Adrenal Gland Tumor - Diagnosis

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Diagnosis

Doctors use many tests to diagnose a tumor, find out if it is cancerous, and if so, whether it has metastasized. Some tests may also determine which treatments may be the most effective. To diagnose an adrenal gland tumor, blood and urine tests (see below) are done to look for certain substances that may indicate that cancer is present. If there is no evidence that the cancer has spread to the adrenal gland from another part of the body, the diagnosis can be made with a computed tomography (CT or CAT) scan or a magnetic resonance imaging (MRI) scan (see below). Imaging tests may also be used to find out whether the cancer has metastasized. Your doctor may consider these factors when choosing a diagnostic test:

- Age and medical condition
- Type of tumor suspected
- Severity of symptoms
- Previous test results

In addition to a physical examination, the following tests may be used to diagnose an adrenal gland tumor:

Blood and urine tests. Blood tests can measure the amounts of natural hormones, such as catecholamines and metanephrines, produced during stress, which can detect a functional tumor. A patient may be asked to take a pill on the evening before the blood and urine tests, which helps detect the normal suppression of production of the hormone cortisol. A 24-hour urine sample, which requires the collection of all urine during that timeframe for laboratory testing, may also be needed. This helps the doctor track how quickly various hormones are produced. Tell your doctor about any medications that you take, even over-the-counter drugs, because this information is needed to correctly interpret the results.

Biopsy [2]. A biopsy is the removal of a small amount of tissue for examination under a microscope. For an adrenal tumor, a narrow, hollow needle is used to collect the tissue; this is called a fine needle biopsy or fine needle aspiration. If the doctor suspects adrenal cancer, a biopsy of the adrenal gland is not recommended because it could help the cancer to spread. However, if the doctor suspects that cancer has spread to the adrenal gland from another area of the body where the cancer started, a biopsy may be done to determine the type of cancer, which can help the doctor plan treatment. The biopsy is performed by a radiologist who uses specialized imaging procedures, such as CT or MRI scans (see below) to direct the needle. The sample removed during the biopsy is analyzed by a pathologist (a doctor who specializes in interpreting laboratory tests and evaluating cells, tissues, and organs to diagnose disease).

CT scan [3]. A CT scan creates a three-dimensional picture of the inside of the body with an x-ray machine. A computer then combines these images into a detailed, cross-sectional view that shows any abnormalities or tumors. Sometimes, a contrast medium (a special dye) is injected into a patient?s vein to provide better detail.

MRI [4]. An MRI uses magnetic fields, not x-rays, to produce detailed images of the body. A contrast medium is injected into a patient?s vein to provide better detail.

Metaiodobenzylguanidine (MIBG) scan. MIBG is a chemical similar to adrenaline that will collect in a neuroendocrine tumor. A MIBG scan can show a tumor of the adrenal medulla that may not appear in an x-ray. The scan takes place over two consecutive days. On the first day, an injection of MIBG is given in the arm. Several hours later, pictures are taken with a special camera that can detect if or where in the body the MIBG has collected. The following morning, more pictures are taken, and the process may be repeated if needed.

After these diagnostic tests are done, your doctor will review all of the results with you. If the diagnosis is a tumor, these results also help the doctor describe it; this is called staging [5]. Learn more about the first steps to take after a diagnosis of a tumor [6].

Learn more about what to expect when having common tests, procedures, and scans [7].

Links:
[1] http://www.cancer.net/about-us
[2] http://www.cancer.net/node/24406
[3] http://www.cancer.net/node/24486
[4] http://www.cancer.net/node/24578
[5] http://www.cancer.net/node/18429
[6] http://www.cancer.net/node/24956
[7] http://www.cancer.net/node/24959