

## Clinician Management Resource for individuals with **two** (biallelic) likely pathogenic or pathogenic mutations in *MSH3*

This overview of clinical management guidelines is based on this patient’s positive test result for two (biallelic) *MSH3* gene mutations. Unless otherwise stated, medical management guidelines used here are limited to those issued by the National Comprehensive Cancer Network® (NCCN®)<sup>1</sup> in the U.S. Please consult the referenced guideline 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 decisions 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 over time.

SCREENING/SURGICAL CONSIDERATIONS <sup>1</sup>	AGE TO START	FREQUENCY
<b>Colorectal Cancer</b>		
Colonoscopy*	25-30 years old	Every 2-3 years if negative Every 1-2 years if polyps are found
Surgical evaluation if appropriate due to unmanageable polyp burden	Individualized	N/A

\* Data to support surveillance recommendations for *MSH3* are evolving at this time. Caution should be used when implementing final colonoscopy surveillance regimens in context of patient preferences and new knowledge that may emerge.

1. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Genetic/Familial High-Risk Assessment: Colorectal. V2.2022. © National Comprehensive Cancer Network, Inc. 2022. All rights reserved. Accessed December 20, 2022. To view the most recent and complete version of the guideline, go online to NCCN.org. NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way.

# Understanding Your Positive *MSH3* Genetic Test Result

INFORMATION FOR PATIENTS WITH TWO PATHOGENIC MUTATIONS OR VARIANTS, LIKELY PATHOGENIC

## 4 Things To Know

1	<i>MSH3</i> mutation	Your testing shows that you have two pathogenic mutations or a variants that are likely pathogenic in the <i>MSH3</i> gene.
2	Cancer risks and other medical concerns	You have an increased chance to develop colorectal polyps and colorectal cancer.
3	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 doctor and decide on a plan that works for you.
4	Family	Family members may also be at risk—they can be tested for the <i>MSH3</i> mutations that were identified 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.

## *MSH3* Mutations in the Family

You have two *MSH3* mutations, therefore, any children you have will inherit one of them. Your children are not at risk to have an increased risk for colorectal cancer unless your partner has at least one *MSH3* mutation as well. Each of your parents carries at least one *MSH3* mutation. This means your brothers and sisters have a 25% chance to have two *MSH3* mutations and an increased risk for colorectal cancer, a 50% chance to inherit one *MSH3* mutation, and a 25% chance to inherit no *MSH3* mutations. The image to the right shows that both men and women can carry and pass on these mutations.



Please discuss this information with your healthcare provider. The cancer genetics field is continuously evolving, so updates related to your *MSH3* 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.

Reach Out	<b>RESOURCES</b>	<p>Ambry's Hereditary Cancer Site for Families <a href="https://patients.ambrygen.com/cancer">patients.ambrygen.com/cancer</a></p> <p>Hereditary Colon Cancer Foundation <a href="https://hcctakesguts.org">hcctakesguts.org</a></p> <p>Genetic Information Nondiscrimination Act (GINA) <a href="https://ginahelp.org">ginahelp.org</a></p> <p>National Society of Genetic Counselors <a href="https://nsgc.org">nsgc.org</a></p> <p>Canadian Association of Genetic Counsellors <a href="https://cagc-accg.ca">cagc-accg.ca</a></p>
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