HOXB13 gene

Associated Syndrome Name: *HOXB13*-associated cancer risk (Men only)

HOXB13 Summary Cancer Risk Table

CANCER	GENETIC CANCER RISK
Prostate	High Risk

HOXB13 gene Overview

HOXB13-associated cancer risk (Men only) [1, 2, 3, 4, 5]

- Men with the *HOXB13* variant identified in this individual have been shown to have a greatly increased risk for prostate cancer. Risks appear to be highest in men with a family history of prostate cancer.
- Most studies to date have focused on men of European ancestry, so there is not enough evidence yet to know if this variant in *HOXB13* leads to an increased risk for prostate cancer in men of other ancestries.
- Some studies have shown that men with this variant in *HOXB13* are more likely to be diagnosed with prostate cancer at younger ages than men in the general population.
- At this time there are no established cancer risks for women with this variant or other variants in *HOXB13*.
- Although there are high cancer risks for men with this variant in *HOXB13*, there may be interventions that can reduce these risks. Guidelines from the National Comprehensive Cancer Network (NCCN) are listed below for men. Since it is likely that these guidelines will change as we learn more about the cancer risks associated with this variant in *HOXB13*, it may be appropriate to interpret these results in consultation with cancer genetics professionals who have expertise in this emerging area of knowledge.

HOXB13 gene Cancer Risk Table

CANCER TYPE	AGE RANGE	CANCER RISK	RISK FOR GENERAL POPULATION
Prostate	To age 80 [1, 3, 4, 5, 6]	22%-52%	10.9%

HOXB13 Cancer Risk Management Table

The overview of medical management options provided is a summary of professional society guidelines. The most recent version of each guideline should be consulted for more detailed and up-to-date information before developing a treatment plan for a particular patient.

This overview is provided for informational purposes only and does not constitute a recommendation. While the medical society guidelines summarized herein provide important and useful information, medical management decisions for any particular patient should be made in consultation between that patient and his or her healthcare provider and may differ from society guidelines based on a complete understanding of the patient's personal medical history, surgeries and other treatments.

CANCER TYPE	PROCEDURE	AGE TO BEGIN	FREQUENCY (UNLESS OTHERWISE INDICATED BY FINDINGS)
Prostate	Consider prostate cancer screening with digital rectal examination (DRE) and prostate specific antigen (PSA).[7, 8]	40 years	Every 1-2 years, or adjusted based on PSA

Information for Family Members

The following information for Family Members will appear as part of the MMT for a patient found to have a mutation in the HOXB13 gene.

This patient's relatives are at risk for carrying the same mutation(s) and associated cancer risks as this patient. Cancer risks for females and males who have this/these mutation(s) are provided below.

Family members should talk to a healthcare provider about genetic testing. Close relatives such as parents, children, brothers and sisters have the highest chance of having the same mutation(s) as this patient. Other more distant relatives such as cousins, aunts, uncles, and grandparents also have a chance of carrying the same mutation(s). Testing of at-risk relatives can identify those family members with the same mutation(s) who may benefit from surveillance and early intervention.

At this time, there are no known cancer risks for women due to mutations in *HOXB13*.

References

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Last Updated on 15-Sep-2026