UT Southwestern Harold C. Simmons Comprehensive Cancer Center | NCI Designated Comprehensive Cancer Center

AXIN2 Mutations

What You Should Know About *AXIN2* Mutations

Individuals with an *AXIN2* gene mutation have an increased risk to develop colon polyps and colorectal cancer. Individuals may also have oligodontia (missing teeth) and may have sparse body hair or eyebrows. There is limited information regarding the specific lifetime cancer risks for individuals with *AXIN2* mutations.

Cancer Risks Associated with an *AXIN2* Mutation

Recent evidence has found that individuals with a mutation in *AXIN2* have an increased risk for adult-onset colon adenomas, polyps, and colorectal cancer. The exact risk to develop colon cancer for patients with an *AXIN2* mutation is currently unknown. Additionally, the number, type, and location of polyps can vary.

Risks to Family Members

Mutations in the *AXIN2* gene are inherited in an autosomal dominant fashion. This means that children, brothers, sisters, and parents of individuals with an *AXIN2* mutation have a 1 in 2 (50%) chance of having the mutation as well. Individuals with an *AXIN2* mutation may have no signs of the condition, one sign or more than one sign. Both males and females can inherit a familial *AXIN2* mutation and can pass that it on to their children.

Managing Cancer Risks

The following surveillance is recommended by the National Comprehensive Cancer Network (NCCN v3.2019):

- Begin colonoscopy at age 25-30, repeating every 2-3 years if negative.
- If polyps are found, colonoscopy should be performed every 1-2 years with consideration of surgery if the polyp burden becomes unmanageable by colonoscopy.

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