



Phoenix Kidney Cancer

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Age Group- 11-12**

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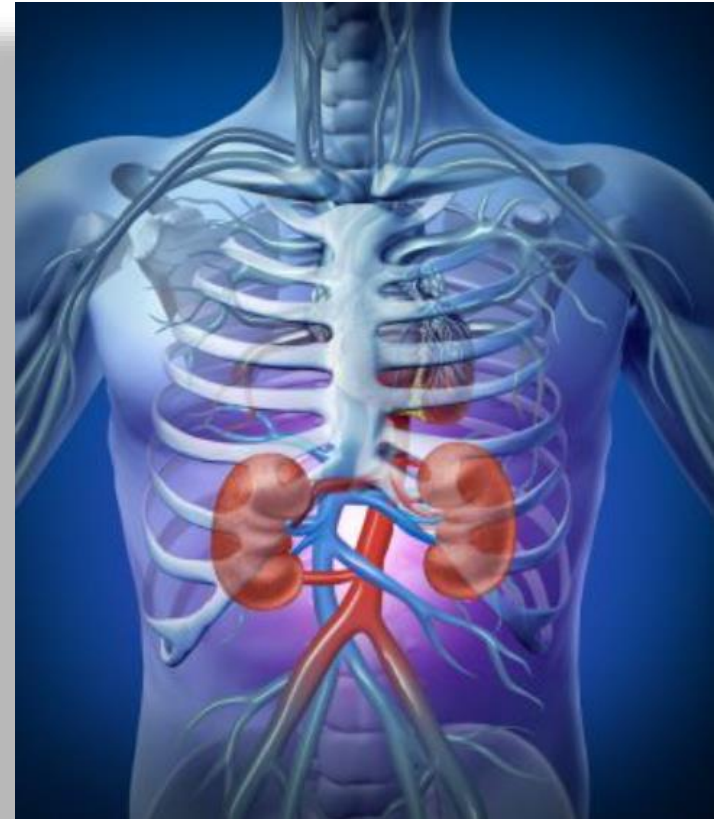
Abstract

- **Kidney cancer is a type of cancer** that starts in the kidney
- Kidney cancer, **identified at a later stage can be fatal**
- Our **goal is to spread awareness** so that people know **how to lead a healthy lifestyle to prevent this cancer from happening** and how to detect early signs if it does happen—**before it's too late!!**
- **We've conducted research** on how the probabilities of **getting kidney cancer varies** from different races, genders, ages, and even between undeveloped and developed countries. We've used resources such as *Web MD, Cancer.net, Kidney.org, etc.*

It is observed that kidney cancer can be prevented if taken the right measures, by keeping good and healthy habits, thereby becoming less of a threat to people all over.

Our Kidneys [1]

- **Most people have 2 kidneys** but some may be born with just one
- Kidneys are **located above the waist** on both sides of the spine towards the back of the body
- Kidneys **help filter blood** to remove impurities, excess mineral and salt through urine
- They **produce hormones** to help control blood pressure, RBC production and promote bone health
- Human body **can also function with just one functioning kidney**



Risk factors that cause Kidney Cancer[2]

1	Hypertension
2	Obesity
3	Smoking
4	Old Age
5	Exposure Select chemicals & substances



6	Genetic Conditions
	Some Examples
	Von Hippel-Lindau syndrome
	Hereditary non-VHL clear cell RCC
	Hereditary Papillary RCC
	Birt-Hogg-Dubé syndrome
	Hereditary leiomyomatosis RCC



Symptoms of Kidney Cancer [3]

1	Blood in the Urine
2	Pain or pressure in the side or back
3	A mass or lump in the side or back
4	Swelling of the ankles and legs
5	High blood pressure

6	Anemia which is low red blood cell count
7	Fatigue
8	Loss of Appetite
9	Unexplained weight loss
10	Recurring fever that is not from a cold, flu or other infections

Types of Kidney Cancer^[4]

Renal cell carcinoma
(RCC) 85% in adults

Urothelial carcinoma
(transitional cell carcinoma)
10-15% in adults

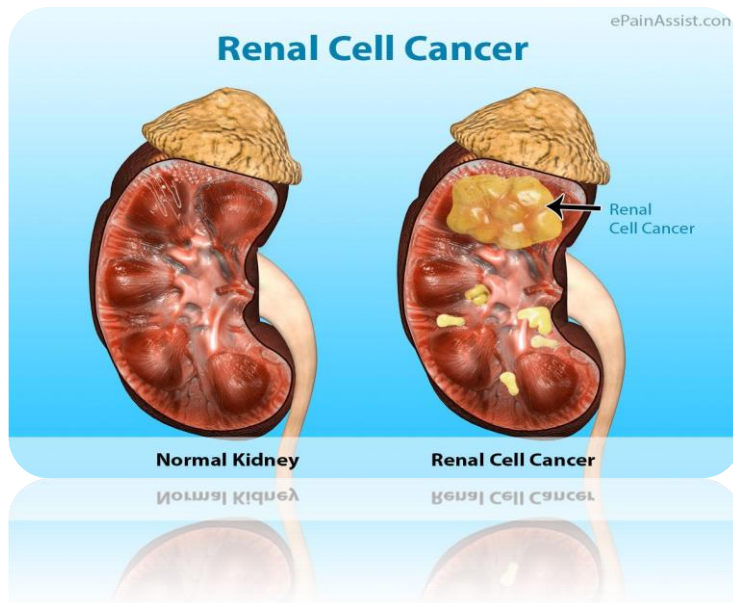
Wilms tumor
Most common in children and
is treated differently from
kidney cancer in adults

Lymphoma

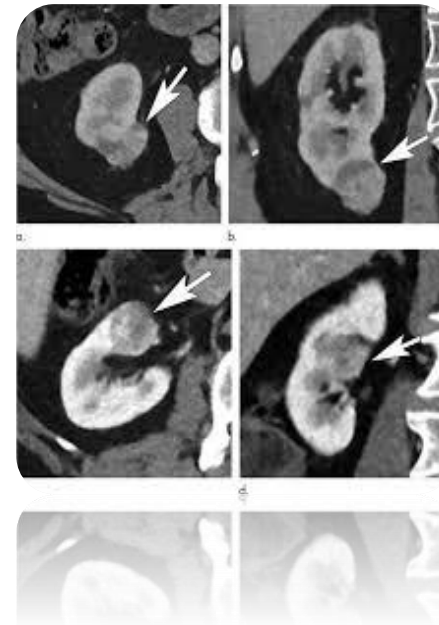
Sarcoma - Rare

Renal Cancer[5]

Renal cancer, more commonly known as kidney cancer, is the formation of a tumor in the kidney. It may spread to other parts of the body but it's more common for the tumor to stay inside the kidney



[6]

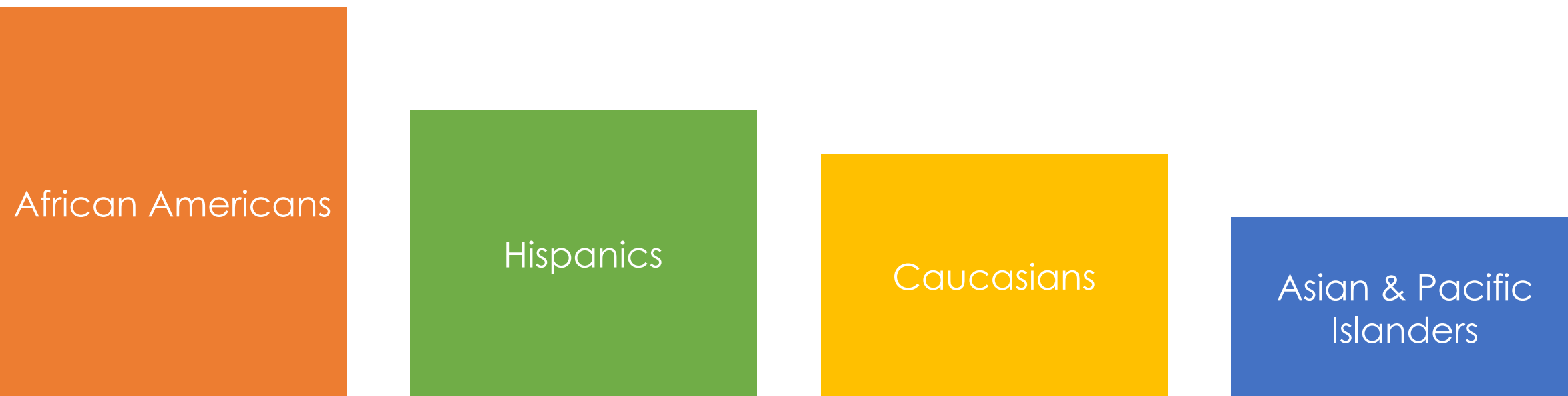


[7]

Race [8]

Racial and Ethnic disparities in Renal Cell Carcinoma (A Study)

An Analysis of Clinical Characteristics (2018) below lists from highest to lowest based on race



Gender and Age [9]

Most common in older generations
(64 Or older)

Very uncommon in people younger than
age 45

Very common in men than women

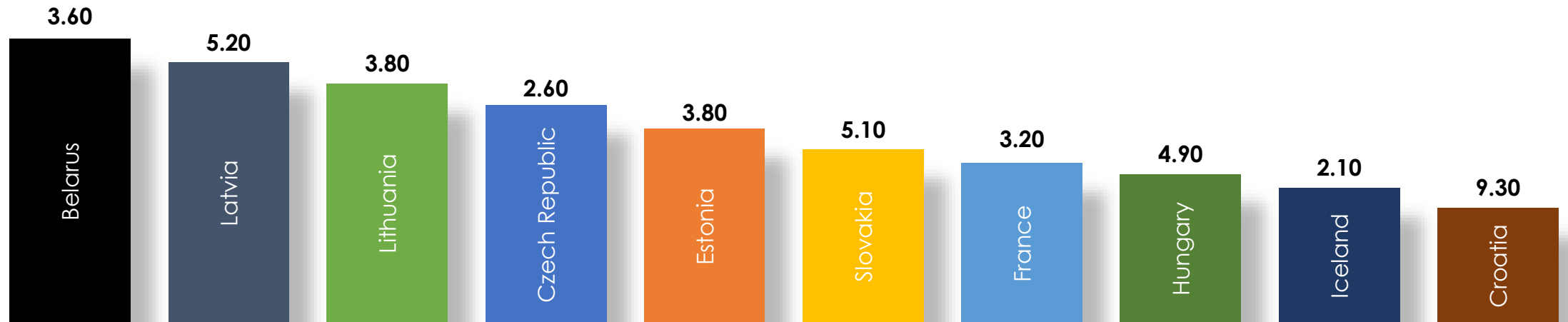
Death rates have gone down slightly
since the mid 90s

More cases have been reported since 1990 as a result of new technologies like CT scans
and such

Statistics based on Countries [10]

Infant mortality rates are a good source of statistics available to let us know **if a country is medically developed or undeveloped**

The **Top 10 Countries** with the **highest kidney cancer rates** are given below **with their infant mortality rates** (All the numbers are out of 1,000):



Based on these numbers, we can infer **that all of the countries listed above are medically developed** because of their low infant mortality rates but **surprisingly, they have high kidney cancer rates**. All these countries are European as well.

Stages of Kidney Cancer [11]

Stage 1

- Tumor is 7 cm or smaller and located only in the kidney
- Not yet spread to the lymph nodes or distant organs

Stage 2

- The tumor is larger than 7 cm and located only in the kidney
- Not yet spread to the lymph nodes or distant organs

Stages of Kidney Cancer [11]

Stage 3

- Tumor of any size is located only in the kidney and has spread to the regional lymph nodes
- Tumor has grown into major veins and may have spread to regional lymph nodes

Stage 4

- Tumor has spread to areas beyond Gerota's fascia and extends into the adrenal gland, possibly to lymph nodes
- Tumor has spread to any other organ, such as the lungs, heart, or the brain

Treatment [12]

Immunotherapy

- Uses the body's immune system to fight cancer
- May work by: slowing the growth of cancerous cells, and stopping them from spreading to other parts of the body

Radiation therapy

- Use of high energy x-rays to destroy cancer cells. Not usually used for kidney cancer

Targeted therapy

- Targets specific genes, proteins, or other molecules that contribute to cancer growth

Treatments

- **Active surveillance**
 - **Monitoring tumor with regular diagnostic tests and clinical appointments**
 - **Effective in older adults**
 - **Useful in stage 1**
- **Surgical**
 - **Partial nephrectomy - surgical removal of only the tumor**
 - **Radical nephrectomy - surgically removing the tumor, kidney and surrounding tissue**
 - **Usually recommended for large tumors**

Prevention [13]

- There is no proven way to completely prevent Kidney cancer, but we can definitely lower the risk by:

Quit Smoking

Lowering
Blood
Pressure

Maintain a
Healthy Body
Weight

Eat diet rich
in fruits &
vegetables
and low in
fat

Get
accurate
family history
and talk to
your doctor

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