

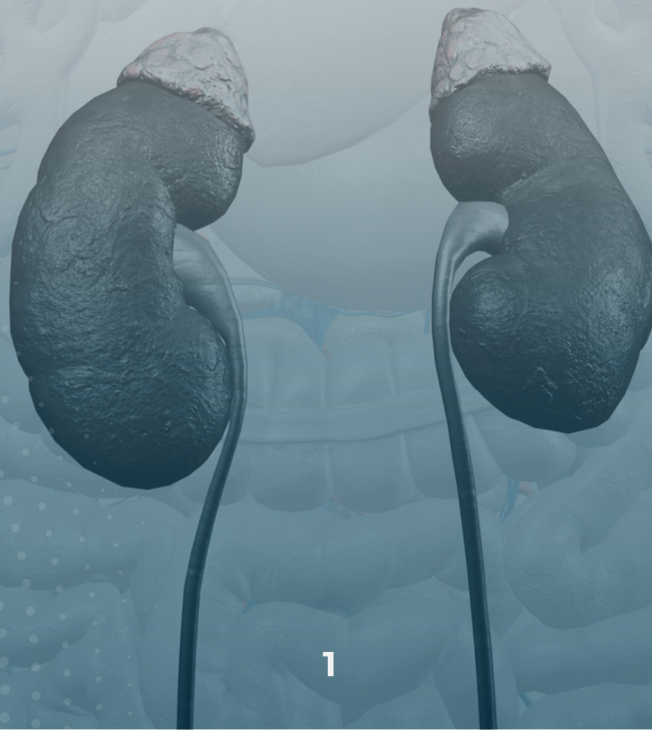


Oxford
Urology
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A GUIDE FOR PATIENTS ADRENAL CANCER

Early Detection Saves Lives

Adrenal cancer is a rare but serious disease affecting the adrenal glands, which are small, triangular organs located on top of each kidney. These glands play a vital role in producing hormones like cortisol and adrenaline, essential for regulating metabolism, blood pressure, and stress responses. Although uncommon, adrenal cancer can have a profound impact on the body. Early detection and modern treatment options significantly improve outcomes, making awareness and timely diagnosis critical.



OVERVIEW OF ADRENAL CANCER

Adrenal cancer is an aggressive disease that disrupts the glands' normal functions. It typically falls into two categories:

- **Functioning Tumors:** These tumors produce excess hormones, leading to physical and metabolic changes. For instance, excessive cortisol can result in Cushing's syndrome, while high aldosterone levels may cause Conn's syndrome, characterized by severe hypertension and low potassium.

Non-Functioning Tumors: These do not produce hormones but can grow and cause pain or pressure on surrounding organs.

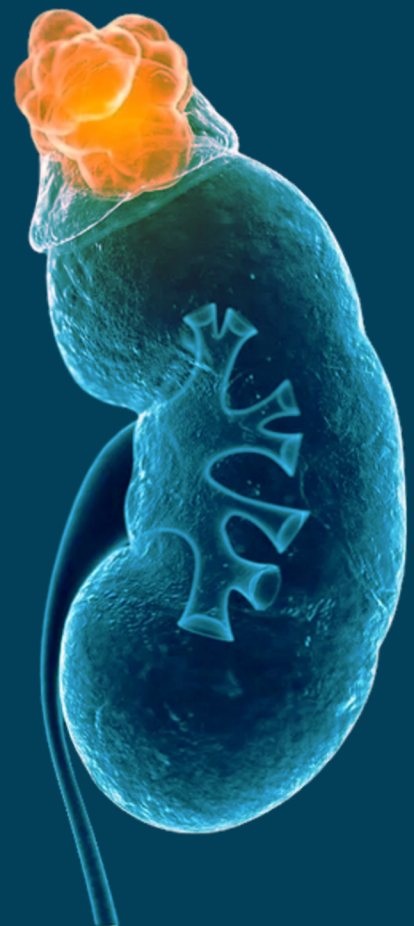
Adrenal cancer accounts for less than 1% of all cancers, but its rapid progression and ability to metastasize underscore the importance of early detection. Symptoms often overlap with other conditions, making specialized testing essential for diagnosis.

Adrenal Gland Functions

To understand adrenal cancer, it is essential to know the roles of the adrenal glands. These glands consist of two parts:

- **Adrenal Cortex:** The outer layer, responsible for producing steroid hormones such as cortisol, aldosterone, and androgens (sex hormones).
- **Adrenal Medulla:** The inner layer, which produces adrenaline and noradrenaline—hormones crucial for the body's "fight or flight" response.

Disruptions in these functions can lead to a wide array of symptoms and complications.





SYMPTOMS OF ADRENAL CANCER

Adrenal cancer symptoms vary widely, depending on the type and extent of the tumor. Many symptoms are related to hormone overproduction, while others result from tumor growth. Common symptoms include:

- **Hormonal Imbalances:** Overproduction of hormones can lead to Cushing's syndrome (excess cortisol), characterized by weight gain, a rounded face, and high blood pressure. In some cases, overproduction of aldosterone causes muscle weakness and severe hypertension.
- **Androgen or Estrogen Excess:** Tumors producing excess androgens or estrogens can lead to changes such as increased body hair or a deepened voice in women and breast enlargement in men.
- **Abdominal Pain and Lump:** Patients may feel persistent pain or a mass in the abdomen as the tumor grows.
- **Unexplained Weight Loss:** Rapid, unintentional weight loss can be a sign of cancer progression.
- **Fatigue and Weakness:** Hormonal changes or tumor burden may lead to a persistent lack of energy.

These symptoms can often mimic other conditions, making early detection challenging. Issues like unexplained weight gain, muscle weakness, or high blood pressure are frequently attributed to stress, aging, or other hormonal disorders, delaying proper diagnosis.

Persistent or unusual symptoms should prompt a thorough medical evaluation to rule out serious conditions like adrenal cancer.

In some cases, symptoms remain subtle until the tumor grows significantly, causing physical effects such as abdominal pain or a detectable lump. Whether symptoms stem from hormonal overproduction or tumor growth, prompt consultation with a healthcare provider is essential.

**Early intervention
allows for more effective treatment
and significantly improves outcomes.**



TESTS AND DIAGNOSIS

Diagnosing adrenal cancer requires a series of steps designed to identify the tumor and determine its impact on the body. Tests may include:

1. Blood and Urine Tests

Hormonal tests are critical in adrenal cancer diagnosis. Blood and urine samples are analyzed for abnormal levels of cortisol, aldosterone, adrenaline, and other hormones that the adrenal glands produce. Elevated or suppressed hormone levels often indicate adrenal gland dysfunction.

2. Imaging Studies

Advanced imaging techniques are used to detect adrenal tumors and assess their size, location, and whether they have spread to other organs.

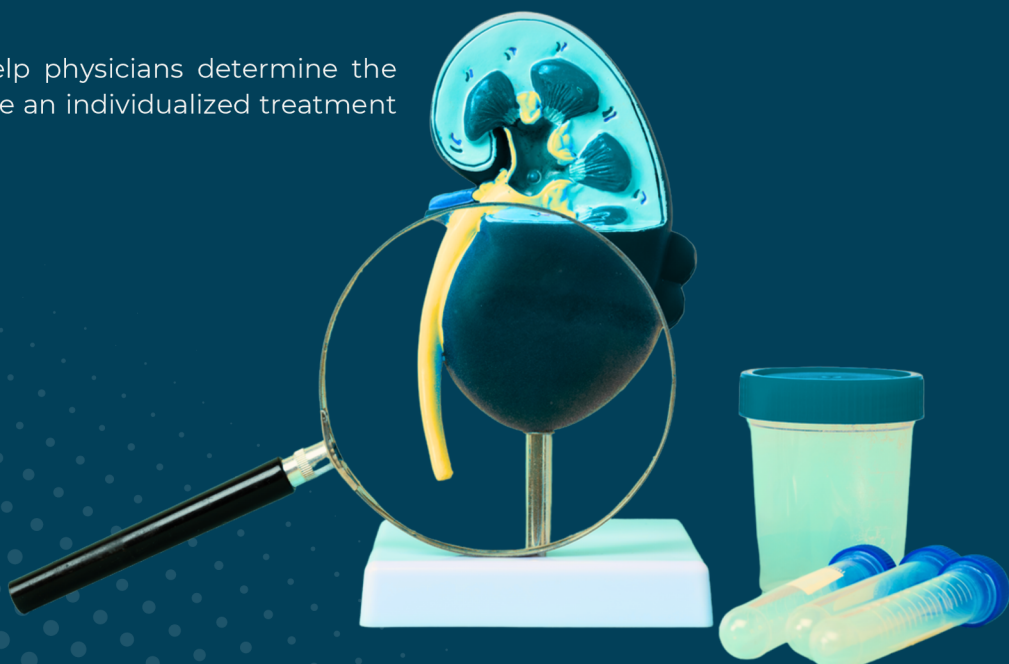
These may include:

- **CT Scan or MRI:** Provides detailed images of the adrenal glands.
- **PET Scan:** Helps identify metastasis and cancerous activity.

3. Biopsy

If imaging reveals a suspicious mass, a biopsy may be performed to obtain a tissue sample for laboratory analysis. This is typically reserved for cases where the diagnosis is unclear, as biopsies can sometimes carry risks in adrenal tumors.

The results of these tests help physicians determine the stage of the cancer and create an individualized treatment plan.



YOUR CARE TEAM



Brent M. Hardin, MD
Board-Certified Urologist

Dr. Brent M. Hardin provides comprehensive care for prostate cancer, benign prostatic hyperplasia (BPH), and male infertility. He employs robotic-assisted and minimally invasive techniques to enhance recovery and improve patient outcomes while tailoring treatments to individual needs.



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TREATMENT OPTIONS

Treatment for adrenal cancer depends on the stage of the disease and the patient's overall health. Common treatment strategies include:

1. Surgery (Adrenalectomy)

Surgical removal of the affected adrenal gland is the primary treatment for localized adrenal cancer. This procedure, known as adrenalectomy, can often be performed laparoscopically, minimizing recovery time. If the cancer has spread, additional surgeries may be needed to remove metastatic tumors.

2. Radiation Therapy

High-energy beams are used to target and destroy cancer cells. Radiation therapy may be employed after surgery to reduce the risk of recurrence or in cases where surgery is not an option.

3. Chemotherapy

Chemotherapy involves the use of drugs to kill cancer cells. It is often used in advanced adrenal cancer cases or when the disease has metastasized. Commonly used drugs include mitotane, which specifically targets adrenal tissue.

4. Targeted Therapy

This innovative approach uses medications designed to interfere with specific pathways that cancer cells rely on to grow and spread. Targeted therapy can often spare healthy tissue while effectively combating cancer cells.

5. Hormonal Therapy

For tumors causing excessive hormone production, medications may be used to block or regulate hormone activity. This helps alleviate symptoms and improve quality of life.



PROGNOSIS AND MOVING FORWARD

The prognosis for adrenal cancer varies depending on several factors, including the stage of the disease at diagnosis, the size and location of the tumor, and whether it has spread to other parts of the body. Early-stage adrenal cancer that is confined to the adrenal gland often has a better outcome, particularly when the tumor is surgically removed completely. Advanced cases may require more aggressive treatment, including a combination of surgery, chemotherapy, and radiation therapy.

Survivorship and Long-Term Outlook

For patients whose adrenal cancer is successfully treated, the focus shifts to survivorship. This includes:

- **Regular Follow-Up Care:** Patients require routine imaging and blood tests to monitor for recurrence. These checkups are typically more frequent in the first few years after treatment and may gradually decrease over time.
- **Management of Hormonal Changes:** If one or both adrenal glands are removed, the body may need help maintaining hormone levels. Endocrinologists will prescribe replacement hormones like cortisol or aldosterone and monitor their effects.

Living with Chronic Conditions

For patients with advanced adrenal cancer or those who experience complications, managing chronic conditions becomes a key focus. This may include:

- **Pain Management:** Palliative care teams specialize in addressing pain and improving quality of life.
- **Nutritional Support:** Dietitians can help create tailored plans to maintain strength and energy levels during treatment and recovery.

Emotional and Psychological Support

Being diagnosed with adrenal cancer can take a toll on emotional well-being. Feelings of anxiety, depression, or fear of recurrence are common. Moving forward includes addressing these concerns:

- **Counseling and Therapy:** Professional counselors or support groups provide a safe space to discuss feelings and challenges.
- **Support Networks:** Connecting with other adrenal cancer survivors can provide encouragement and practical advice.

The prognosis depends on the cancer's stage at diagnosis and response to treatment. Early-stage adrenal cancer confined to the gland has a favorable outlook, particularly with complete surgical removal. Advanced cases often require a combination of treatments, such as surgery, chemotherapy, and radiation therapy, for optimal outcomes.

CONTACT

OXFORD UROLOGY ASSOCIATES

If you or a loved one are facing symptoms or have been diagnosed with adrenal cancer, prompt care is essential. Reach out to us today to schedule a consultation or explore your treatment options.

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