TEXAS ONCOLOGY
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Thymoma and Thymic Carcinoma

Thymoma and thymic carcinoma are rare cancers that form when cancer cells develop on the surface of the thymus. The thymus is a small organ in front of and above the heart and underneath the breastbone that produces white blood cells to help fight infection. Also called thymic epithelial tumors (TETs), they often develop between the lungs in the front of the chest.

Thymomas and thymic carcinomas behave differently.

- **Thymomas** resemble normal thymus cells, usually don't spread outside the thymus, and are slow growing. Thymomas are often linked to autoimmune paraneoplastic diseases, which cause the body's immune system to attack normal cells as well as cancer cells. These include myasthenia gravis (the most common), Good syndrome, and thymoma-associated autoimmune pure red cell aplasia. There is increased risk for developing another type of cancer after a thymoma diagnosis.
- **Thymic carcinomas** do not resemble normal thymus cells. This cancer type grows more rapidly and has a higher tendency to spread outside the thymus. Thymic carcinomas are more difficult to treat and often recur.

Statistics

- In the U.S., 1.3 cases for every million people are diagnosed with thymus cancer each year, accounting for approximately 400 diagnoses.
- Thymic carcinomas are about 15% to 20% of all tumors in the thymus.
- Myasthenia gravis is present in approximately 30% to 50% of people diagnosed with thymic tumors and causes weakness in muscles.

Risk Factors

No risk factors have been strongly associated with thymomas or thymic carcinoma. However, risk increases with age, and these cancers are more common among Asian Americans and Pacific Islanders.

Symptoms

Many patients do not have symptoms at diagnosis. If any of the following symptoms are present, individuals are encouraged to consult a physician.

- Persistent cough
- Chest pain
- Shortness of breath
- Hoarseness
- Swollen face, neck, upper body, or arms
- Muscle weakness
- Drooping eyelids
- Double vision
- Swallowing difficulty
- Anemia
- Frequent infections
- Fatigue
- Dizziness

Diagnosis and Treatment Options

The diagnostic tests used to identify a thymoma in the chest include a computed tomography (CT) scan, magnetic resonance imaging (MRI) scan, and a positron emission tomography (PET) scan in combination with a CT. These tests help determine if the tumor has spread beyond the thymus or invaded other structures. In some cases, a CT-guided biopsy will be used to make the diagnosis.

Treatment for thymoma and thymic carcinoma include surgery, radiation therapy, chemotherapy, hormone therapy, targeted therapy, immunotherapy, and palliative medicine. Surgery is the most common treatment, especially for early-stage cancers that are confined to the thymus. In patients with advanced disease or larger tumors, chemotherapy is

sometimes used before or after surgery. Some patients will require radiation after surgery, depending on the extent of the tumor. Patients may want to consider a clinical trial. A combination of treatments may provide the most effective treatment.

Texas Oncology's multidisciplinary program to treat thymomas and thymic tumors includes thoracic surgeons, medical oncologists, and radiation oncologists who work together to treat tumors. More information is available at texasoncology.com/services-and-treatments/medical-programs/thoracic-surgery.

About Texas Oncology

With more than 530 physicians and 280 locations, Texas Oncology is an independent private practice, a member of The US Oncology Network, that sees more than 71,000 new cancer patients each year. Founded in 1986, Texas Oncology provides comprehensive, multidisciplinary care, and includes Texas Center for Proton Therapy, Texas Breast Specialists, Texas Colon & Rectal Specialists, Texas Oncology Surgical Specialists, Texas Urology Specialists and Texas Infusion and Imaging Center. Texas Oncology's robust community-based clinical trials and research program has contributed to the development of more than 100 FDA-approved cancer therapies. Learn more at TexasOncology.com.

Sources: American Cancer Society, National Cancer Institute, and National Center for Biotechnology Information

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