,000 between ages 70 and 80 years.

—Sherry Boschert