

Questions and Answers for the Patient with Thyroid Cancer:

What are the indications for thyroid surgery?- The indications for thyroid surgery include suspicion or diagnosis of thyroid tumor, compression symptoms on trachea and/or esophagus secondary to thyroid enlargement, progressive thyroid enlargement on medical therapy, uncontrolled hyperthyroidism in spite of medical management or hyperthyroidism during pregnancy, substernal goiter, cosmetic concerns with large goiter/neck mass, and uncontrolled hyperthyroidism.

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Who should do thyroid surgery?- A qualified and experienced thyroid surgeon (general, endocrine, ENT) working in hospital with considerable caseload should do surgery.

What are the risks of thyroid surgery?- The risks of surgery of the thyroid include but are not limited to recurrent nerve injury (vocal cord paralysis), parathyroid gland deficiency (low blood calcium), wound infection and bleeding and anesthetic risks. The overall risk is very low.

How much thyroid should be removed?- The extent of thyroid removal should be sufficient to adequately remove the disease. This is controversial and varies from partial to total thyroidectomy depending upon multiple patient, tumor, and surgeon factors. Treatment must be individualized!

Will surgery be required on the neck lymph nodes?- Many, but not all thyroid cancers can and do metastasize to lymph nodes in the neck and upper chest. If such involvement is suspected or present then the lymph nodes should be removed by adequate surgery, the extent of which is dictated by the location and extent of the tumor metastases.

What symptoms can I anticipate postoperatively?- Moderate sore throat, which lasts 1 to 2 days, will occur, not precluding drinking and swallowing. Some minor incisional pain is expected with some neck tightness later, all of which resolve with time. Hoarseness is uncommon and generally transient. Wound healing is brisk and generally complete in a week or two.

How long will I be hospitalized for the thyroid surgery?- The length of hospitalization depends upon the nature and extent of the thyroid pathology and the surgery necessary to remove it, and may extend from less than one day to a week or more. Poor general health, increased operative risk and postoperative complications may prolong the hospitalization.

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Will I have any cosmetic deformity after my surgery?- Most thyroid operations do not require radical removal of neck tissues. If the neck lymph nodes are removed some loss of soft tissue contour in the low neck may result. Only if very extensive surgery is required will more deficit be produced. Simple removal of part or all of the thyroid gland generally results in no cosmetic deficit and an insignificant almost invisible scar.

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Will I need further treatment after my thyroid surgery?- Depending upon the nature and extent of the disease, radioiodine treatment, less commonly external radiation treatment, rarely chemotherapy or combinations may be recommended.

Will I need to take medicine often after my thyroid surgery?- Usually yes, depending upon the nature of the disease process and the extent of thyroid removal. Total removal of the thyroid mandates life long replacement medicine.

What are the goals of thyroid surgery?- The goals are the documentation of precise diagnosis of the nature and extent of the thyroid disease and, if possible, its complete removal. Many but not all patients will know the nature of the disease from results of preoperative investigation including imaging studies and fine needle aspiration biopsy. Based upon his knowledge of the natural history of the disease and its known-or-suspected-extent, the surgeon will recommend a procedure to remove all the disease from the thyroid bed and the neck. In those patients whose tumor has already spread beyond the confines of the neck and is thus not surgically curable, the surgeon may recommend total removal of the thyroid gland and the adjacent central lymph nodes to facilitate and expedite other treatment, usually radioactive iodine, and to assure local control of the tumor around the larynx (voice box) and the esophagus (gullet). Rarely, adequate tumor resection may necessitate a more radical resection including muscle, soft tissues, nerves and other structures in those very few patients with more extensive neck disease already invading those structures.

Do all thyroid cancers need to be treated with extensive surgery and radiation?- Some thyroid cancers, if they are small and totally confined to the thyroid, can be successfully treated by surgery alone. Other patients are at "high risk" for recurrence or other complications, and require more extensive treatment to reduce the chance that the tumor will come back or that it will spread outside the thyroid gland.

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How does my doctor determine that I have "high risk" thyroid cancer?- In the same way that you are a unique individual, so is your cancer, in terms of its tendency to cause serious complications like spread to other organs, local invasion, or a tendency to come back after apparently successful initial treatment. By studying many thyroid cancers in a number of patients, doctors have noticed features of individual cancers which are more likely to be associated with these complications. Some of these features include a large size of the tumor, an aggressive appearance under the microscope, invasion of the cancer into the tissues surrounding the thyroid, tumors arising at multiple sites in the thyroid. Patient characteristics may also be important, especially your age at the time of diagnosis. Older patients tend to have more problems than younger patients.

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How does the radioactive testing and treatment of thyroid cancer work?- These procedures take advantage of a special form of energy, which is given to you either for diagnosis or for therapy. The energy is trapped and concentrated in your tumor, much like a fisherman traps fish and concentrates them in his net.

This "trapping" depends on the natural ability of your thyroid and thyroid cancer to trap the chemical element iodine. Special proteins on the surface of thyroid cells, take up iodine atoms and concentrate them in large amounts. Most of the iodine atoms in your body are not radioactive. However, elements that are radioactive, like I-131, discharge radiant energy, in the form of gamma rays and beta rays. I-131's gamma ray, can be detected by sensitive instruments in nuclear medicine. When radioiodine I-131 is given, it is trapped in tissue like other forms of iodine. The radioactivity detector (the gamma camera), scans over your body, and an image is created by detecting gamma rays, based on the contrast between the I-131 uptake in cancer and normal tissues. An increase in intensity shows up on the image as a black spot, wherever there is a site of thyroid cancer, taking up the radioactivity.

For the diagnostic purpose, a tiny (tracer) amount of I-131 is given, and the "whole body" is scanned. This test is the most sensitive way that we have to determine if there has been spread of cancer anywhere in your body outside your thyroid gland.

For the therapy purpose, I-131 is given in larger (therapeutic) amounts, and the trapped radioactivity discharges enough energy to kill the cancer cell. The more atoms which are trapped in the tumor, the greater the amount of beneficial energy that is discharged to kill the tumor.

Stevie JoEllie's Cancer Care Fund, dedicated to empower minority communities with early detection strategies and supportive services for thyroid cancer patients, survivors, family and friends

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Will I ever be cured of my cancer?- Many patients, even with aggressive thyroid cancers that have spread outside the thyroid, can be cured. Early spread to the lymph nodes and lungs are common, in "high-risk" patients. Fortunately, a variety of treatments have proven to be curative. These include surgery, which is often the first form of therapy given to the patient with thyroid cancer. This form of treatment is most effective when the cancer is confined to the thyroid gland, but we have identified patients whose only known tumor sites have been removed by surgery, when it was detected by other testing. Radioactive iodine is also a curative therapy for many patients, even when the tumor has spread to distant sites. Although we cannot promise that all patients will be cured, early treatment helps.

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What if the treatment does not totally eradicate my thyroid cancer?- Thyroid cancer which has spread outside the thyroid gland is a serious condition which can be life threatening. Nonetheless, some patients, will have a normal life expectancy, even when their thyroid cancer is not totally eradicated by treatments. This is because there are effective treatments which tend to stop the growth of the thyroid cancer. One such treatment is thyroid hormone, which reduces the rate of growth for most thyroid cancer. This is one important reason why you should take your thyroid pill every day, without fail, unless your doctor has instructed you to stop your thyroid medication as a preparation for diagnostic testing or treatment with radioactive iodine.

Also, if new worrisome symptoms develop, we would like you to tell us about them right away, so that additional local treatments may be given which will reduce their negative effects.

What are the side effects of not having the thyroid pill? - When the body does not have enough thyroid hormone, you will be "hypothyroid." Patients who are hypothyroid feel weaker, slower, and cold despite normal or warm room temperatures. You may also experience constipation, and changes in mood, especially depression. This is because your body depends on thyroid hormone, as a basis for the natural metabolism which is the basis for most normal functions of life. Also, you may find that your reflexes will be slowed, particularly just before you undergo the diagnostic testing which we call "dosimetry". Its important that you recognize this, and we recommend that you have someone else drive your car when you are not taking the thyroid hormone, particularly in the last week prior to dosimetry testing. In addition, the ability to think may be impaired.

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My wife and I have not started our family. Will this treatment have any effect on our ability to have children?- High dose radioiodine therapy can cause the sperm count to drop in the year immediately after treatment. For this reason, many male patients who desire to have children will bank their sperm, in order to facilitate later conception.

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What is the purpose of the radioactive iodine therapy? How will this therapy be administered?-This therapy is intended to target thyroid-like tissue, whether normal residual thyroid that remains after surgery, or thyroid cancer deposits. You will drink a saline solution that contains the therapeutic dose of radioactive iodine, and over the next few hours, the radioactivity will be absorbed from your stomach, and will enter your blood stream. The radioactive Iodine 131 will be trapped in thyroid like tissue, in sufficient amounts to destroy the cancer cells.

Will the radioactive Iodine-131 therapy make me feel sick?- In the first few days after oral treatment, there can be side effects of nausea, salivary gland pain and swelling and redness and irritation in the mouth. Normally these effects are mild, and we will treat you with an anti-nausea pill before therapy to counteract this effect. Analgesics and local treatment is normally effective to reduce salivary gland swelling pain. If there is a very major discomfort and swelling, a short course of steroids is very effective to reduce pain and discomfort. These side effects occur because some normal tissues, like the stomach and salivary glands will also trap radioactive iodine, and although this trapping is much less than the target cancer cells, there is the potential for some damage to these normal tissues.

I am allergic to shellfish and iodine containing contrast materials. Will the radioactive Iodine treatment cause me to have allergic symptoms? -The chemical concentration of radioactive iodine is too low to have any effect on your body at all. Also, allergies such as this, are caused by iodinated proteins, rather than inorganic iodine. During the course of normal living, you take in about 100 micrograms of inorganic iodine per day, and in the long run, your body requires a certain amount of inorganic iodine to survive.

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Will I feel anything from the "test" dose or dosimetry dose of radioactive iodine?-You will not feel any side effects from the radioiodine used in dosimetry. This is because the chemical dose of iodine, is extremely tiny, only a "trace".

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Why do I have to be on a "low iodine" diet, prior to diagnostic testing or therapy with radioactive iodine? -Iodine is a natural chemical element that is essential for life. In patients with a thyroid gland, the iodine is taken up by the thyroid and used as a building block to make a key hormone, thyroid hormone, which is important to the bodies normal functioning. Thyroid cancer, also takes up iodine, not as efficiently as the normal thyroid, but sufficient that the uptake can be traced with a radioactive iodine, the most commonly used form is Iodine-131. (Also called a radioisotope). What happens is that the tracer dose of radioactive iodine mixes with the naturally occurring, non-radioactive iodine, and together, the radioactive and the non-radioactive iodines are taken up in your thyroid gland and thyroid cancer.

How different is the therapy from the dosimetry dose?-You will get a more concentrated solution but the procedure of "drinking" the dose is identical.

I am contemplating having children in the future? Can I get pregnant again?-Yes, but you should not get pregnant until a year after your last therapy because this is the time period we need in order to repeat the testing to confirm if you have no evidence of disease.