Ambry Genetics®

Clinician Management Resource for *STK11* (Peutz-Jeghers syndrome)

This overview of clinical management guidelines is based on this patient's positive test result for an *STK11* ene mutation. Unless otherwise stated, medical management guidelines used here are limited to those issued by the National Comprehensive Cancer Network® (NCCN®)[1,2] 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[1]	AGE TO START	FREQUENCY
Breast Cancer[1,2]		
Clinical Breast Exam	30 years old	Every 6 months
Mammogram and breast MRI with and without contrast	30 years old	Every 12 months
Discuss option of risk-reducing mastectomy	Individualized	N/A
Colorectal Cancer[1]		
Colonoscopy	8-10 years old. Start at earlier age or repeat more frequently if signs/ symptoms of GI blood loss or intussusception/obstruction.	Follow-up based on findings at baseline screening: if polyps are found, repeat every 2-3 years. Shorter intervals may be indicated based on polyp size, number and pathology. If no polyps, then resume at 18 years.
Gastric Cancer[1]		
Upper endoscopy	8-10 years old. Start at earlier age or repeat more frequently if signs/ symptoms of GI blood loss or intussusception/obstruction.	Follow-up based on findings at baseline screening: if polyps are found, repeat every 2-3 years. Shorter intervals may be indicated based on polyp size, number and pathology. If no polyps, then resume at 18 years.
Small Intestine Cancer[1]		
Small bowel visualization via CT or MRI enterography or video capsule endoscopy	8-10 years old. Start at earlier age or repeat more frequently if signs/ symptoms of GI blood loss or intussusception/obstruction.	Follow-up based on findings at baseline screening, but at least by age 18 years, then every 2-3 years. Shorter intervals may be indicated based on polyp size, number and pathology.
Pancreatic Cancer[1,2]		
Consider screening using contrast-enhanced MRI/ MRCP and/or EUS[†]	30-35 years old, or 10 years younger than the earliest exocrine pancreatic cancer diagnosis in the family, whichever is earlier[2]	Every 12 months. May consider shorter screening intervals based on clinical judgment for individuals found to have worrisome abnormalities on screening.
Ovarian[**], Cervical[^], and Uterine Cancer[1]		
Physical exam for observation of precocious puberty	8 years old	Every 12 months
Pelvic exam, ultrasound, and Pap smear	18-20 years old	Every 12 months
Consideration of total hysterectomy	When childbearing is complete	N/A
Endometrial biopsy may be done if there is abnormal bleeding	Individualized	N/A

SCREENING/SURGICAL CONSIDERATIONS[1]	AGE TO START	FREQUENCY
Testicular Cancer^^,[1]		
Testicular exam and observation for feminizing changes	10 years old	Every 12 months
Lung Cancer[1]		
Provide education about symptoms and smoking cessation	Individualized	N/A

* Due to the rarity of the syndrome and complexities of diagnosing and managing individuals with Peutz-Jeghers syndrome, referral to a specialized team is recommended.

** Typically benign sex cord/Sertoli cell tumors ^ Typically cervical adenoma malignum ^^ Typically sex cord/Sertoli cell tumors

† For individuals considering pancreatic cancer screening, the panel recommends that screening be performed in experienced high-volume centers. The panel recommends that such screening only take place after an in-depth discussion about the potential limitations to screening, including cost, the high incidence of benign or indeterminate pancreatic abnormalities, and uncertainties about the potential benefits of pancreatic cancer screening. Most small cystic lesions found on screening will not warrant biopsy, surgical resection, or any other intervention.

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2. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Genetic/Familial High-Risk Assessment: Breast, Ovarian, and Pancreatic. V2.2024. © National Comprehensive Cancer Network, Inc. 2023. All rights reserved. Accessed September 27, 2023. 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.

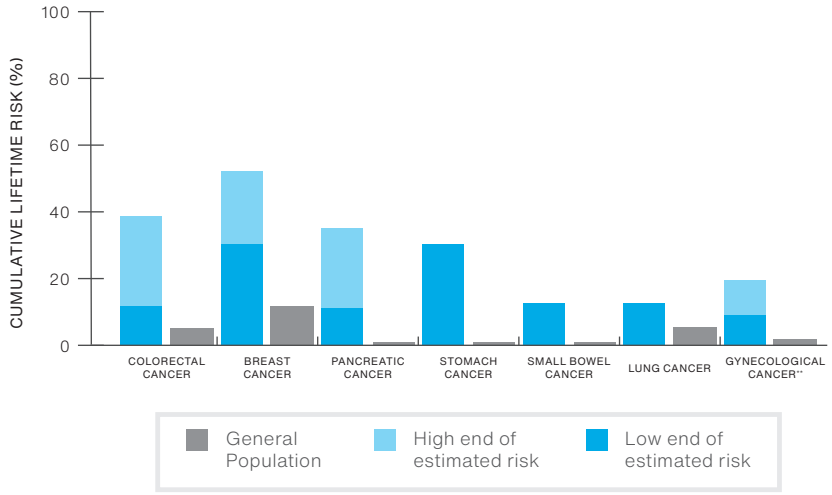
Understanding Your Positive *STK11* Genetic Test Result

INFORMATION FOR PATIENTS WITH A PATHOGENIC MUTATION OR VARIANT, LIKELY PATHOGENIC

5 Things To Know

1	*STK11* mutation	Your testing shows that you have a pathogenic mutation or a variant that is likely pathogenic in the *STK11* gene.
2	Peutz-Jeghers syndrome	People with *STK11* mutations have Peutz-Jeghers syndrome (PJS).
3	Cancer risks and other medical concerns	You have an increased chance to develop non-cancerous gastrointestinal polyps, as well as cancers such as colorectal, breast, stomach, small bowel, pancreatic, and other types of cancer. Individuals may develop mucocutaneous hyperpigmentation (dark blue to dark brown spots around areas like the mouth, eyes, and nostrils) in childhood, which most often fades by adulthood.
4	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.
5	Family	Family members may also be at risk – they can be tested for the *STK11* mutation that was 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.

STK11 Mutation Lifetime Cancer Risks*



STK11 Mutations in the Family

There is a 50/50 random chance to pass on a *STK11* mutation to each of your children. The image below shows that everyone can carry and pass on these mutations, regardless of their sex at birth.

* Because risk estimates vary in different studies, only approximate risks are given. Cancer risks will differ based on individual and family history.
** Gynecological cancers include ovarian (sex-cord tumors with annular tubules), cervical (adenoma malignum), and possibly uterine.

RESOURCES

- Ambry's Hereditary Cancer Site for Families patients.ambrygen.com/cancer
- Bright Pink brightpink.org
- FORCE facingourrisk.org
- Hereditary Colon Cancer Foundation hcctakesguts.org
- Imerman Angels imermanangels.org
- Susan G. Komen Foundation komen.org
- Genetic Information Nondiscrimination Act (GINA) ginahelp.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 *STK11* 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.

MKT-ONCO-FLYR-10032-EN v2 | 10.24.23
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