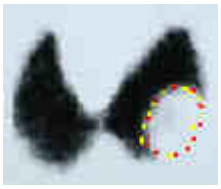
Thyroid Cancer

There are over 11,000 new cases of thyroid cancer each year in the United States. Females are more likely to have thyroid cancer at a ratio of three to one. Thyroid cancer can occur in any age group, although it is most common after age 30 and its aggressiveness increases significantly in older patients. The majority of patients present with a nodule on their thyroid which typically does not cause symptoms.



Occasionally, symptoms such as hoarseness, neck pain, and enlarged lymph nodes do occur. Although as much as 10 % of the population will have thyroid nodules, the vast majority are benign. Only approximately 5% of all thyroid nodules are malignant. A nodule which is cold on scan (shown in photo outlined in red and yellow) is more likely to be malignant, nevertheless, the majority of these are benign as well.

Types of Thyroid Cancer

There are four types of thyroid cancer some of which are much more common than others.

Thyroid Cancer Type and Incidence

- Papillary and mixed papillary/follicular ~ 75%
- Follicular and Hurthle cell ~ 15%
- Medullary ~ 7%
- Anaplastic ~ 3%

What's the Prognosis ??

Most thyroid cancers are very curable. In fact, the most common types of thyroid cancer (papillary and follicular) are the most curable. In younger patients, both papillary and follicular cancers can be expected to have better than 95% cure rate if treated appropriately. Both papillary and follicular cancers are typically treated with complete removal of the lobe of the thyroid which harbors the cancer, PLUS, removal of most or all of the other side.

Medullary cancer of the thyroid is significantly less common, but has a worse prognosis. Medullary cancers tend to spread to large numbers of lymph nodes very early on, and therefore requires a much more aggressive operation than does the more localized cancers such as papillary and follicular. This cancer requires complete thyroid removal PLUS a dissection to remove the lymph nodes of the front and sides of the neck.

The least common type of thyroid cancer is anaplastic which has a very poor prognosis...it tends to be found after it has spread and is not cured in most cases. Often an operation cannot remove all the tumor.

What About Chemotherapy ??

Thyroid cancer is unique among cancers, in fact, thyroid cells are unique among all cells of the human body. They are the only cells which have the ability to absorb Iodine. Iodine is required for thyroid cells to produce thyroid hormone, so they absorb it out of the bloodstream and concentrate it inside the cell. Most thyroid cancer cells retain this ability to absorb and concentrate iodine. This provides a perfect "chemotherapy" strategy. Radioactive Iodine is given to the patient and the remaining thyroid cells (and any thyroid cancer cells retaining this ability) will absorb and concentrate it. Since all other cells of our bodies cannot absorb the toxic iodine, they are unharmed. The thyroid cancer cells, however, will concentrate the poison within themselves and the radioactivity destroys the cell from within. No sickness. No hair loss. No nausea. No diarrhea. No pain. More about this on the pages for each specific thyroid cancer type.

Not all patients with thyroid cancer need radioactive iodine treatments after their surgery. This is important to know. Others, however, should have it if a cure is to be expected. Just who needs it and who doesn't is a bit more detailed than can be outlined here. Patients with medullary cancer of they thyroid usually do not need iodine therapy...because medullary cancers almost never absorb the radioactive iodine. Some small papillary cancers treated with a total thyroidectomy may not need iodine therapy as well, but for a different reason. These cancers are often cured with simple (complete) surgical therapy alone. Important!!! This varies from patient to patient and from cancer to cancer. Don't look for easy answers here. This decision will be made between the surgeon, the patient, and the referring endocrinologist or internist. Remember, radioactive iodine therapy is extremely safe. If you need it, take it.