



What is Kidney Cancer?

Cancer by definition is a disease in which abnormal cells divide uncontrollably and destroy body tissue. Kidney cancer originates in kidney cells. The most common type is Renal Cell Carcinoma (RCC), also referred to as Renal Cell Adenocarcinoma or Renal Cell Cancer. Transitional Cell Carcinomas, Wilms Tumors, and Renal Sarcomas also occur in the Kidney.

To understand a little more about Kidney Cancer, one must understand exactly what your kidneys are and how they function. Usually, you are born with two kidneys, one on either side of your spine, protected by your lower ribcage. Each kidney is roughly the size of a fist and is the shape of a bean. The adrenal glands, attached to the top of each kidney, are endocrine glands that produce a variety of hormones including adrenaline and the steroids aldosterone and cortisol for regulation of metabolism and immune system suppression.

Kidneys are great multitasking organs. They are responsible for filtering blood and disposing of the waste and extra fluid as urine. \*They filter roughly 200 quarts of blood per day and create 1-2 quarts of urine. Kidneys also help regulate blood pressure, make red blood cells, keep your bones healthy, and control pH level.

Kidney Cancer Facts

As a Virginian, what does kidney cancer mean to me? In collaboration with the Virginia Division of Population Health Data, the Virginia Cancer Registry works to increase awareness. By collecting and tracking cancer data, we get a better picture of the progress being made with treatment and early detection as well as determining where additional research is needed. Virginia remains below the national incidence rate for kidney cancer. In the commonwealth, as well as nationally, men are twice as likely to be diagnosed with kidney cancer. Mortality is low, and remains relatively consistent.

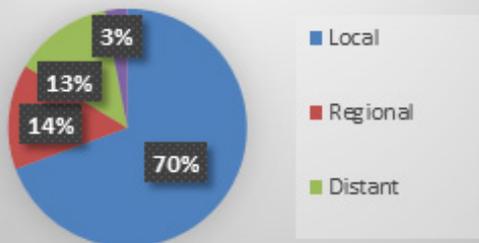
Incidence and death rates nationwide: 2 The incidence rate of Kidney and renal pelvis cancer nationwide was 15.6 per 100,000 persons per year. The death rate was 3.9 per 100,000 persons per year.

Incidence and death rates in Virginia: 2 The incidence rate of Kidney and renal pelvis cancer in Virginia was 14.4 per 100,000 persons per year. The death rate was 3.6 per 100,000 persons per year.

(Age-adjusted rates based on 2010-2014 cases and deaths.)

Percentage of Kidney cancer cases by stage, VA 2010-2014

Data Source: Virginia Cancer Registry 2010-2014

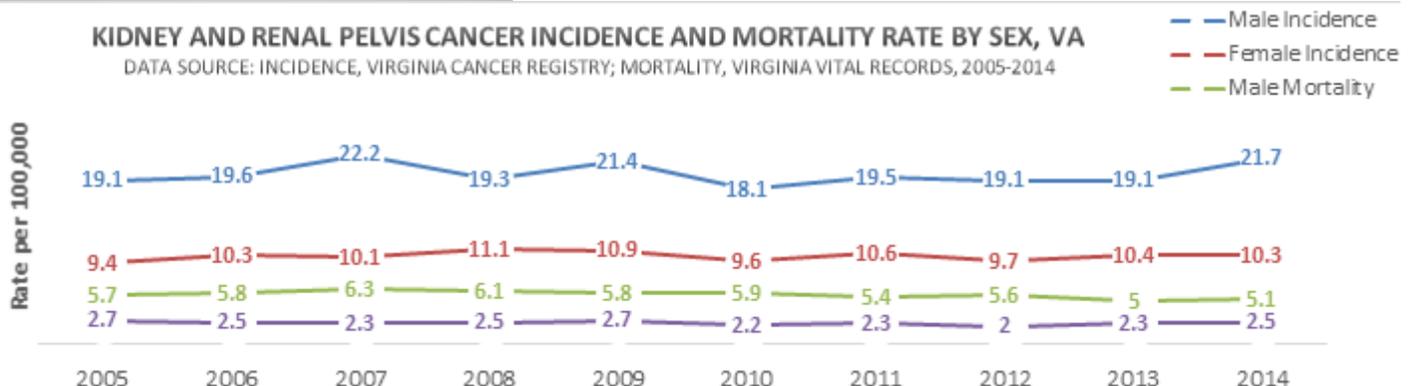


Kidney/ Renal Cancer Facts from the CDC 2010-2014

- 59,395 people were diagnosed in 2014 (most recent data available)1
- 1445 new Kidney &Renal Pelvis cases diagnosed in Virginia in 2014. 2
- National average rate: 15.6 per 100,000 people (graph 1)
- Average rate of new cases: 14.4 per 100,000 people (graph

KIDNEY AND RENAL PELVIS CANCER INCIDENCE AND MORTALITY RATE BY SEX, VA

DATA SOURCE: INCIDENCE, VIRGINIA CANCER REGISTRY; MORTALITY, VIRGINIA VITAL RECORDS, 2005-2014





### Progression/Stages:

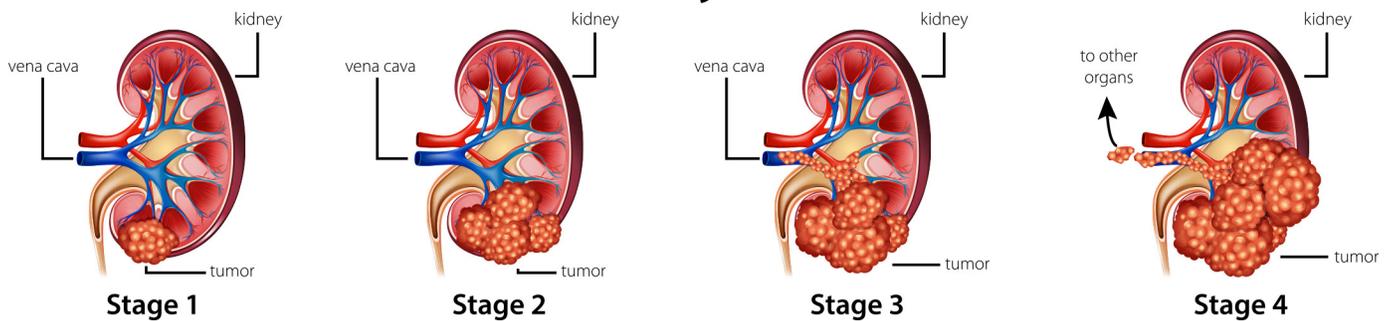
Kidney cancer has 4 stages.

Stage I & II (Local): The cancer confined to the kidney.

Stage III (Regional): The cancer has spread to nearby lymph nodes or blood vessels, or the surrounding fatty tissue.

Stage IV (Distant): Cancer has spread beyond the surrounding fatty tissue, into the adrenal gland, nearby lymph nodes, or has spread to other parts of the body; liver, lungs, brain, adrenal glands, distant lymph nodes.

## Kidney Cancer



### Detection and Prevention

Although, there is not a wide spread/universal screening test for Kidney cancer, some imaging, urinalyses, and gene tests can catch kidney cancer early<sup>3</sup>. Still, Kidney cancer is mostly diagnosed while in a localized stage. According to the CDC the following are things that put you at a higher risk for kidney cancer<sup>1</sup>:

- Smoking
- Obesity
- Long-term use of certain pain medicines
- Certain genetic conditions <sup>3</sup>
- Exposure to a chemical called trichloroethylene, a chemical used to remove grease from metal
- High blood pressure (it is unclear if the increased risk is due to high blood pressure or medicines used to treat it)

### References:

- 1: <https://www.cdc.gov/cancer/kidney/index.htm> - Data source: U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2014 Incidence and Mortality Web-based Report. Atlanta (GA): Department of Health and Human Services, Centers for Disease Control and Prevention, and National Cancer Institute; 2017. Available at: <http://www.cdc.gov/uscs>.
- 2: Virginia Cancer Registry. VA Rates: Based on combined 2010-2014 data (Incidence). VDH Division of Health Statistics. Based on combined 2010-2014 dat. Both rates are age-adjusted to the 2000 U.S. standard population (Mortality).
- 3: <https://www.cancer.org/cancer/kidney-cancer/detection-diagnosis-staging/detection.html>
4. [https://www.cancer.gov/types/kidney/patient/kidney-treatment-pdq#section/\\_1](https://www.cancer.gov/types/kidney/patient/kidney-treatment-pdq#section/_1)
5. <https://seer.cancer.gov/>
6. <https://nccd.cdc.gov/uscs/toptencancers.aspx> NPCR (National Program of Cancer Registries)
7. <https://www.cancer.org/cancer/kidney-cancer.html>
8. US data: <https://seer.cancer.gov/statfacts/html/kidney.htm>