Thyroid cancer can arise from thyroid follicular or parafollicular C cells. Differentiated thyroid cancer (DTC) arises from the follicular cells and

PTand characteristics of the chromatin is used to make the diagnosis of PTC.

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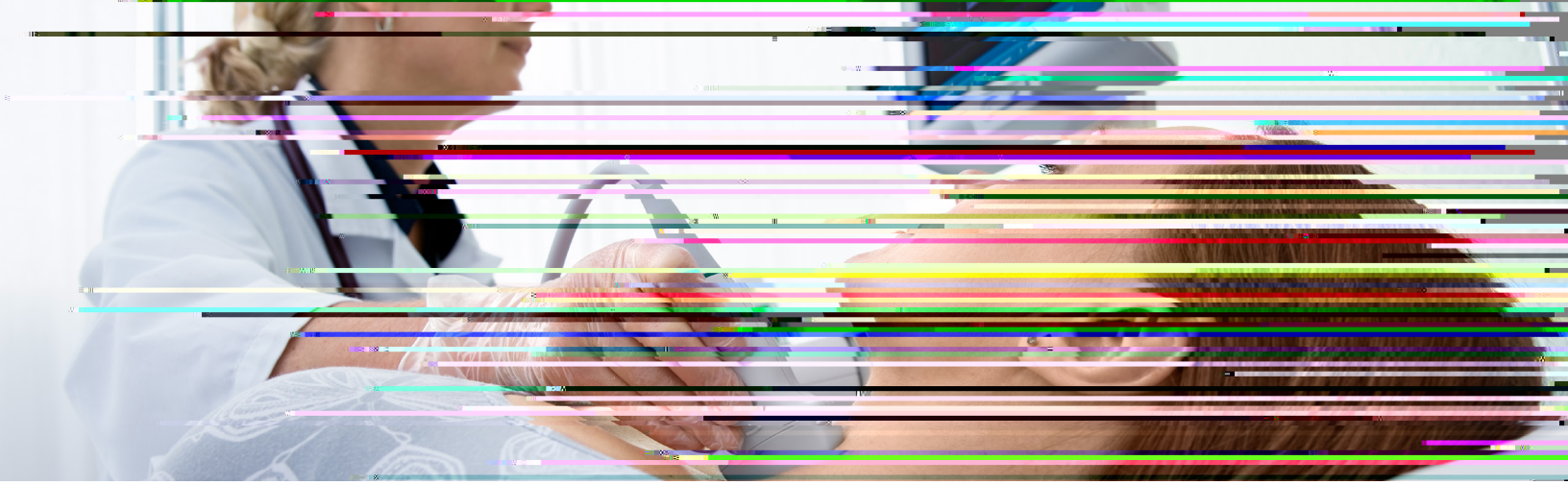
nuclei do not have the features seen in PTC. There can be invasion of the blood vessels and also the tumor capsule.

When thyroid cancer is suspected, an ultrasound exam is performed, followed by fne needle aspiration of the thyroid lump. Microscopic examination of the cells enables the pathologist to recognize the typical changes

In the last 20 to 30 years, incidence of encapsulated thyroid tumors has risen two to threefold and now represents 10% to 20% of all thyroid cancers in Europe and North America. These tumors generally have an indolent course and following limited surgery (removal of the affected lobe rather than the whole thyroid gland), they very rarely relapse or spread to distant sites. To avoid overdiagnosis and overtreatment, these tumors were downgraded from cancer to neoplasm in 2017.

In 2016, an international working group of expert thyroid pathologists convened by the National Cancer Institute reported on a study of 109 patients diagnosed with EFVPTC.[13] At a median follow-up of 13 years there were no episodes of recurrences or spread in these patients. This was not, however, the case for patients with the invasive form of FVPTC. Because of these results, the working group recommended that EFVPTC be called "non-invasive follicular thyroid neoplasm with papillary-like nuclear features" (NIFTP).

This change in nomenclature and classification was subsequently accepted by the World Health Organization (WHO) and was included in the 4th edition of the WHO Classification of Tumors of Endocrine Organs, published in 2017.[14] NIFTPs are now usually treated by removal of one lobe



by cancer cells or any lymphovascular invasion.Thus, the diagnosis can only be made after surgery, not pre-operatively.

The average size of an NIFTP is 3 cm, but they can vary from microtumors (<1 cm) to as large as 10 cm. They can also be multifocal or affect both lobes, and can be found in a thyroid gland containing an invasive tumor.

From the perspective of assessing critical illness (CI) claims, it is important to be aware that not all EFVPTC cases have been downgraded from cancer to NIFTP. The strict criteria for diagnosing NIFTP highlight that there should be no invasion into the capsule or into the adjacent thyroid gland for well-circumscribed tumors.

The tumor must be well-demarcated, with discrete interface with the surrounding thyroid tissue. There can be three scenarios:
• Well-defned fbrous capsule
• Partly encapsulated
• Unencapsulated but clearly delineated from the adjacent thyroid tissue
Appearance of the nuclei as seen in PTC. The features can be subtle and are often easier to assess in areas of small follicles or near the tumor periphery.
Invasion with complete tumor capsule penetration. For well-circumscribed tumors lacking a fbrous capsule, infltration of tumor cells into adjacent uninvolved thyroid tissue. Also, lymphatic and/or vascular invasion defned by tumor cells within an endothelial lined space in the tumor capsule or in vessels outside the tumor.
Pattern of growth not showing follicular architecture although up to 30% solid, trabecular, or insular appearance is allowed.
Papillary structures.
High-grade features with psammoma bodies (dead calcifed papillae), tumor necrosis, or high mitotic index (i.e., three or more mitoses per 10 high-power felds).

For DTC CI claims, assessment of cancer invasion depends upon evaluation of the tumor capsule, vascular invasion, and local spread within the adjacent thyroid and the lymph nodes.

EFVPTC meeting strict inclusion and exclusion criteria, defined by an expert international panel of pathologists, are now known as NIFTP. Downgrading these tumors from cancer to neoplasm recognizes that many of the cases are non-invasive tumors with excellent prognoses and so can be safely managed by limited surgery. This will enable these patients to avoid the complications of removal of the whole thyroid gland and radioactive iodine therapy. From the insurance point of view, these neoplasms generally would not meet the strict definition of “cancer” as defined by most CI policy provisions. Nonetheless, these cases should be reviewed carefully to ensure accurate and fair adjudication.

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