Enough Evidence of a Breast Cancer-Thyroid Disease Connection to Warrant Screening?

BY ED SUSMAN

ORLANDO, Florida—Patients with breast cancer may require screening for thyroid disease, researchers suggested here at the American Society of Breast Surgeons Annual Meeting.

A review of 867 cases of breast cancer found 141 cases of thyroid disease (about 16%), Corrado Chiappa, MD, a surgical resident specializing in breast cancer at the Senology Research Center at the University of Insubria in Italy, said in an interview at his poster presentation.

"From the results of our study, we think that women who are diagnosed with breast cancer should also be screened for thyroid disease. This is a high percentage, and we have started such screening at our institute.

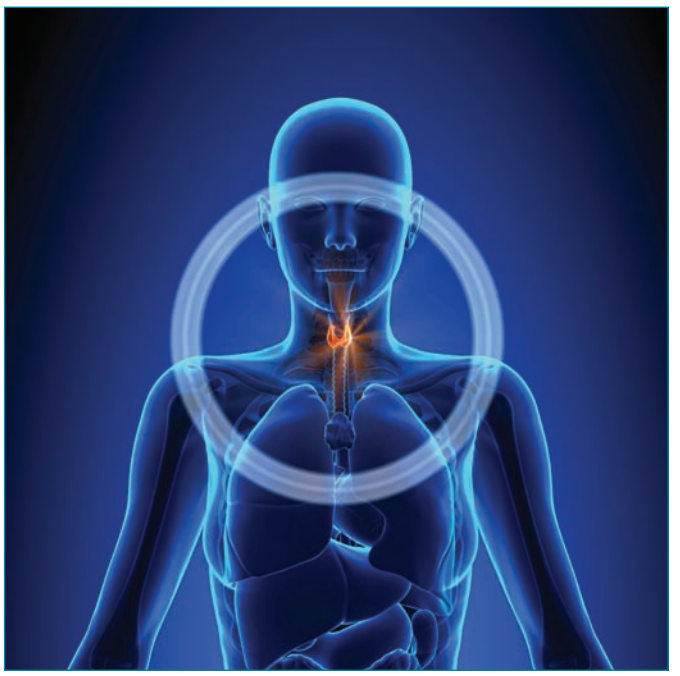
"The possible existence of a correlation between thyroid diseases and breast cancer has been evaluated previously, but the relationship between these two pathological conditions remains controversial," he explained.

"The dependence of breast cancer on hormonal substances and controversial data shown in the literature on the relationship between thyroid function and neoplastic disease suggested that the expression of thyroid hormone receptors could be an important marker in the characterization of breast cancer."

Define Mechanism of Action

Asked for her perspective, Karen Kostroff, MD, Chief of Breast Surgery at North Shore-LIJ Cancer Institute, said: "I believe a pathophysiological mechanism linking breast cancer and thyroid disease needs to be defined before changing screening guidelines."

In the study by Chiappa and his colleagues, histology findings showed that 725 of the breast cancer cases were ductal carcinoma, 71 were lobular carcinoma, and the remaining 71 were made up of less frequent tumoral types.



Regarding the 141 cases of thyroid disease, 138 had benign disease and three had thyroid cancer. Fifty-three patients had autoimmune thyroid disease, more of the women who were premenopausal were diagnosed with autoimmune thyroid disease compared with those who were postmenopausal (44% vs. 25%, respectively).

"We did stratify the women by menopausal status, and the major association was in the postmenopausal women—about 19 percent of the women with thyroid disease were postmenopausal compared with about 11 percent who were premenopausal.

ER Status

The researchers also observed a correlation between estrogen receptor positivity in breast cancer and chronic autoimmune thyroiditis. There were no statistically significant differences regarding the characteristics of breast cancer such as family history, tumor size, lymph node metastasis, distant metastasis, clinical stage, histopathology, grading, estrogen and progesterone receptor profile, and the expression of Ki67, p53, and HER2 genetic markers.

"If we can continue to study these correlations we may be able to find a specific population that can obtain a benefit from the early identification of thyroid disease," Chiappa said.

"It appears to be an association between autoimmune thyroid disease, specifically chronic autoimmune thyroiditis, and the occurrence of breast cancer at young age. However, the pathophysiological mechanism strongly linking the two entities remains to be investigated.

"Multicenter studies are needed to confirm the correlation between these two diseases, in order to accurately identify a subpopulation of high-risk patients."

> "The hope is to find a specific population that can benefit from early identification of thyroid disease."

GEP TEST

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high-risk, stage 2 melanoma. "Most patients in our cohort had stage 2 melanoma and were GEP class 2. Some patients with stage 2 melanoma do well, showing improved survival with targeted therapies."

There are more false positives with the GEP test than with SLN biopsy. "We speculate that when we find early melanoma, some lesions are thinner, less aggressive tumors and others are thicker, more aggressive ones. There is a window of cure. I predict the GEP test has the potential to catch melanomas in the window of cure before they metastasize," she said.

Outside of the research setting, Ferris said she has used the GEP test on 10 melanoma patients who have thinner, 0.5 to one millimeter lesions. The patients she has selected for the GEP test "have an increased mitotic rate and evidence of ulceration, and are questionable candidates for SLN biopsy. Others are patients who want SLN biopsy, but do not meet the criteria. The GEP test can assure these patients they do not need an additional procedure. If patients have very deep, four to five millimeter lesions, the GEP test is unlikely to be necessary since we know that these are high-risk patients.

"There is no good consensus on how to deal with intermediate-risk melanoma," she continued. "We need a consensus statement on how the GEP test fits in. I believe it is predictive. Most SLN biopsies are negative. If a patient is class 1, the chance of a negative SLN biopsy is low. Then we would only do SLN biopsies on class 2 patients. This is reasonable, but requires the entire melanoma community to come together. This would save a lot of procedures and money."

Cost is also a factor, she noted: A sentinel lymph node biopsy costs $12,000 to $15,000 versus $3,000 to $7,000 for the GEP test. Some insurance companies pay a reimbursement rate of $1,500 for the GEP test, and if insurance does not cover the test, the developer, Castle Biosciences, told *OT* that it will not go to the patient for payment.