



# Thyroid Carcinoma

## *Information for Patients*

### What is thyroid cancer?

The thyroid gland is located in the lower front of the neck, below the larynx ("Adam's apple") and above the collarbones. Thyroid cancer (carcinoma) usually appears as a painless lump in this area. In most cases, the lump affects only one side, and the results of thyroid function tests (blood tests) are usually normal.

There are four main types of thyroid cancer (papillary, follicular, medullary and anaplastic). Since the vast majority are either papillary or follicular, and these are the only two types treatable with radioiodine, this brochure will focus on these two types.

### What are the symptoms of thyroid cancer?

Many patients with thyroid cancer have no symptoms whatsoever, and are found by chance to have a lump in the thyroid gland on a routine physical exam or an imaging study of the neck done for unrelated reasons (CT or MRI scan of spine or chest, carotid ultrasound, etc). Some patients with thyroid cancer become aware of a gradually enlarging lump in the front portion of the neck which usually moves with swallowing. Occasionally, the lump may cause a feeling of pressure. Obviously, finding a lump in the neck should be brought to the attention of your physician, even in the absence of symptoms.

### What are the causes of thyroid cancer?

As with many types of cancer, the specific reason for developing thyroid cancer remains a mystery in the vast majority of patients. Several known risk factors have been identified.

- ◆ External radiation to the head or neck, especially during childhood
- ◆ Genetic predisposition (the influence of heredity), particularly for the medullary type of thyroid cancer
- ◆ Gender (a lump in a man's neck is more likely to be cancerous than one in a woman's neck)

### How is thyroid cancer diagnosed?

First, your physician takes a detailed history and performs a careful physical examination, especially of the thyroid gland. The best diagnostic approach for a specific patient will be determined by your physician after careful consideration of all the facts. The tests available to your physician for evaluation of the thyroid lump include, but are not limited to, the following:

- ◆ Fine-needle aspiration biopsy— this is usually done first and, if positive, significantly reduces the need for more elaborate and expensive testing



- ◆ Ultrasonography– this may be required for guidance of the fine needle biopsy if the nodule is difficult to feel
- ◆ Thyroid scan – this can be done to see if the mass is capable of concentrating radioiodine, particularly in those rare patients with associated hyperthyroidism
- ◆ Blood studies

## How is thyroid cancer treated?

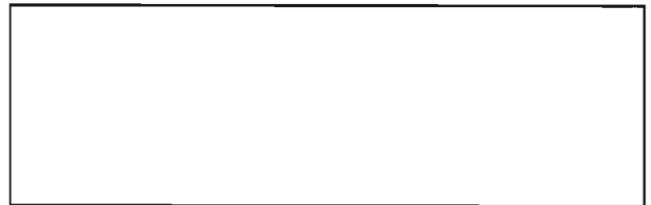
Fortunately, most types of thyroid cancer can be diagnosed early and cured completely, but a thoughtful and comprehensive investigation is necessary. If thyroid cancer is suspected after review of all the information, referral to an experienced thyroid surgeon is recommended.

The usual approach is to remove the portion of the thyroid containing the lump, along with most of the remaining thyroid gland and any abnormal lymph glands. If cancer is confirmed, further consultation with the endocrinologist is appropriate. Radioactive iodine treatment is usually recommended in order to destroy any remaining malignant thyroid cells and to reduce the risk of recurrence of this disease.

After radioiodine therapy, thyroid medication (levothyroxine) should be started and the dose carefully adjusted to each patient's unique requirements, which will prevent the development of persistent hypothyroidism and decrease the likelihood of cancer recurrence. Periodic monitoring is supervised by the endocrinologist, and may include ultrasound examinations, radioiodine body scans, and periodic testing of a blood protein called thyroglobulin, which is found in normal thyroid cells but can also be produced by thyroid cancer cells.

The optimal frequency of further monitoring studies to be certain that the cancer does not recur will be determined by your physician. Fortunately, most types of thyroid cancer are associated with a very good prognosis when diagnosed early and treated by a physician who is familiar with the management of this disease.

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