BAPTIST MD Anderson Cancer Center
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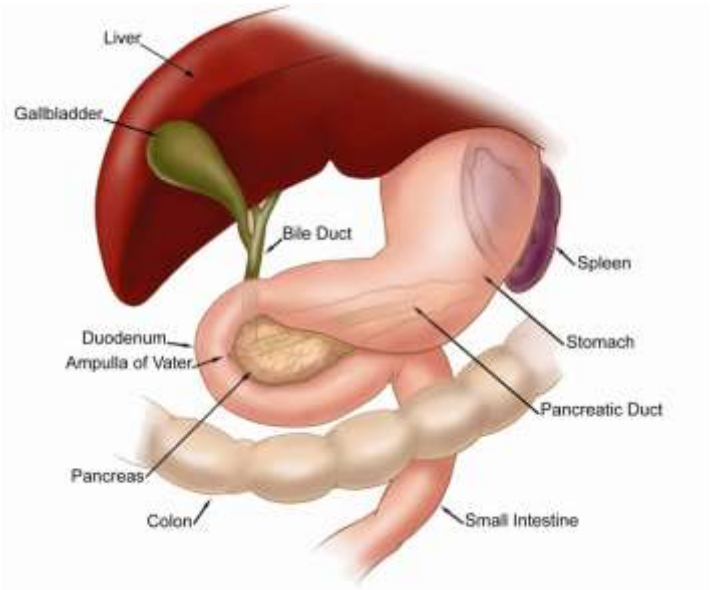
Low-Grade Neuroendocrine Cancer
(Carcinoid, Atypical Carcinoids and Islet Cell Carcinomas)

What is neuroendocrine cancer?

Neuroendocrine (pronounced nur-o-in-de-crin) cancer is rare and the cells are specialized. These cells are located in the lungs, stomach and intestines and endocrine system (organs that produce hormones, such as the pancreas). Each type of neuroendocrine cell produces specific hormones.

Neuroendocrine cancer is caused by an overgrowth of cells in one or more areas of the body. The overgrowth forms a tumor. This cancer can, but does not always, cause increased production and release of specific hormones. If these hormones are released, they may cause symptoms such as diarrhea, facial flushing and wheezing.



This image shows some of the organs that can be involved in neuroendocrine cancer.

What is staging?

Your doctor may take a small amount of tissue (called a biopsy) to confirm the diagnoses. Other tests and exams are done to determine the extent of the cancer. This process is called staging. When patients are first seen, certain tests are done to help doctors figure out how much neuroendocrine cancer is present in the body and where it is located. These tests can include, but are not limited to, a CT scan and/or an Octreotide scan, which is a nuclear medicine scan. The test results help your doctors make the best treatment suggestions. Periodically throughout your care, re-staging tests are done to check how the cancer responds. You will also have lab work.

What are the different types of neuroendocrine cancer?

There are two groups of low-grade neuroendocrine cancer: carcinoids and islet cell carcinomas (also known as islet cell tumors, pancreatic endocrine tumors or PNETs).

Adapted from Low-Grade Neuroendocrine Cancer, Revised 12/07/16

Revised 01/2015, Patient Education 2152

Carcinoid tumors are a relatively slow growing cancer, and start in the bronchopulmonary or gastrointestinal areas of the body. This type of cancer usually does not respond to treatment such as chemotherapy or radiation therapy.

Islet cell tumors are neuroendocrine cancers that start in the pancreas. This type cancer can have some response to traditional chemotherapy.

How are these cancers treated?

Carcinoid Tumors

Surgery to remove the tumor is the best treatment choice if the patient is healthy enough for surgery and if all of the tumor(s) can potentially be removed.

If surgery is not possible, your doctor will discuss other options with you. The purpose of treatment aside from surgery would be to try to:

- Control the cancer with possible shrinkage or at least prevent growth of the tumor and/or to
- Decrease the amount of hormones that the tumor(s) is producing

Another option is called watchful waiting. These tumors are relatively slow growing. Patients may not need treatment until a doctor determines that the tumor is growing at a certain rate, if it is a certain size or if the patient has symptoms caused by the cancer.

Sometimes, special medicine is given called somatostatin analogs. This medicine is injected under the skin to control hormone production and symptoms. This medicine has been shown to control the cancer for a longer period of time when compared to watchful waiting.

New targeted chemotherapy treatments have also shown promise in controlling this cancer and may be an option.

For patients whose tumors have spread to the liver, the doctor may suggest another treatment option. If this is your case, your care team will explain this treatment to you.

Islet Cell Tumors

Surgery is the first choice of treatment if:

- The tumor can be removed
- The patient is healthy enough to have surgery and
- If all of the tumor(s) can potentially be removed

Chemotherapy treatment is usually recommended if the tumor cannot be removed, or if it has spread to other parts of the body. Chemotherapy includes many different types of cancer fighting drugs. These drugs work to kill cancer cells in the body. Chemotherapy is usually given intravenously (into a vein). Chemotherapy drugs can also damage healthy cells and cause symptoms. You will receive information about the specific drug(s) you doctor prescribes for you.

Multiple targeted chemotherapies as well as a somatostatin analog are approved by the Federal Drug Administration (FDA) to control pancreatic neuroendocrine tumors.

For patients whose carcinoid tumors have spread to the liver, another treatment option may help. It delivers therapy directly to the liver. If this is an option for you, your care team will discuss this in detail.
Because neuroendocrine cancer is rare, treatment through a clinical trial may be an option, if available. It is important to remember that every patient is different, and every patient's treatment will be tailored to his or her type of cancer.

Feel free ask your doctor or nurse questions or concerns you may have. You will receive information regarding your specific plan of care.

Resources

American Cancer Society
800-227-2345
http://www.cancer.org

National Cancer Institute
1-800-4-Cancer
http://cancer.gov