

[Home](#) > [Types of Cancer](#) > Hereditary Papillary Renal Carcinoma

PDF generated on July 26, 2016 from <http://www.cancer.net/cancer-types/hereditary-papillary-renal-carcinoma>

[Hereditary Papillary Renal Carcinoma](#) [1]

What is hereditary papillary renal carcinoma?

Hereditary papillary renal carcinoma (HPRC) is a hereditary condition that increases the risk of the papillary type of renal cell carcinoma ([kidney cancer](#) [2]). There are two types of papillary renal cell tumors: type 1 and type 2. The tumors in HPRC are type 1 tumors. Individuals with HPRC have an increased risk of multiple kidney tumors and an increased risk of developing tumors on both kidneys. Currently, no other types of cancer or noncancerous health problems are known to be related to HPRC.

What causes HPRC?

HPRC is a genetic condition. This means that the risk for type 1 papillary renal carcinoma can be passed from generation to generation in a family. Mutations (alteration) in a gene called *MET* are linked to HPRC development. *MET* is a gene that encodes for the receptor to hepatocyte growth factor. Research is ongoing to learn more about HPRC.

How is HPRC inherited?

Normally, every cell has two copies of each gene: one inherited from the mother and one inherited from the father. HPRC follows an autosomal dominant inheritance pattern, in which a mutation happens in only one copy of the gene. This means that a parent with a gene mutation may pass along a copy of their normal gene or a copy of the gene with the mutation. Therefore, a child who has a parent with a mutation has a 50% chance of inheriting that mutation. A brother, sister, or parent of a person who has a mutation also has a 50% chance of having the same mutation.

Options exist for couples interested in having a child when they know that one of them carries a

gene mutation that increases the risk for this hereditary cancer syndrome. Preimplantation genetic diagnosis (PGD) is a medical procedure done in conjunction with in-vitro fertilization (IVF). It allows people who carry a specific known genetic mutation to have children who do not carry the mutation. A woman's eggs are removed and fertilized in a laboratory. When the embryos reach a certain size, one cell is removed and is tested for the hereditary condition in question. The parents can then choose to transfer embryos that do not have the mutation. PGD has been in use for over two decades, and has been used for several hereditary cancer predisposition syndromes. However, this is a complex procedure with financial, physical, and emotional factors to consider before starting. For more information, talk with an assisted reproduction specialist at a fertility clinic.

How common is HPRC?

HPRC is considered to be rare. The number of people and families who have HPRC is unknown.

How is HPRC diagnosed?

HPRC is suspected when multiple family members have type 1 papillary renal cell carcinoma or bilateral multifocal type 1 papillary renal cell carcinoma. [Genetic testing](#) [3] to look for mutations in the *MET* gene is available for people suspected of having HPRC.

What are the estimated cancer risks associated with HPRC?

The specific risk for type 1 papillary renal cell carcinoma in families with HPRC is unknown. If kidney cancer is diagnosed, talk with your doctor about treatment options. Currently, surgery is the primary method of treating localized tumors in people with HPRC. One drug, called foretinib, has shown evidence as being effective in one small study but is not currently approved by the U.S. Food and Drug Administration. However, other drugs in this class are being studied in clinical trials.

What are the screening options for HPRC?

There are no specific screening guidelines for families suspected of having HPRC. Individuals in these families are encouraged to talk with their doctor about screening options for kidney cancer, including:

- [Ultrasound](#) [4] in addition to CT and/or MRI scans. Ultrasound uses sound waves to create a picture of the internal organs,
- [Computed tomography \(CT or CAT\) scan](#) [5], which creates a three-dimensional picture of the inside of the body with an x-ray machine. A computer then combines these images into a detailed, cross-sectional view that shows any abnormalities or tumors, and

- [Magnetic resonance imaging \(MRI\)](#) [6], which uses magnetic fields, not x-rays, to produce detailed images of the body. Some doctors suggest that individuals who have HPRC, or a family history that suggests HPRC, should have yearly screenings beginning at age 30 or earlier.

Screening options may change over time as new technologies are developed and more is learned about HPRC. It is important to talk with your doctor about appropriate screening tests.

Learn more about [what to expect when having common tests, procedures, and scans](#) [7].

Questions to ask the doctor

If you are concerned about your risk for kidney cancer, talk with your doctor. Consider asking the following questions of your doctor:

- What is my risk of developing kidney cancer?
- What can I do to reduce my risk of cancer?
- What are my options for cancer screening and prevention?

If you are concerned about your family history and think your family may have HPRC, consider asking the following questions:

- Does my family history increase my risk of developing kidney cancer?
- Should I meet with a genetic counselor?
- Should I consider genetic testing?

More Information

[The Genetics of Cancer](#) [8]

[Genetic Testing](#) [3]

[What to Expect When You Meet With a Genetic Counselor](#) [9]

[Collecting Your Family Cancer History](#) [10]

[Sharing Genetic Test Results with Your Family](#) [11]

Additional resources

National Cancer Institute

www.cancer.gov [12]

American Cancer Society

www.cancer.org [13]

CancerCare

www.cancercare.org [14]

To find a genetic counselor in your area, ask your doctor or visit the following websites:

National Society of Genetic Counselors

www.nsgc.org [15]

National Cancer Institute: Cancer Genetics Services Directory

www.cancer.gov/cancertopics/genetics/directory [16]

Links

[1] <http://www.cancer.net/cancer-types/hereditary-papillary-renal-carcinoma>

[2] <http://www.cancer.net/node/31256>

[3] <http://www.cancer.net/node/24895>

[4] <http://www.cancer.net/node/24714>

[5] <http://www.cancer.net/node/24486>

[6] <http://www.cancer.net/node/24578>

[7] <http://www.cancer.net/node/24959>

[8] <http://www.cancer.net/node/24897>

[9] <http://www.cancer.net/node/24907>

[10] <http://www.cancer.net/node/30761>

[11] <http://www.cancer.net/node/24906>

[12] <http://www.cancer.gov/>

[13] <http://www.cancer.org/>

[14] <http://www.cancercare.org/>

[15] <http://www.nsgc.org/>

[16] <http://www.cancer.gov/cancertopics/genetics/directory>