National Cancer Institute at the National Institutes of Health

Thyroid Cancer Treatment (PDQ®)

Patient Version

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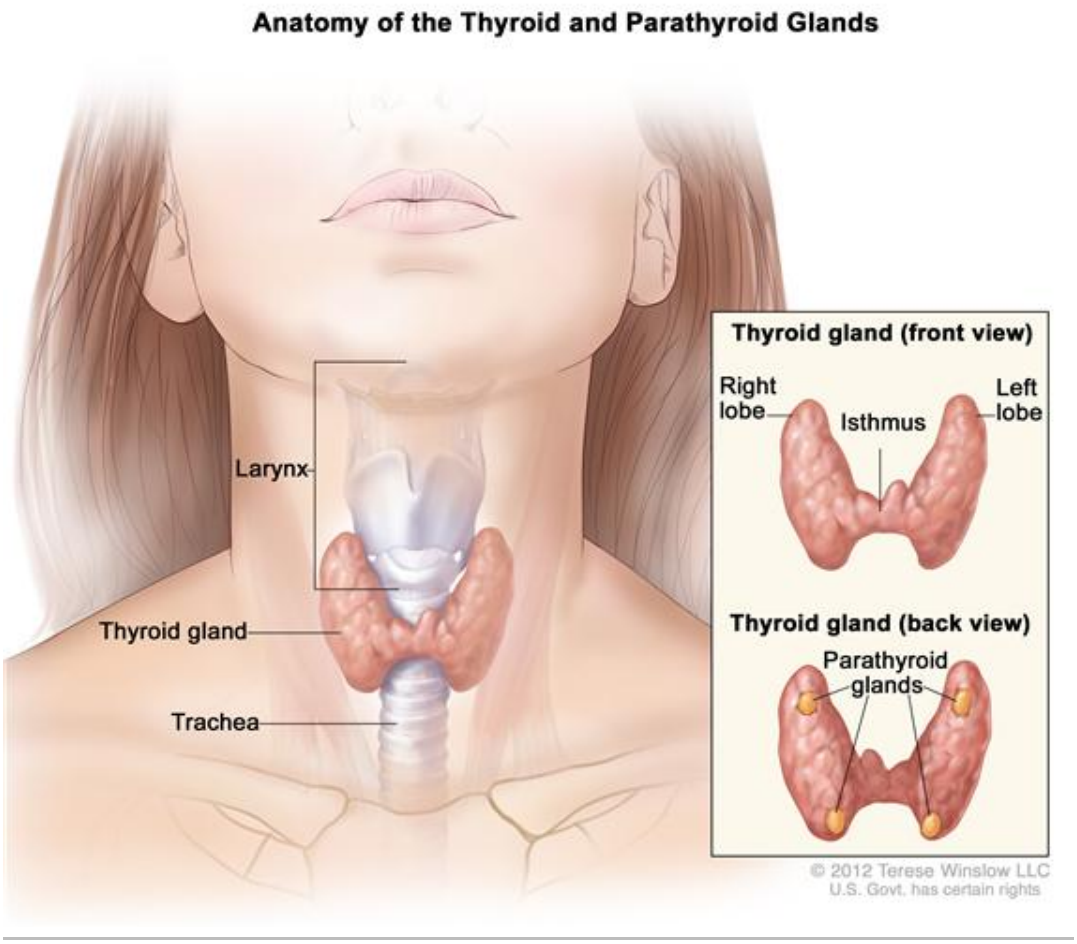
General Information About Thyroid Cancer

Key Points for This Section

- Thyroid cancer is a disease in which malignant (cancer) cells form in the tissues of the thyroid gland.
- Age, gender, and exposure to radiation can affect the risk of thyroid cancer.
- Medullary thyroid cancer is sometimes caused by a change in a gene that is passed from parent to child.
- Possible signs of thyroid cancer include a swelling or lump in the neck.
- Tests that examine the thyroid, neck, and blood are used to detect (find) and diagnose thyroid cancer.
- Certain factors affect prognosis (chance of recovery) and treatment options.

Thyroid cancer is a disease in which malignant (cancer) cells form in the tissues of the thyroid gland.

The thyroid is a gland at the base of the throat near the trachea (windpipe). It is shaped like a butterfly, with a right lobe and a left lobe. The isthmus, a thin piece of tissue, connects the two lobes. A healthy thyroid is a little larger than a quarter. It usually cannot be felt through the skin.



Anatomy of the thyroid and parathyroid glands. The thyroid gland lies at the base of the throat near the trachea. It is shaped like a butterfly, with the right lobe and left lobe connected by a thin piece of tissue called the isthmus. The parathyroid glands are four pea-sized organs found in the neck near the thyroid. The thyroid and parathyroid glands make hormones.

The thyroid uses iodine, a mineral found in some foods and in iodized salt, to help make several hormones. Thyroid hormones do the following:

- Control heart rate, body temperature, and how quickly food is changed into energy (metabolism).
- Control the amount of calcium in the blood.

There are four main types of thyroid cancer:

- Papillary thyroid cancer: The most common type of thyroid cancer.
- Follicular thyroid cancer. Hürthle cell carcinoma is a form of follicular thyroid cancer and is treated the same way.
- Medullary thyroid cancer.
- Anaplastic thyroid cancer.

See the PDQ summary on Unusual Cancers of Childhood for information about childhood thyroid cancer.

Age, gender, and exposure to radiation can affect the risk of thyroid cancer.

Anything that increases your risk of getting a disease is called a risk factor. Having a risk factor does not

mean that you will get cancer; not having risk factors doesn't mean that you will not get cancer. Talk with your doctor if you think you may be at risk. Risk factors for thyroid cancer include the following:

- Being between 25 and 65 years old.
- Being female.
- Being exposed to radiation to the head and neck as a child or being exposed to radiation from an atomic bomb. The cancer may occur as soon as 5 years after exposure.
- Having a history of goiter (enlarged thyroid).
- Having a family history of thyroid disease or thyroid cancer.
- Having certain genetic conditions such as familial medullary thyroid cancer (FMTC), multiple endocrine neoplasia type 2A syndrome, and multiple endocrine neoplasia type 2B syndrome.
- Being Asian.

Medullary thyroid cancer is sometimes caused by a change in a gene that is passed from parent to child.

The genes in cells carry hereditary information from parent to child. A certain change in a gene that is passed from parent to child (inherited) may cause medullary thyroid cancer. A test has been developed that can find the changed gene before medullary thyroid cancer appears. The patient is tested first to see if he or she has the changed gene. If the patient has it, other family members may also be tested. Family members, including young children, who have the changed gene can decrease the chance of developing medullary thyroid cancer by having a thyroidectomy (surgery to remove the thyroid).

Possible signs of thyroid cancer include a swelling or lump in the neck.

Thyroid cancer may not cause early symptoms. It is sometimes found during a routine physical exam. Symptoms may occur as the tumor gets bigger. Other conditions may cause the same symptoms. Check with your doctor if you have any of the following problems:

- A lump in the neck.
- Trouble breathing.
- Trouble swallowing.
- Hoarseness.

Tests that examine the thyroid, neck, and blood are used to detect (find) and diagnose thyroid cancer.

The following tests and procedures may be used:

- **Physical exam and history** : An exam of the body to check general signs of health, including checking for signs of disease, such as lumps or swelling in the neck, voice box, and lymph nodes, and anything else that seems unusual. A history of the patient's health habits and past illnesses and treatments will also be taken.

- **Laryngoscopy** : A procedure in which the doctor checks the larynx (voice box) with a mirror or with a laryngoscope. A laryngoscope is a thin, tube-like instrument with a light and a lens for viewing. A thyroid tumor may press on vocal cords. The laryngoscopy is done to see if the vocal

cords are moving normally.

- **Blood hormone studies**: A procedure in which a blood sample is checked to measure the amounts of certain hormones released into the blood by organs and tissues in the body. An unusual (higher or lower than normal) amount of a substance can be a sign of disease in the organ or tissue that makes it. The blood may be checked for abnormal levels of thyroid-stimulating hormone (TSH). TSH is made by the pituitary gland in the brain. It stimulates the release of thyroid hormone and controls how fast follicular thyroid cells grow. The blood may also be checked for high levels of the hormone calcitonin and antithyroid antibodies.

- **Blood chemistry studies** : A procedure in which a blood sample is checked to measure the amounts of certain substances, such as calcium, released into the blood by organs and tissues in the body. An unusual (higher or lower than normal) amount of a substance can be a sign of disease in the organ or tissue that makes it.

- **Ultrasound exam**: A procedure in which high-energy sound waves (ultrasound) are bounced off internal tissues or organs and make echoes. The echoes form a picture of body tissues called a sonogram. The picture can be printed to be looked at later. This procedure can show the size of a thyroid tumor and whether it is solid or a fluid -filled cyst. Ultrasound may be used to guide a fine-needle aspiration biopsy.

- **CT scan (CAT scan)**: A procedure that makes a series of detailed pictures of areas inside the body, taken from different angles. The pictures are made by a computer linked to an x-ray machine. A dye may be injected into a vein or swallowed to help the organs or tissues show up more clearly. This procedure is also called computed tomography, computerized tomography, or computerized axial tomography.

- **Fine-needle aspiration biopsy of the thyroid**: The removal of thyroid tissue using a thin needle. The needle is inserted through the skin into the thyroid. Several tissue samples are removed from different parts of the thyroid. A pathologist views the tissue samples under a microscope to look for cancer cells. Because the type of thyroid cancer can be hard to diagnose, patients should ask to have biopsy samples checked by a pathologist who has experience diagnosing thyroid cancer.

- **Surgical biopsy** : The removal of the thyroid nodule or one lobe of the thyroid during surgery so the cells and tissues can be viewed under a microscope by a pathologist to check for signs of cancer. Because the type of thyroid cancer can be hard to diagnose, patients should ask to have biopsy samples checked by a pathologist who has experience diagnosing thyroid cancer.

Certain factors affect prognosis (chance of recovery) and treatment options.

The prognosis (chance of recovery) and treatment options depend on the following:

- The age of the patient.
- The type of thyroid cancer.
- The stage of the cancer.

- The patient's general health.
- Whether the patient has multiple endocrine neoplasia type 2B (MEN 2B).
- Whether the cancer has just been diagnosed or has recurred (come back).

Stages of Thyroid Cancer

Key Points for This Section

- After thyroid cancer has been diagnosed, tests are done to find out if cancer cells have spread within the thyroid or to other parts of the body.
- There are three ways that cancer spreads in the body.
- Cancer may spread from where it began to other parts of the body.
- The following stages are used for papillary and follicular thyroid cancer in patients younger than 45 years:
  - Stage I
  - Stage II
- The following stages are used for papillary and follicular thyroid cancer in patients 45 years and older:
  - Stage I
  - Stage II
  - Stage III
  - Stage IV
- The following stages are used for medullary thyroid cancer:
  - Stage 0
  - Stage I
  - Stage II
  - Stage III
  - Stage IV
- Anaplastic thyroid cancer is considered stage IV thyroid cancer.

After thyroid cancer has been diagnosed, tests are done to find out if cancer cells have spread within the thyroid or to other parts of the body.

The process used to find out if cancer has spread within the thyroid or to other parts of the body is called staging. The information gathered from the staging process determines the stage of the disease. It is important to know the stage in order to plan treatment. The following tests and procedures may be used in the staging process:

- **CT scan (CAT scan)**: A procedure that makes a series of detailed pictures of areas inside the

body, taken from different angles. The pictures are made by a computer linked to an x-ray machine. A dye may be injected into a vein or swallowed to help the organs or tissues show up more clearly. This procedure is also called computed tomography, computerized tomography, or computerized axial tomography.

- **Ultrasound exam**: A procedure in which high-energy sound waves (ultrasound) are bounced off internal tissues or organs and make echoes. The echoes form a picture of body tissues called a sonogram. The picture can be printed to be looked at later.
- **Chest x-ray** : An x-ray of the organs and bones inside the chest. An x-ray is a type of energy beam that can go through the body and onto film, making a picture of areas inside the body.
- **Sentinel lymph node biopsy** : The removal of the sentinel lymph node during surgery. The sentinel lymph node is the first lymph node to receive lymphatic drainage from a tumor. It is the first lymph node the cancer is likely to spread to from the tumor. A radioactive substance and/or blue dye is injected near the tumor. The substance or dye flows through the lymph ducts to the lymph nodes. The first lymph node to receive the substance or dye is removed. A pathologist views the tissue under a microscope to look for cancer cells. If cancer cells are not found, it may not be necessary to remove more lymph nodes.

There are three ways that cancer spreads in the body.

Cancer can spread through tissue, the lymph system, and the blood:

- Tissue. The cancer spreads from where it began by growing into nearby areas.
- Lymph system. The cancer spreads from where it began by getting into the lymph system. The cancer travels through the lymph vessels to other parts of the body.
- Blood. The cancer spreads from where it began by getting into the blood. The cancer travels through the blood vessels to other parts of the body.

Cancer may spread from where it began to other parts of the body.

When cancer spreads to another part of the body, it is called metastasis. Cancer cells break away from where they began (the primary tumor) and travel through the lymph system or blood.

- Lymph system. The cancer gets into the lymph system, travels through the lymph vessels, and forms a tumor (metastatic tumor) in another part of the body.
- Blood. The cancer gets into the blood, travels through the blood vessels, and forms a tumor (metastatic tumor) in another part of the body.

The metastatic tumor is the same type of cancer as the primary tumor. For example, if thyroid cancer spreads to the lung, the cancer cells in the lung are actually thyroid cancer cells. The disease is metastatic thyroid cancer, not lung cancer.

The following stages are used for papillary and follicular thyroid cancer in patients younger than 45 years:

Stage I

In stage I papillary and follicular thyroid cancer, the tumor is any size, may be in the thyroid, or may have spread to nearby tissues and lymph nodes. Cancer has not spread to other parts of the body.

Stage II

In stage II papillary and follicular thyroid cancer, the tumor is any size and cancer has spread from the thyroid to other parts of the body, such as the lungs or bone, and may have spread to lymph nodes.

The following stages are used for papillary and follicular thyroid cancer in patients 45 years and older:

Pea, peanut, walnut, and lime show tumor sizes.

Stage I

In stage I papillary and follicular thyroid cancer, cancer is found only in the thyroid and the tumor is 2 centimeters or smaller.

Stage II

In stage II papillary and follicular thyroid cancer, cancer is only in the thyroid and the tumor is larger than 2 centimeters but not larger than 4 centimeters.

Stage III

In stage III papillary and follicular thyroid cancer, either of the following is found:

- the tumor is larger than 4 centimeters and only in the thyroid or the tumor is any size and cancer has spread to tissues just outside the thyroid, but not to lymph nodes; or
- the tumor is any size and cancer may have spread to tissues just outside the thyroid and has spread to lymph nodes near the trachea or the larynx (voice box).

Stage IV

Stage IV papillary and follicular thyroid cancer is divided into stages IVA, IVB, and IVC.

- In stage IVA, either of the following is found:
    - the tumor is any size and cancer has spread outside the thyroid to tissues under the skin, the trachea, the esophagus, the larynx (voice box), and/or the recurrent laryngeal nerve (a nerve with two branches that go to the larynx); cancer may have spread to nearby lymph nodes; or
    - the tumor is any size and cancer may have spread to tissues just outside the thyroid. Cancer has spread to lymph nodes on one or both sides of the neck or between the lungs.
- In stage IVB, cancer has spread to tissue in front of the spinal column or has surrounded the carotid artery or the blood vessels in the area between the lungs; cancer may have spread to lymph nodes.
- In stage IVC, the tumor is any size and cancer has spread to other parts of the body, such as the lungs and bones, and may have spread to lymph nodes.

The following stages are used for medullary thyroid cancer:

Stage 0

Stage 0 medullary thyroid cancer is found only with a special screening test. No tumor can be found in the thyroid.

Stage I

Stage I medullary thyroid cancer is found only in the thyroid and is 2 centimeters or smaller.

Stage II

In stage II medullary thyroid cancer, either of the following is found:

- the tumor is larger than 2 centimeters and only in the thyroid; or
- the tumor is any size and has spread to tissues just outside the thyroid, but not to lymph nodes.

Stage III

In stage III medullary thyroid cancer, the tumor is any size, has spread to lymph nodes near the trachea and the larynx (voice box), and may have spread to tissues just outside the thyroid.

Stage IV

Stage IV medullary thyroid cancer is divided into stages IVA, IVB, and IVC.

- In stage IVA, either of the following is found:
    - the tumor is any size and cancer has spread outside the thyroid to tissues under the skin, the trachea, the esophagus, the larynx (voice box), and/or the recurrent laryngeal nerve (a nerve with 2 branches that go to the larynx); cancer may have spread to lymph nodes near the trachea or the larynx; or
    - the tumor is any size and cancer may have spread to tissues just outside the thyroid. Cancer has spread to lymph nodes on one or both sides of the neck or between the lungs.
- In stage IVB, cancer has spread to tissue in front of the spinal column or has surrounded the carotid artery or the blood vessels in the area between the lungs. Cancer may have spread to lymph nodes.

- In stage IVC, the tumor is any size and cancer has spread to other parts of the body, such as the lungs and bones, and may have spread to lymph nodes.

Anaplastic thyroid cancer is considered stage IV thyroid cancer.

Anaplastic thyroid cancer grows quickly and has usually spread within the neck when it is found. Stage IV anaplastic thyroid cancer is divided into stages IVA, IVB, and IVC.

- In stage IVA, cancer is found in the thyroid and may have spread to lymph nodes.
- In stage IVB, cancer has spread to tissue just outside the thyroid and may have spread to lymph nodes.
- In stage IVC, cancer has spread to other parts of the body, such as the lungs and bones, and may have spread to lymph nodes.

Recurrent Thyroid Cancer

Recurrent thyroid cancer is cancer that has recurred (come back) after it has been treated. Thyroid cancer may come back in the thyroid or in other parts of the body.

Treatment Option Overview

Key Points for This Section

- There are different types of treatment for patients with thyroid cancer.
- Five types of standard treatment are used:
  - Surgery
  - Radiation therapy, including radioactive iodine therapy
  - Chemotherapy
  - Thyroid hormone therapy
  - Targeted therapy
- New types of treatment are being tested in clinical trials.
- Patients may want to think about taking part in a clinical trial.
- Patients can enter clinical trials before, during, or after starting their cancer treatment.
- Follow-up tests may be needed.

There are different types of treatment for patients with thyroid cancer.

Different types of treatment are available for patients with thyroid cancer. Some treatments are standard (the currently used treatment), and some are being tested in clinical trials. A treatment clinical trial is a research study meant to help improve current treatments or obtain information on new treatments for patients with cancer. When clinical trials show that a new treatment is better than the standard treatment, the new treatment may become the standard treatment. Patients may want to think about taking part in a

clinical trial. Some clinical trials are open only to patients who have not started treatment.

Five types of standard treatment are used:

Surgery

Surgery is the most common treatment of thyroid cancer. One of the following procedures may be used:

- Lobectomy: Removal of the lobe in which thyroid cancer is found. Biopsies of lymph nodes in the area may be done to see if they contain cancer.
- Near-total thyroidectomy: Removal of all but a very small part of the thyroid.
- Total thyroidectomy: Removal of the whole thyroid.
- Lymphadenectomy: Removal of lymph nodes in the neck that contain cancer.

Radiation therapy, including radioactive iodine therapy

Radiation therapy is a cancer treatment that uses high-energy x-rays or other types of radiation to kill cancer cells or keep them from growing. There are two types of radiation therapy. External radiation therapy uses a machine outside the body to send radiation toward the cancer. Internal radiation therapy uses a radioactive substance sealed in needles, seeds, wires, or catheters that are placed directly into or near the cancer. The way the radiation therapy is given depends on the type and stage of the cancer being treated.

Radiation therapy may be given after surgery to kill any thyroid cancer cells that were not removed. Follicular and papillary thyroid cancers are sometimes treated with radioactive iodine (RAI) therapy. RAI is taken by mouth and collects in any remaining thyroid tissue, including thyroid cancer cells that have spread to other places in the body. Since only thyroid tissue takes up iodine, the RAI destroys thyroid tissue and thyroid cancer cells without harming other tissue. Before a full treatment dose of RAI is given, a small test-dose is given to see if the tumor takes up the iodine.

Chemotherapy

Chemotherapy is a cancer treatment that uses drugs to stop the growth of cancer cells, either by killing the cells or by stopping them from dividing. When chemotherapy is taken by mouth or injected into a vein or muscle, the drugs enter the bloodstream and can reach cancer cells throughout the body (systemic chemotherapy). When chemotherapy is placed directly into the cerebrospinal fluid, an organ, or a body cavity such as the abdomen, the drugs mainly affect cancer cells in those areas (regional chemotherapy). The way the chemotherapy is given depends on the type and stage of the cancer being treated.

See Drugs Approved for Thyroid Cancer for more information.

Thyroid hormone therapy

Hormone therapy is a cancer treatment that removes hormones or blocks their action and stops cancer cells from growing. Hormones are substances made by glands in the body and circulated in the bloodstream. In the treatment of thyroid cancer, drugs may be given to prevent the body from making thyroid-stimulating hormone (TSH), a hormone that can increase the chance that thyroid cancer will grow

or recur.

Also, because thyroid cancer treatment kills thyroid cells, the thyroid is not able to make enough thyroid hormone. Patients are given thyroid hormone replacement pills.

Targeted therapy

Targeted therapy is a type of treatment that uses drugs or other substances to identify and attack specific cancer cells without harming normal cells. Tyrosine kinase inhibitor (TKI) therapy is a type of targeted therapy that blocks signals needed for tumors to grow. Vandetanib is a TKI used to treat thyroid cancer.

See Drugs Approved for Thyroid Cancer for more information.

New types of treatment are being tested in clinical trials.

Information about clinical trials is available from the NCI Web site.

Patients may want to think about taking part in a clinical trial.

For some patients, taking part in a clinical trial may be the best treatment choice. Clinical trials are part of the cancer research process. Clinical trials are done to find out if new cancer treatments are safe and effective or better than the standard treatment.

Many of today's standard treatments for cancer are based on earlier clinical trials. Patients who take part in a clinical trial may receive the standard treatment or be among the first to receive a new treatment.

Patients who take part in clinical trials also help improve the way cancer will be treated in the future. Even when clinical trials do not lead to effective new treatments, they often answer important questions and help move research forward.

Patients can enter clinical trials before, during, or after starting their cancer treatment.

Some clinical trials only include patients who have not yet received treatment. Other trials test treatments for patients whose cancer has not gotten better. There are also clinical trials that test new ways to stop cancer from recurring (coming back) or reduce the side effects of cancer treatment.

Clinical trials are taking place in many parts of the country. See the Treatment Options section that follows for links to current treatment clinical trials. These have been retrieved from NCI's listing of clinical trials.

Follow-up tests may be needed.

Some of the tests that were done to diagnose the cancer or to find out the stage of the cancer may be repeated. Some tests will be repeated in order to see how well the treatment is working. Decisions about whether to continue, change, or stop treatment may be based on the results of these tests. This is sometimes called re-staging.

Some of the tests will continue to be done from time to time after treatment has ended. The results of

these tests can show if your condition has changed or if the cancer has recurred (come back). These tests are sometimes called follow-up tests or check-ups.

Treatment Options by Stage

Stages I and II Papillary and Follicular Thyroid Cancer

Treatment of stage I and II papillary and follicular thyroid cancer may include the following:

- Total or near-total thyroidectomy, with or without radioactive iodine therapy.
- Lobectomy and removal of lymph nodes that contain cancer, followed by hormone therapy. Radioactive iodine therapy may be given following surgery.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with stage I papillary thyroid cancer, stage I follicular thyroid cancer, stage II papillary thyroid cancer and stage II follicular thyroid cancer. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

Stage III Papillary and Follicular Thyroid Cancer

Treatment of stage III papillary and follicular thyroid cancer is usually total thyroidectomy. Cancer that has spread outside the thyroid, as well as any lymph nodes that have cancer in them, will also be removed. Radioactive iodine therapy or external radiation therapy may be given after surgery.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with stage III papillary thyroid cancer and stage III follicular thyroid cancer. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

Stage IV Papillary and Follicular Thyroid Cancer

Treatment of stage IV papillary and follicular thyroid cancer that has spread only to the lymph nodes can often be cured. When cancer has spread to other places in the body, such as the lungs and bone, treatment usually does not cure the cancer, but can relieve symptoms and improve the quality of life. Treatment may include the following:

- Radioactive iodine therapy.
- External-beam radiation therapy.
- Surgery to remove cancer from areas where it has spread.
- Hormone therapy.
- A clinical trial of chemotherapy.
- A clinical trial of a targeted therapy.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with stage IV papillary thyroid cancer and stage IV follicular thyroid cancer. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

Medullary Thyroid Cancer

Treatment may include the following:

- Total thyroidectomy if the cancer has not spread to other parts of the body.
- Removal of lymph nodes that contain cancer.
- External radiation therapy as palliative therapy to relieve symptoms and improve the quality of life for patients whose cancer has recurred in the thyroid.
- Targeted therapy with a tyrosine kinase inhibitor for cancer that has spread to other parts of the body.
- Chemotherapy as palliative therapy to relieve symptoms and improve the quality of life for patients whose cancer has spread to other parts of the body.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with thyroid gland medullary carcinoma. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

Anaplastic Thyroid Cancer

Treatment may include the following:

- Tracheostomy as palliative therapy to relieve symptoms and improve the quality of life.
- Total thyroidectomy as palliative therapy to relieve symptoms and improve the quality of life for patients whose cancer has not spread away from the thyroid.
- External radiation therapy.
- Chemotherapy.
- A clinical trial of total thyroidectomy followed by chemotherapy and radiation therapy.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with anaplastic thyroid cancer. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

Treatment Options for Recurrent Thyroid Cancer

Treatment of recurrent thyroid cancer may include the following:

- Surgery with or without radioactive iodine therapy.

- Radioactive iodine therapy when the cancer can be found only by a thyroid scan and cannot be felt during a physical exam.
- External radiation therapy or intraoperative radiation therapy as palliative therapy to relieve symptoms and improve the quality of life.
- Chemotherapy.
- A clinical trial of a targeted therapy.

Check for U.S. clinical trials from NCI's list of cancer clinical trials that are now accepting patients with recurrent thyroid cancer. For more specific results, refine the search by using other search features, such as the location of the trial, the type of treatment, or the name of the drug. Talk with your doctor about clinical trials that may be right for you. General information about clinical trials is available from the NCI Web site.

To Learn More About Thyroid Cancer

For more information from the National Cancer Institute about thyroid cancer, see the following:

- Thyroid Cancer Home Page
- What You Need to Know About™ Thyroid Cancer
- Unusual Cancers of Childhood
- Drugs Approved for Thyroid Cancer
- Targeted Cancer Therapies
- Genetic Testing for Hereditary Cancer Syndromes

For general cancer information and other resources from the National Cancer Institute, see the following:

- Cancer Staging
- Chemotherapy and You: Support for People With Cancer
- Radiation Therapy and You: Support for People With Cancer
- Coping with Cancer: Supportive and Palliative Care
- Questions to Ask Your Doctor About Cancer
- Cancer Library
- Information For Survivors/Caregivers/Advocates

Changes to This Summary (04/17/2014)

The PDQ cancer information summaries are reviewed regularly and updated as new information becomes available. This section describes the latest changes made to this summary as of the date above.

Editorial changes were made to this summary.

About This PDQ Summary

About PDQ

Physician Data Query (PDQ) is the National Cancer Institute's (NCI's) comprehensive cancer information

database. The PDQ database contains summaries of the latest published information on cancer prevention, detection, genetics, treatment, supportive care, and complementary and alternative medicine. Most summaries come in two versions. The health professional versions have detailed information written in technical language. The patient versions are written in easy-to-understand, nontechnical language. Both versions have cancer information that is accurate and up to date and most versions are also available in Spanish.

PDQ is a service of the NCI. The NCI is part of the National Institutes of Health (NIH). NIH is the federal government's center of biomedical research. The PDQ summaries are based on an independent review of the medical literature. They are not policy statements of the NCI or the NIH.

Purpose of This Summary

This PDQ cancer information summary has current information about the treatment of thyroid cancer. It is meant to inform and help patients, families, and caregivers. It does not give formal guidelines or recommendations for making decisions about health care.

Reviewers and Updates

Editorial Boards write the PDQ cancer information summaries and keep them up to date. These Boards are made up of experts in cancer treatment and other specialties related to cancer. The summaries are reviewed regularly and changes are made when there is new information. The date on each summary ("Date Last Modified") is the date of the most recent change.

The information in this patient summary was taken from the health professional version, which is reviewed regularly and updated as needed, by the PDQ Adult Treatment Editorial Board.

Clinical Trial Information

A clinical trial is a study to answer a scientific question, such as whether one treatment is better than another. Trials are based on past studies and what has been learned in the laboratory. Each trial answers certain scientific questions in order to find new and better ways to help cancer patients. During treatment clinical trials, information is collected about the effects of a new treatment and how well it works. If a clinical trial shows that a new treatment is better than one currently being used, the new treatment may become "standard." Patients may want to think about taking part in a clinical trial. Some clinical trials are open only to patients who have not started treatment.

Clinical trials are listed in PDQ and can be found online at NCI's Web site. Many cancer doctors who take part in clinical trials are also listed in PDQ. For more information, call the Cancer Information Service 1-800-4-CANCER (1-800-422-6237).

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More information about contacting us or receiving help with the Cancer.gov Web site can be found on our Contact Us for Help page. Questions can also be submitted to Cancer.gov through the Web site's Contact Form.

Get More Information From NCI

Call 1-800-4-CANCER

For more information, U.S. residents may call the National Cancer Institute's (NCI's) Cancer Information Service toll-free at 1-800-4-CANCER (1-800-422-6237) Monday through Friday from 8:00 a.m. to 8:00 p.m., Eastern Time. A trained Cancer Information Specialist is available to answer your questions.

Chat online

The NCI's LiveHelp® online chat service provides Internet users with the ability to chat online with an Information Specialist. The service is available from 8:00 a.m. to 11:00 p.m. Eastern time, Monday through Friday. Information Specialists can help Internet users find information on NCI Web sites and answer questions about cancer.

Write to us

For more information from the NCI, please write to this address:

NCI Public Inquiries Office
9609 Medical Center Dr.
Room 2E532 MSC 9760

Bethesda, MD 20892-9760

Search the NCI Web site

The NCI Web site provides online access to information on cancer, clinical trials, and other Web sites and organizations that offer support and resources for cancer patients and their families. For a quick search, use the search box in the upper right corner of each Web page. The results for a wide range of search terms will include a list of "Best Bets," editorially chosen Web pages that are most closely related to the search term entered.

There are also many other places to get materials and information about cancer treatment and services. Hospitals in your area may have information about local and regional agencies that have information on finances, getting to and from treatment, receiving care at home, and dealing with problems related to cancer treatment.

Find Publications

The NCI has booklets and other materials for patients, health professionals, and the public. These publications discuss types of cancer, methods of cancer treatment, coping with cancer, and clinical trials. Some publications provide information on tests for cancer, cancer causes and prevention, cancer statistics, and NCI research activities. NCI materials on these and other topics may be ordered online or printed directly from the NCI Publications Locator. These materials can also be ordered by telephone from the Cancer Information Service toll-free at 1-800-4-CANCER (1-800-422-6237).