

What doctors want patients to know about thyroid cancer

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Until recently, thyroid cancer, a disease affecting the “butterfly-shaped” gland at the front of the lower neck, was growing faster than any other cancer in the U.S., doing so primarily among women. While most forms of thyroid cancer are highly treatable, early detection and awareness remain critical. As medical research evolves and treatment options improve, it is important to pay close attention to subtle symptoms and routine screenings that could make all the difference.

The American Cancer Society estimates that there will be about 44,020 new cases of thyroid cancer in this country in 2025, with 31,350 among women. This cancer also is often diagnosed at a younger age than most other adult cancers, with an average age of 51. Thyroid cancer is almost three times more common in women than men and is about 40% to 50% less common in Black people than other racial or ethnic groups, [according to the American Cancer Society](#).

The AMA’s What Doctors Want Patients to Know™ series gives physicians a platform to share what they want patients to understand about today’s health care headlines.

In this installment, [Tom Thomas, MD](#), MPH, an otolaryngologist, and head and neck surgeon at Atlantic Health System in Morristown, New Jersey, discusses thyroid cancer and what patients should know.

[Atlantic Health System](#) is part of the [AMA Health System Member Program](#), which provides enterprise solutions to equip leadership, physicians and care teams with resources to help drive the future of medicine.

Thyroid glands develop nodules

“The thyroid is a shield or butterfly shaped gland that sits in front of your neck, on top of your trachea—which is the windpipe—and it produces hormones that every human being needs for their various bodily functions including metabolism or energy production,” said Dr. Thomas. “And these glands develop nodules as we age. Over 90 to 95% of these nodules are benign.



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“Some of these nodules, probably 5 to 10%, develop into malignancy or cancer,” he added, noting that “cancer is something that develops in the thyroid that has the potential to travel elsewhere in the body and ultimately compromise your life.”

If thyroid cancer is diagnosed early, it is highly treatable, with 98 to 100% of cases being cured, Dr. Thomas said.

There are four types of thyroid cancers

“There are four different types of thyroid cancers with subtypes that are concerning,” Dr. Thomas said. “The most common one is called papillary thyroid cancer, or papillary thyroid carcinoma. Eighty percent of the time that is what is diagnosed, and that’s what the general public talk about.

“Second most common is follicular cancer. It's probably about 10 to 15% of the thyroid cancer,” he added. “The third group is the medullary thyroid cancer, that's about 5%. The last and least common is anaplastic thyroid cancer, which is the most aggressive type, probably 2% or less.”

There's no early warning sign

“Patients who are diagnosed with thyroid cancer usually do not have any unique symptoms that point to the thyroid gland. There are no routine lab tests that point to thyroid cancer either,” said Dr. Thomas. “It usually is found incidentally by having a lump in the front of the neck felt by the patient, primary care physician or a gynecologist during a routine physical examination.

“Another instance of finding a thyroid nodule is when you get a chest X-ray, CT scan or MRI scan for an unrelated problem such as spine surgery or after a motor-vehicle accident,” he said. “But there is no early way to identify it because there are no real symptoms that develop until it's quite large or more advanced, then patients can experience, pressure in the neck, pain, voice changes, difficulty with swallowing.”

“One thing to keep in mind is if you have a [family history](#) of thyroid cancer or any kind of endocrine cancers. It is important to make your primary care physician aware of it,” Dr. Thomas said. “Also, If you have any history of radiation exposure to the head and neck area, you should be discussing the risk of thyroid cancer with your primary care physician.”

Diagnosis starts with a physical exam

If not discovered incidentally, “thyroid cancer is diagnosed initially by a physical examination by your physician,” said Dr. Thomas. “Then we proceed with getting an ultrasound to survey the size of the gland, size, shape, character and quantity of the nodules, etc.”

“If any of the nodules needs more detailed study, we proceed with getting a sample of the nodule through a fine needle aspiration, or FNA,” he said. “Then the sample is studied

under the microscope by a pathologist.”

Biopsy results include six categories

“The FNA results are reported according to the [Bethesda System](#). This system helps to uniformly report the risk of malignancy,” Dr. Thomas said. “The Bethesda System has six categories. Category one means the sample was poor quality, two means it was benign and six means there were cancer cells in the sample.”

“Categories three, four and five show progressive worsening abnormalities in the cell sample when viewed under the microscope,” he said. “Nowadays, we have multiple molecular testing that use next generation sequencing to look at DNA abnormalities and gene mutations to help us guide treatment decisions for the categories three, four and five.”

Main treatment is surgery

“Once you have a definite diagnosis of thyroid cancer, surgery is the treatment of choice. Total thyroidectomy is performed with curative intent by a surgeon trained in thyroid surgery,” Dr. Thomas said. For example, “I’m a head and neck cancer surgeon, which means I’m an otolaryngologist who is trained in cancers of the head and neck who can perform standard thyroidectomy to complex resection and reconstruction for advanced staged thyroid cancers.

“I take the patient to the operating room. Then under general anesthesia, I’ll make an incision in the lower part of the neck and remove the entire thyroid and then look for any lymph nodes that are concerning in and around the thyroid and remove it at the same time,” he added. “We pay special attention to the parathyroid glands and preserve them. In addition, we monitor and preserve the recurrent laryngeal nerves that move the patient’s vocal cords that make the voice possible.”

“Once the pathology is known and the stage of the cancer is established, the patients are risk stratified as low, intermediate or high risk,” said Dr. Thomas. “Then we decide to treat

the patient with radioactive or not. Then the whole treatment is completed.”

Partial surgery is also an option

For “the middle Bethesda categories—where they’re saying it’s not normal, it’s not cancer, but there is a high likelihood of cancer—we do what we call a partial thyroidectomy or hemithyroidectomy,” Dr. Thomas said. That means “you remove the lobe of the thyroid gland with the concerning nodule.”

“Again, the surgery is performed under general anesthesia, and it takes half the time of a total thyroidectomy,” he said. “Then we send out the specimen to pathology and five to seven days later we’ll get the definitive diagnosis of the questionable nodule.”

“There is no 50% chance or 70% chance. You will have a definite 100% answer,” Dr. Thomas said. “If the pathology comes back as cancer, the patient will return to the operating room to have the remaining thyroid gland removed. However, if the pathology is benign, we can watch the rest of the thyroid with periodic ultrasounds and hormone levels.”

Thyroid hormone replacement is needed

“Once we remove the whole thyroid, the patient will be on thyroid hormone replacement for the rest of their life,” said Dr. Thomas. “If only half is removed, they may or may not need any medications depending on the amount of hormone produced by the remaining thyroid.”

“Then patients will usually follow up with their primary physician or endocrinologist,” he said. “I expect the patient to have complete quality of life back to the way they were before the surgery.”

Making strides in mutation analysis

“Although we are detecting even small thyroid nodules early due to better imaging capacity, there are also stricter criteria to diagnose who has cancer and then stricter

criteria on whom to treat surgically,” said Dr. Thomas. “This decision-making process is helped by the genetic mutation analysis that is being utilized.”

With thyroid cancer, “where we are making strides in finding mutations that are contributing to these cancers,” he said. “That means we don’t jump to do surgery like we did before. We are very selective about who is getting surgery.”

Prevention is still elusive

“But unlike most of the [lung cancers](#) that develop from smoking, there’s no lifestyle change that you can adopt to prevent this unless you are iodine deficient,” Dr. Thomas said. Yet “we do still discuss a healthier lifestyle in terms of exercise and a [balanced diet](#).”

“As of right now, we cannot prevent thyroid cancer—such as papillary thyroid cancer, which is the most common one—because it is random mutations at this point,” he said. “But we know that with medullary thyroid cancer, for example, a small percentage of that happens in families, so we can be more vigilant, and we can do early diagnosis and prophylactic thyroidectomy if need be.”

Contact your doctor

“As a consumer of health care, patients should do their due diligence and seek help from an expert who has vast experience in dealing with thyroid cancer,” Dr. Thomas said. “It’s important that patients seek surgical treatment from a high-volume thyroid surgeon because research has shown repeatedly that high volume thyroid surgeons have less complication rates and better oncologic outcomes for the patient.”

“Even though we say thyroid cancer is 98% curative, we know that there is a percentage of patients who develop an advanced stage of thyroid cancer and die from it,” he said. “That’s why it’s important to recognize any vague head and neck symptoms and seek medical help early so we can do appropriate work and diagnose early.

“Early diagnosis translates into timely treatment and the best outcomes,” Dr. Thomas added.