

About *HOXB13* Gene Mutations

About Genes

Genes are in every cell in our bodies. Genes are made of DNA, which gives instructions to cells about how to grow and work together. We have two copies of each gene in each cell—one from our mother and one from our father. When genes work properly, they help stop cancer from developing. If one copy of a gene has a mutation, it cannot work as it should. This raises the risk for certain tumors and cancers.

The *HOXB13* gene is a tumor suppressor. When one copy of *HOXB13* does not work right, tumors form more easily. Currently, there is one mutation known in *HOXB13* that can cause men to have higher risks of prostate cancer.

HOXB13 Mutations and Cancer Risk

Prostate Cancer

About 14 in 100 men will get prostate cancer in their lifetime. About 30 to 60 in 100 men with a *HOXB13* gene mutation will get prostate cancer in their lifetime. For these men, prostate cancer typically occurs younger than in men without a *HOXB13* gene mutation.

Other Cancers

Currently, we only know about *HOXB13* gene mutations increasing the risk of prostate cancer. Females can carry *HOXB13* gene mutations but don't have higher cancer risks.

Recommendations

MEN

Men with a *HOXB13* gene mutation should begin prostate cancer screening at age 40. This may be earlier depending on family history. Prostate cancer screening can include yearly PSA (prostate-specific antigen) testing and digital rectal exams.

WOMEN

Currently, we don't believe that *HOXB13* gene mutations increase cancer risks in women. However, female carriers of *HOXB13* gene mutations can pass it on to their children.

CHILDREN AND SIBLINGS

Siblings and children of people with a *HOXB13* mutation have a 50% chance of having it too. Both men and women can carry *HOXB13* mutations and can pass them on to their children. Genetic testing and counseling are recommended after age 18.

If you have a *HOXB13*, we recommend testing for your family members. That can help us know the cancer risk for your family.

Resources

If you have a strong personal or family history of prostate cancer, you may be eligible for genetic testing and counseling. If you already know you or a family member has a *HOXB13* or other gene mutation, our team of doctors and genetic counselors can help find the screening plan you need.

For More Information

Do you have questions about your risk for cancer? Our doctors and genetic counselors can help find the cancer screening plan you need. Call Huntsman Cancer Institute's Family Cancer Assessment Clinic to learn more: 801-587-9555.