

# Kidney and Renal Pelvis Cancer

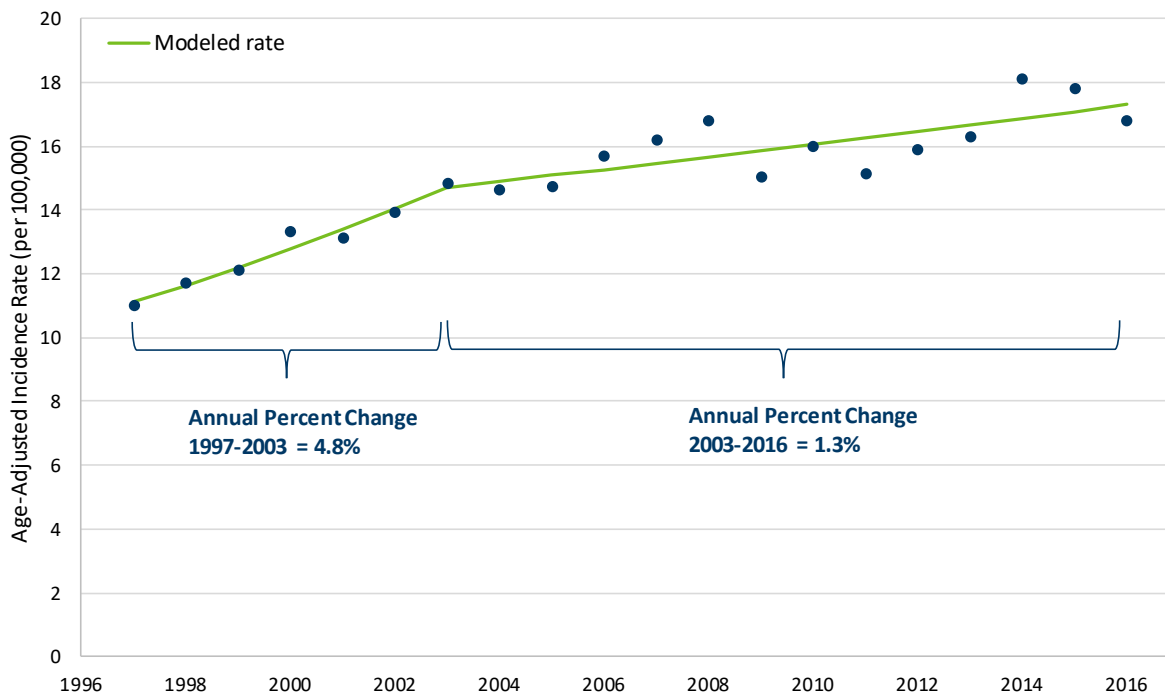
## FACTS AND FIGURES - INCIDENCE AND MORTALITY IN MINNESOTA

The kidneys are located on each side of the spinal cord just above the waist. Kidneys filter and clean blood and then create urine from the waste. Cancer within the kidneys is called renal cell cancer. A similar type of cancer is called transitional cell cancer; this is a cancer of the renal pelvis which is the top part of the ureter where the kidneys connect to the bladder.<sup>1</sup> Adults and children can develop kidney and renal pelvis cancer. In the U.S., kidney cancer accounted for 4.2% of all new cancer cases and 2.4% of all cancer deaths.<sup>2</sup> As in the US, kidney and renal pelvis cancer ranks as one of the top ten newly diagnosed cancers in Minnesota men and women.<sup>3</sup> There were 1,099 cases of kidney and renal pelvis cancer diagnosed and 241 deaths from kidney and renal pelvis cancer in 2016.

### The rate of newly diagnosed kidney cancers is increasing

The rate of new kidney and renal pelvis cancer diagnoses increased only slightly over time with about a 1% increase in cases each year between 2003 and 2016. Between 1997 and 2003 the percent of new kidney cancer cases increased by almost 5% each year.

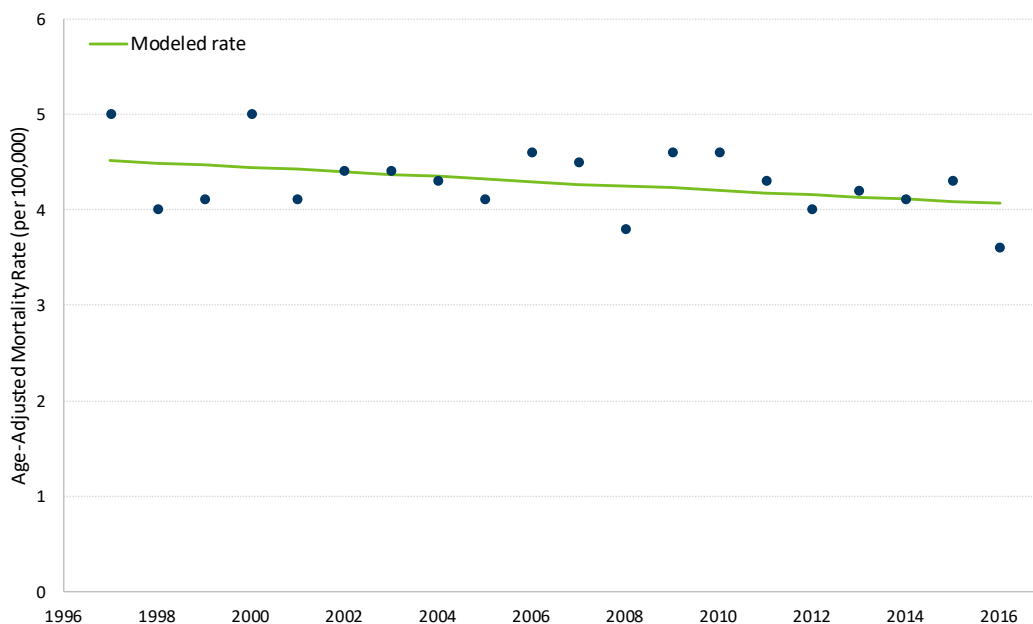
#### Kidney cancer incidence increased at a slower rate starting in 1997



## Kidney cancer mortality rates have decreased slightly since 1995

In 2016, the age-adjusted mortality rate was 4 deaths per 100,000 Minnesotans while twenty years prior the age-adjusted mortality rate was 5 per 100,000 Minnesotans. The age-adjusted mortality rate decreased by about one-half percent each year from 1997 to 2016.

### Kidney cancer mortality rates decreased slightly over the last 20 years



## Most Minnesotans diagnosed with kidney cancer survive at least five years

Of Minnesotans diagnosed with kidney and renal pelvis cancer between 2009 and 2015, three-quarters of them were still living after 5-years. The 5-year survival rate was slightly lower for men with 74% still alive after 5 years, while for women about 77% were still alive after 5 years.

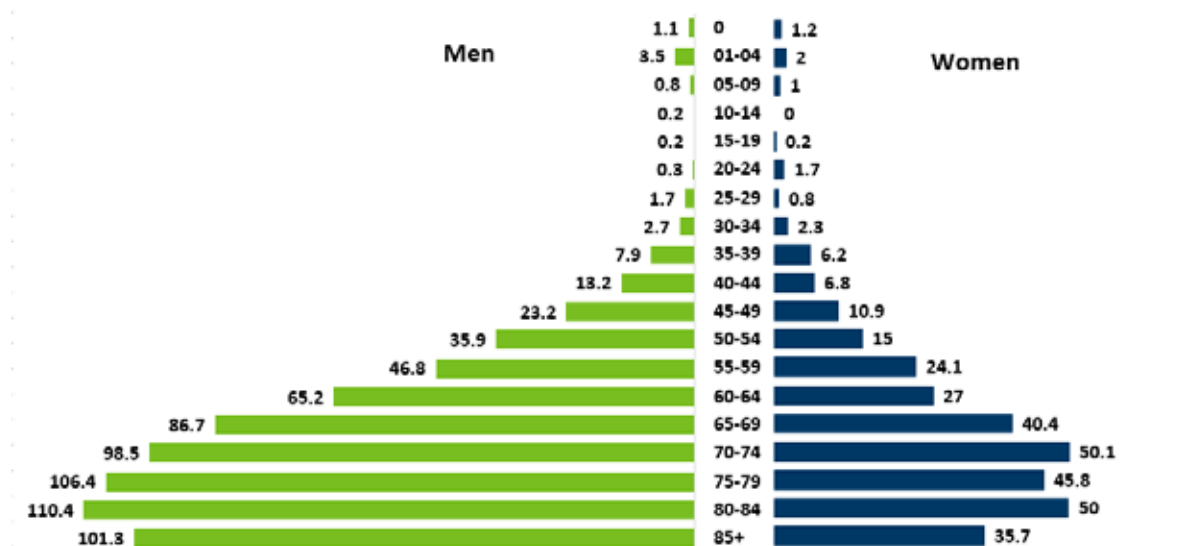
## The majority of new kidney cancer cases are diagnosed early (local stage)

From 2012 to 2016, almost two-thirds of new kidney and renal pelvis cancer cases were diagnosed at the localized stage, while 17% were diagnosed at the regional stage, 13% were diagnosed at the distant stage, and 5% were not given a stage at diagnosis.

## The rate of newly diagnosed kidney cancers increases with age and is highest for men

In Minnesota from 2012 to 2016, the age-adjusted rate of new kidney cancer cases was 24 per 100,000 men and 11 per 100,000 women. The highest rate was for men between the ages of 80 and 84 years.

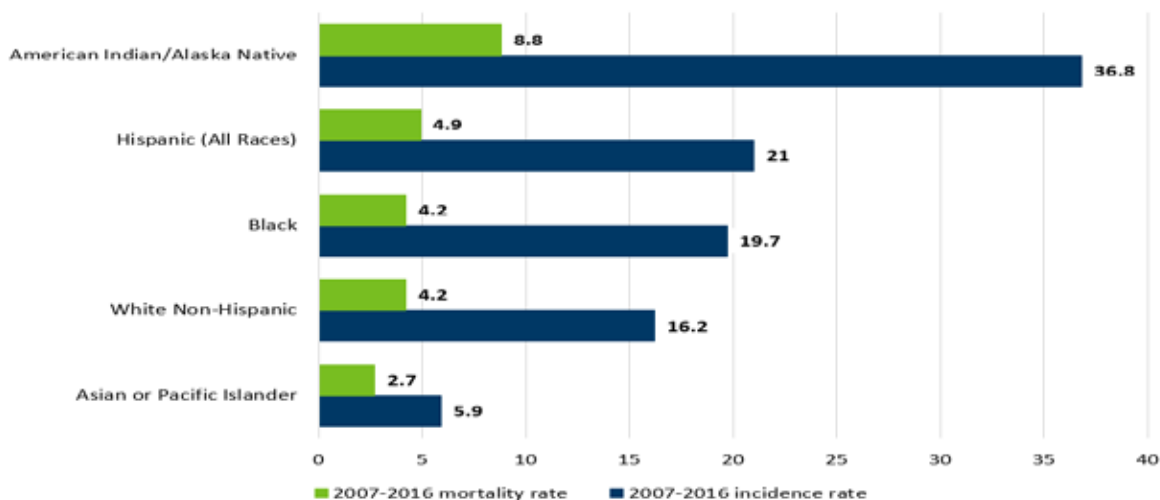
### Older Minnesotans and men have the highest rates of kidney cancer



## Incidence and mortality varies by race and ethnicity

Rates of new kidney cancer cases and deaths were highest among American Indians and were lowest among Asian or Pacific Islanders.

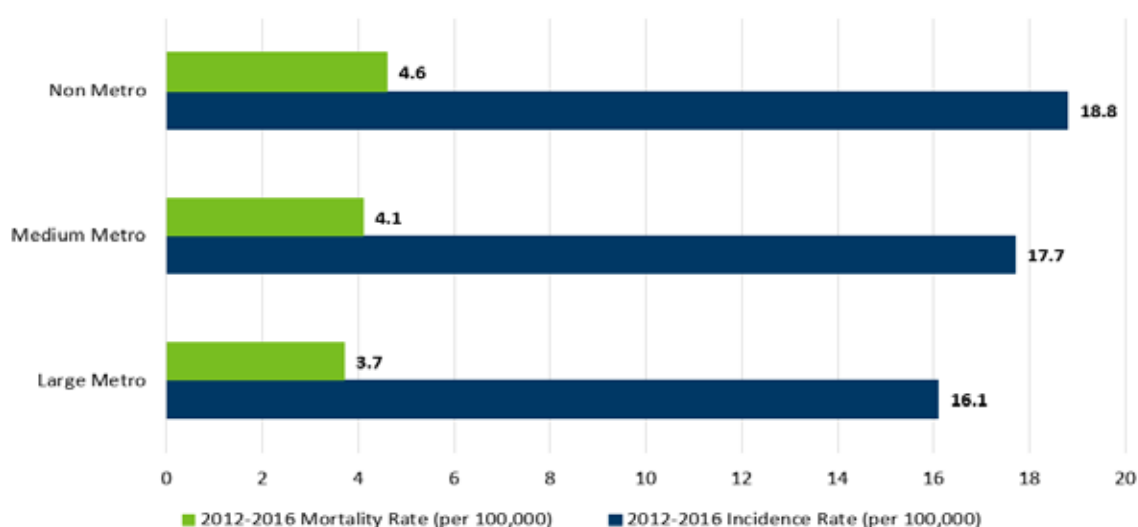
### American Indians have the highest kidney cancer incidence and mortality



## Kidney cancer incidence and mortality rates vary across Minnesota

Rates of new cases were different by geographic location within Minnesota. Counties in or near a large metropolitan area, such as Hennepin and Chisago, had the lowest rate of new kidney and renal pelvis cases, and had significantly lower rates than counties not in or near a metropolitan area, such as Roseau or Cook. Counties in or near a large metropolitan area had the lowest rate of kidney and renal pelvis deaths, and had significantly lower mortality rates than non-metropolitan counties. Counties in or near a medium-sized metropolitan area include counties like Stearns and Saint Louis.

### The highest rates of new kidney cancer cases and deaths occurred in non-metropolitan counties not near a metropolitan area



### Symptoms of Kidney and Renal Pelvis Cancer:<sup>1,4</sup>

- Painful or frequent urination
- Back or side pain that does not go away
- Blood in urine
- Extreme tiredness
- Unexplainable weight loss
- Loss of appetite
- Lump in the abdomen

### Risk Factors of Kidney and Renal Pelvis Cancer:

- Smoking: tobacco smoke is classified as a cancer-causing substance to the kidneys. However, former smokers have a lower risk of kidney cancer than current smokers.<sup>4,5</sup>

- Older age: as we age, errors in replication build up and we have over time been exposed to more harmful mutation-causing agents which increase the chance of developing various forms of cancer.
- Obesity: individuals who have maintained a healthy weight their entire lives have a lower risk of kidney cancer than those who are overweight or obese.<sup>4,5</sup>
- High blood pressure: individuals with a history of high blood pressure have an increased risk of kidney cancer.<sup>4,5</sup>
- Work-place exposures: Trichloroethylene (TCE), a metal cleaner and degreaser, is a cancer-causing substance when exposed to at high levels, such as through some industrial work environments.<sup>6</sup>
- Gender and Race: men have a higher risk of kidney cancer than women. American Indians/Alaskan Natives, Hispanics, and Blacks all have higher rates of kidney cancer than White non-Hispanics and Asians or Pacific Islanders.<sup>4,7</sup>
- Rare Inherited Conditions: there are several heritable conditions that account for 3 to 5% of all kidney cancer cases.<sup>4</sup>

### Ways to lower your risk of Kidney or Renal Pelvis Cancer:

- There are currently no recommended ways to screen for kidney and renal pelvis cancer. If you have symptoms of kidney cancer or have a family history of kidney cancer, please consult your physician to discuss this further.
- Maintain a healthy weight throughout your life by being physically active and eating a healthy diet rich in fruits and vegetables while also low in saturated and trans fats, cholesterol, sodium, and added sugar.<sup>8</sup> The Minnesota Department of Health (MDH) offers a variety of resources on [Obesity](https://www.health.state.mn.us/people/obesity/index.html) (<https://www.health.state.mn.us/people/obesity/index.html>)
- If you are a smoker, try a smoking cessation program to help you quit smoking. The Minnesota Department of Health has several options to help you quit smoking for free:<sup>9</sup> Visit MDH, [Quitting Tobacco](https://www.health.state.mn.us/communities/tobacco/quitting/index.html) (<https://www.health.state.mn.us/communities/tobacco/quitting/index.html>) for more information.
- Maintain a healthy blood pressure by eating a diet low in salt, exercising regularly, working on stress management, limiting alcohol consumption, losing weight if you are overweight or obese, and not smoking tobacco products.<sup>10</sup>

## References

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