

What Is ACC?

Adrenocortical carcinoma (ACC) is a **rare, aggressive, and endocrine malignancy**, arising from the adrenal cortex, and associated with poor prognosis.^{1,2}



An estimated **350**
new diagnoses each year³

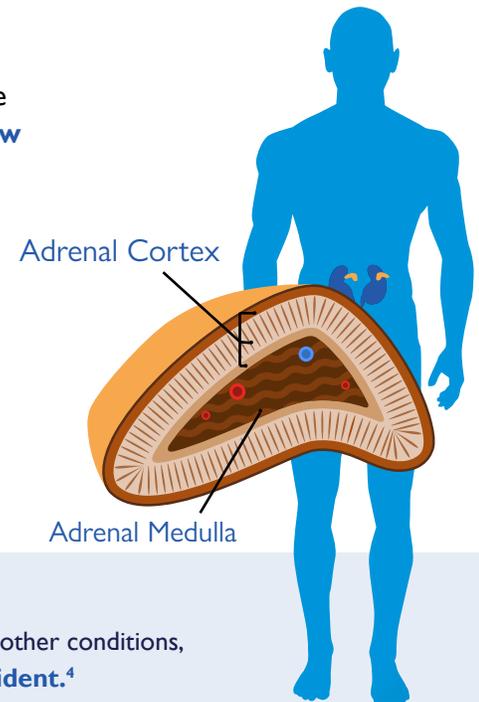
Typically diagnosed under **10**
or **40-50** years old⁴

WHAT ARE THE ADRENAL GLANDS?

The **adrenal glands** sit on top of the kidneys and serve a multi-functional role in the endocrine system. These glands **help regulate and maintain metabolism and how your body responds to stress**.^{5,6} Each adrenal gland has two parts:

- **The adrenal cortex** – the outer layer that produces hormones important for normal bodily functions such as aldosterone, cortisol, and dehydroepiandrosterone (DHEA).^{6,7}
- **The adrenal medulla** – the center of the adrenal gland, which produces adrenaline and noradrenaline.⁸

In patients with ACC, cancer cells cause changes in the adrenal cortex, leading to an imbalance in hormone production.⁵



WHAT ARE THE SYMPTOMS OF ACC?

Some patients with ACC don't have symptoms, while others do.³ Symptoms can mimic other conditions, which **makes ACC difficult to diagnose**.³ Up to **20% of patients are diagnosed by accident**.⁴

The presentation of symptoms depends on the type of ACC a patient has. In the case of “non-functional” ACC, in which hormones are not secreted, there may be no signs or symptoms in the early stages. In the case of “functional” ACC, there is an excess production of one of the following hormones: cortisol, aldosterone, testosterone, or estrogen. The symptoms of functional ACC therefore depend on the type of hormone produced:

ACC TUMORS MAY CAUSE THESE SIGNS AND SYMPTOMS¹⁰

- A lump in the abdomen
- Pain in the abdomen or back
- A feeling of fullness in the abdomen

SYMPTOMS OF FUNCTIONAL ACC¹⁰

Too much cortisol may cause:

- Weight gain
- Growth of fine hair on the face, upper back, or arms
- A round, red, full face
- A lump of fat on the back of the neck
- A deepening of the voice and swelling of the sex organs or breasts in both males and females
- Muscle weakness
- High blood sugar
- High blood pressure

Too much aldosterone may cause:

- High blood pressure
- Muscle weakness or cramps
- Frequent urination
- Feeling thirsty

Too much estrogen (in women) may cause:

- Irregular menstrual periods in women who have not gone through menopause
- Vaginal bleeding in women who have gone through menopause
- Weight gain

Too much testosterone (in women) may cause:

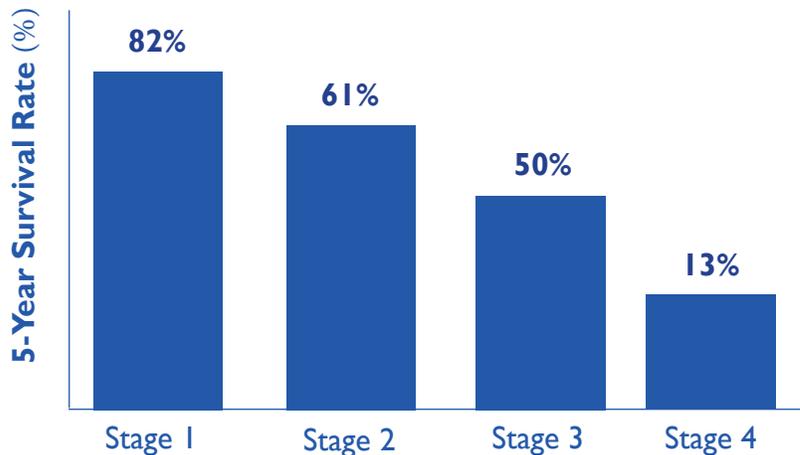
- Growth of fine hair on the face, upper back, or arms
- Acne
- Balding
- A deepening of the voice
- No menstrual periods

Too much estrogen (in men) may cause:

- Growth of breast tissue
- Lower sex drive
- Impotence

PROGNOSIS FOR ACC WHEN TREATED

The 5-year survival rate for ACC depends greatly on when the tumor is found.⁹



The following stages of cancerous tumors are used for adrenocortical carcinoma¹⁰

Stage I

In stage I, the tumor is 5 centimeters or smaller and is found in the adrenal gland only.

Stage II

In stage II, the tumor is larger than 5 centimeters and is found in the adrenal gland only.

Stage III

In stage III, the tumor is any size and has spread: to nearby lymph nodes; or to nearby tissues or organs (kidney, diaphragm, pancreas, spleen, or liver) or to large blood vessels (renal vein or vena cava) and may have spread to nearby lymph nodes.

Stage IV

In stage IV, the tumor is any size, may have spread to nearby lymph nodes, and has spread to other parts of the body, such as the lung, bone, or peritoneum.

Various factors can affect the prognosis and treatment options.⁴

- How big is the tumor?
- Has the cancer spread?
- Can the tumor be removed surgically?
- Has the cancer been treated previously?
- What is the patient's general health?



To learn more about ACC, please visit www.cancer.gov/types/adrenocortical

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