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Clinician Management Resource for *FH*

This overview of clinical management guidelines is based on this patient's positive test result for a pathogenic or likely pathogenic *FH* variant. Unless otherwise stated, medical management guidelines used here are limited to those published in GeneReviews[1]. Please consult the referenced website link for complete details and further information.

Clinical correlation with the patient's past medical history, treatments, surgeries, and family history may lead to changes in clinical management decisions; therefore, other management recommendations may be considered. Genetic testing results and medical society guidelines help inform medical management decision but do not constitute formal recommendations. Discussions of medical management decisions and individualized treatment plans should be made in consultation between each patient and his or her healthcare provider and may change.

SURVEILLANCE CONSIDERATIONS[1,^]	AGE TO START	FREQUENCY
Cutaneous leiomyoma		
Detailed skin exam by dermatologist to evaluate extent of disease and presence of atypical lesions and to discuss treatment options, if necessary.	At diagnosis	Annually to every 2 years
Uterine leiomyoma		
Gynecology consult to assess the severity of fibroids and to discuss treatment options, if necessary.	Beginning at age 20 years, or earlier if symptomatic	Annually
Renal tumors		
MRI with contrast with 1-3mm slices through kidney. Abdominal CT scan with contrast may also be performed, although MRI is preferred.	Beginning at age 8 years	Annually
Suspicious lesions (indeterminate lesion, questionable or complex cysts) should have prompt follow up. Renal tumors should be evaluated by a urologic oncology surgeon familiar with *FH* tumor predisposition syndrome to discuss treatment options.	Individualized	Individualized
Pheochromocytoma/paraganglioma		
Baseline blood pressure	At diagnosis	Individualized*
For genotypes associated with paraganglioma or patients with a personal or family history of paraganglioma, consider baseline MRI from skull base through pelvis and fractionated plasma metanephrines.	Individualized	Individualized
Counseling		
Genetic counseling by a genetic counselor, cancer genetics program, and/or a clinical geneticist.	At diagnosis	Individualized

^ Regular surveillance with an emphasis on early detection of renal cell carcinoma by clinicians familiar with the clinical manifestations of *FH* tumor predisposition syndrome is recommended. Surveillance may also be considered for individuals with a suspected diagnosis in whom an *FH* pathogenic variant has not been identified, as well as for at-risk family members who have not undergone molecular genetic testing.

* No uniform guidelines currently exist.

1. Kamihara J, et al. 2006 Jul 31 [Updated 2020 Aug 13]. In: GeneReviews [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2024. https://www.ncbi.nlm.nih.gov/books/NBK1252/

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Understanding Your Positive *FH* Genetic Test Result

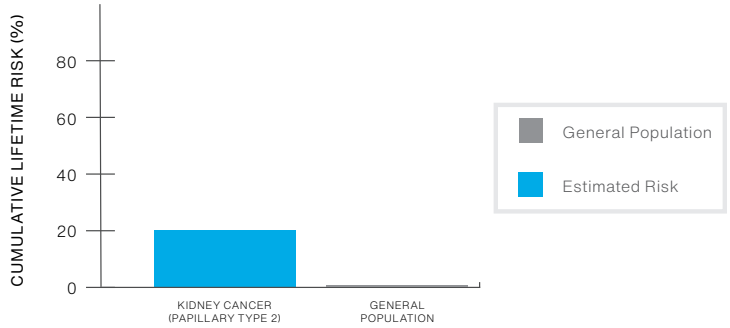
INFORMATION FOR PATIENTS WITH A PATHOGENIC OR LIKELY PATHOGENIC VARIANT

7 Things to know

1	Result	Your testing shows that you have a pathogenic or likely pathogenic variant in the *FH* gene.
2	*FH*-related tumor predisposition	People with one pathogenic or likely pathogenic *FH* variant have *FH*-related tumor predisposition.
3	Cancer risks	You have an increased chance to develop kidney (renal cell) cancer.
4	Tumor risks	▪ **For women^:** Women with pathogenic or likely pathogenic *FH* variants have a higher chance to develop multiple uterine leiomyomas (uterine fibroids), which usually occur at a younger age compared to the general population. ▪ **For men^ and women:** Many people with pathogenic or likely pathogenic *FH* variants develop skin leiomyomas, which appear as skin-colored or light brown bumps. ▪ Some variants in *FH* may cause a slightly increased risk to develop paragangliomas or pheochromocytomas, which are rare tumors that affect the endocrine system (the body system that makes and controls hormones). These variants may or may not cause increased risk for other *FH*-related tumors. Refer to your specific clinical report for more details.
5	Other medical concerns	Individuals with pathogenic or likely pathogenic *FH* variants may have an increased risk to have a child with fumarate hydratase deficiency (FHD), but only if their partner also carries a pathogenic or likely pathogenic variant in the *FH* gene. FHD is a rare, severe condition of infancy that can cause abnormal brain development, weak muscle tone, and seizures.
6	What you can do	Risk management decisions are very personal. There are options to detect cancer early or lower the risk to develop cancer. It is important to discuss these options with your healthcare provider and decide on a plan that works for you.
7	Family	Family members may also be at risk – they can be tested for the pathogenic or likely pathogenic *FH* variant that was found in you. It is recommended that you share this information with your family members so they can learn more and discuss with their healthcare providers.

^ Refers to sex assigned at birth.

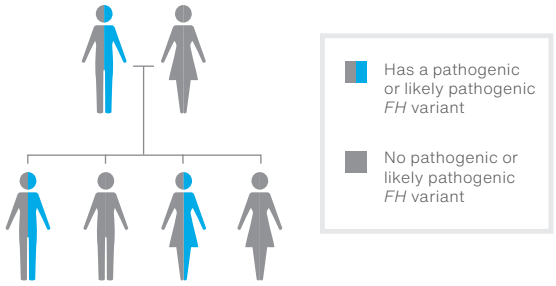
FH Lifetime Cancer Risks*



* Because risk estimates vary in different studies, only approximate risks are given. Cancer risks will differ based on individual and family history.

FH in the Family

There is a 50/50 random chance to pass on a pathogenic or likely pathogenic *FH* variant to each of your children.



RESOURCES

- HLRCC Family Alliance hlrccinfo.org
- National Society of Genetic Counselors nsgc.org
- Canadian Association of Genetic Counsellors cagc-accg.ca

Please discuss this information with your healthcare provider. The cancer genetics field is continuously evolving, so updates related to your *FH* result, medical recommendations, and/or potential treatments may be available over time. This information is not meant to replace a discussion with a healthcare provider, and should not be considered or interpreted as medical advice.

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