Thyroid Cancer

Understanding Thyroid Cancer

Thyroid cancer starts in the thyroid gland, which has two types of cells: follicular cells and C cells. Follicular cells make thyroid hormone, while C cells produce calcitonin, a hormone important for calcium levels. There are different types of thyroid cancer, including papillary, follicular, Hurthle, medullary, and anaplastic thyroid cancer.

Some factors increase the risk of thyroid cancer, including genetic factors like the RET mutation, being female, radiation exposure, a low-iodine diet, being of white or Asian race, and a history of certain other cancers.

Thyroid cancer may cause symptoms like hoarseness, swollen neck glands, trouble swallowing or breathing, a persistent cough, or neck pain. However, these usually appear when the cancer is more advanced.

Diagnosis and Staging of Thyroid Cancer

Doctors use various methods to diagnose thyroid cancer: On a physical exam, a doctor may feel your neck for any lumps or abnormalities. They may order lab tests, including thyroid hormone levels, CEA, and calcitonin. Imaging studies such as a neck ultrasound and CT scans help understand the local and distant spread of disease. Taking a biopsy for a tissue sample allows the doctor to confirm the diagnosis. Typically, the doctor will send the tissue sample to a genetics lab to learn about the presence of any mutations, as these can inform treatment options.

Staging determines how far the cancer has spread. It's based on the size of the tumor (T), involvement of lymph nodes (N), and distant metastasis (M). Different types of thyroid cancer have specific staging criteria.

Treatment Options

- **Surgery:** Removal of the thyroid gland is an option for localized cancer. The extent of surgery depends on the tumor size - options include removing only a lobe (lobectomy) or the entire thyroid (total thyroidectomy). After surgery, patients often need thyroid hormone replacement.
- **Radioactive Iodine Therapy (RAI):** This is used for some types of thyroid cancer like papillary, follicular, and Hurthle cell cancer. RAI can be given after surgery to destroy remaining thyroid cells or for more advanced or recurrent cancer. Preparation for this includes being on a low-iodine diet.
- **Systemic Therapy:** Medications target specific cancer mutations. These include sorafenib, lenvatinib, larotrectinib, selpercatinib, vandetanib, and dabrafenib/trametinib.
- **Radiation:** External beam radiation treats areas where cancer has spread, especially when it affects critical areas like the trachea or esophagus.
- **Observation:** For slow-growing, early-stage thyroid cancer, doctors might closely monitor without immediate treatment.

Remember to discuss your specific diagnosis and treatment options with your doctor.