



## ADRENAL CANCER

Adrenal cancer is a rare disease that originates in the adrenal glands. The adrenal glands are located on top of the kidneys and consist of two parts that function separately: the outer layer (cortex) and the inner area (medulla).

The cortex produces three major hormones: cortisol (a glucocorticoid), aldosterone (a mineralocorticoid), and dehydroepiandrosterone (DHEA; an androgen). The medulla produces epinephrine (adrenaline), norepinephrine, and dopamine.

Adrenal tumors can increase hormone production (called functioning tumors). Adrenal tumors that do not produce hormones are called nonfunctioning. Symptoms of adrenal cancer and treatment for the condition depend on whether the tumor is functioning or nonfunctioning, and on which hormone is being overproduced.

### **ADRENAL CANCER TYPES**

Most (99%) adrenal tumors are noncancerous (i.e., benign) adrenal cortical adenomas and do not require treatment. These tumors usually do not cause symptoms, are small, and are found incidentally during diagnostic imaging.

The most common type of adrenal cancer develops in the adrenal cortex and is called **adrenocortical carcinoma**. Functioning adrenocortical carcinomas may produce symptoms related to increased hormone production.

Nonfunctioning tumors may cause pain from pressure on abdominal organs and a mass in the abdomen that is able to be felt with the fingers (palpable).

Cancers that develop in the adrenal medulla include **neuroblastoma** (originates in undeveloped nerve cells) and **pheochromocytoma** (originates in cells that produce epinephrine and norepinephrine). Neuroblastoma usually occurs in infants and children and pheochromocytoma more commonly occurs in people who are in their 30s and 40s.

Other types of cancer (e.g., breast, lung) may spread (metastasize) to the adrenal glands.