Genetic testing for hereditary cancer

An overview for healthcare providers
Specimen requirements

**Whole blood**

Two 4.5 mL EDTA tubes (lavender top)

- Please wait at least 2 weeks after a packed cell/platelet transfusion and at least 4 weeks after a whole blood transfusion prior to blood draw for testing

- DNA quality may be affected if the patient has received chemotherapy within the last 120 days. Sema4 may request an additional specimen if DNA quality is insufficient

**Saliva**

2 mL of freshly-collected saliva in an Oragene container per kit’s specific instructions

- Fill up to black line with 2 mL of saliva and close the lid. Once the lid is closed, it automatically adds 2 mL of buffer for a total volume of 4 mL

- Please note that 2 containers are required for all pediatric saliva testing kits

Saliva and blood are the most common specimen types we receive. For questions regarding other specimen types and requirements for patients with a significant medical history (including allogenic transplant and hematological diseases), please contact our lab at 800-298-6470 to discuss before sample submission.

Shipping requirements

- Ship at room temperature

Turnaround time

- Approximately 14-21 days from receipt of specimen

- After Sema4 conducts a benefits investigation, some patients may require pretest genetic counseling or billing counseling. This may impact the timing of test results

To request oncology specimen kits or requisition forms, please contact your Regional Sales Manager or call 800-298-6470.
Understanding hereditary cancer risk

**Genetic testing can provide insight in a patient’s risk for hereditary cancer**

Genetic testing for hereditary cancer can help determine if a patient carries a genetic change that increases their risk for certain cancers.

Both positive and negative genetic test results may have a significant impact on a patient’s medical management. The risks associated with certain cancer predisposition genes may warrant increased cancer screening beginning at an earlier age, preventative surgery, or medications. As genetic changes can be inherited in a family, results may also have implications for a patient’s family members.

**When to consider genetic testing for hereditary cancer**

Guidelines recommend offering testing to patients that meet certain criteria, including

- **Early onset of common cancers**, such as the diagnosis of breast cancer, colon cancer, or uterine cancer before the age of 50
- **Diagnosis of rare cancers at any age**, such as ovarian cancer or male breast cancer
- **Multiple cancers**, including ≥2 cancers and/or ≥10 colorectal polyps in the same person or ≥3 cancers on the same side of a family
- **Ashkenazi Jewish ancestry** and a history of breast cancer or pancreatic cancer

The Sema4 Hereditary Cancer Questionnaire can help to identify appropriate patients for testing. Alternatively, patients may be referred to a genetic counselor for a comprehensive risk assessment.

To learn more about hereditary cancer testing, visit [sema4.com](http://sema4.com) or call **800-298-6470**.
Ordering hereditary cancer testing

Available hereditary cancer panels

Sema4 offers several different hereditary cancer panels, depending on provider preference, patient preference, and test indication. While larger panels may identify more genetic changes that explain your patient’s personal and/or family history of cancer, these panels may also introduce more variants of uncertain clinical significance. To learn more about available hereditary cancer panels, please visit go.sema4.com/tests or call 800-298-6470.

How to order

Ordering hereditary cancer testing through Sema4 is simple. We accept multiple sample types, including blood and saliva. Sema4 also provides specimen collection kits and requisition forms designed specifically for hereditary cancer testing.

To order genetic testing for hereditary cancer through Sema4

- Provide patient education about genetic testing
- Obtain informed consent from the patient
- Collect a blood or saliva specimen from the patient
- Ship the specimen, completed test requisition form, and insurance information to Sema4. To arrange for specimen pick up through a local courier service, please call 800-298-6470
- Upon specimen receipt, Sema4 will initiate a benefits investigation to determine genetic counseling requirements and/or patient out-of-pocket costs
- After the test analysis is complete, you will receive a comprehensive results report
Interpreting results

Interpreting genetic test results can be complex, especially in the context of a patient’s personal and family history. In general, the types of results you may receive include

- **Positive**: This means that testing identified a mutation that is associated with an increased risk to develop cancer. A positive result may have medical management implications for the patient and their family. Certain genes and mutations may be associated with a higher or lower risk. In some cases, the cancer risks associated with a gene or mutation may not be well established. Further data and medical management recommendations related to these genes and mutations may evolve over time.

- **Negative**: This means that no mutations were identified. A negative result reduces, but does not eliminate, the possibility that the patient carries mutations in the genes that were analyzed or in other genes that are not included in the test. The patient still has a baseline risk for developing cancer and may also be at a higher risk to develop cancer based on personal or family history.

- **Inconclusive**: This means that testing identified a genetic change, however, there is not enough information currently available to determine if this change is associated with an increased risk of cancer. Medical management recommendations should be based on the patient’s personal and family history.

Genetic counseling

At Sema4, we believe that genetic counseling plays an important role in supporting and educating patients throughout the testing process. Therefore, we have partnered with an independent genetic counseling company, called GeneScreen, that offers tele-genetic counseling before and after testing. If you choose to refer your patient to GeneScreen, you will receive updates on the counseling status and detailed consultation notes for the pre- and post-test counseling sessions.

If you prefer to refer your patients to a different genetic counseling organization, you may locate one using the [Find a genetic counselor](https://www.nsgc.org) tool from the National Society of Genetic Counselors at [www.nsgc.org](https://www.nsgc.org).
Sema4 is committed to simplifying the payment process for both providers and patients. To that end, Sema4 has instituted the following policies to guide patients through insurance and billing:

- We will immediately contact a patient’s insurance company to verify eligibility, obtain precertification or pre-authorization for testing, and determine potential out-of-pocket (OOP) expenses. Sema4 is contracted with all major national payors.
- We will inform the patient if the estimated OOP cost is expected to exceed $99. If desired, we can work with the patient to establish a payment plan that meets their needs.
- If required by the patient’s insurance plan, we can help coordinate an appointment with a genetic counselor to substantiate medical necessity.
- We also offer affordable self-pay prices if a patient does not meet insurance criteria for testing or does not have insurance coverage.

If a patient encounters any financial hardship associated with their bill, Sema4 will work directly with them to find a solution.

If patients have any questions about the explanation of benefits from their insurance provider or their Sema4 bill, they should contact Sema4 for assistance.

☎️ 800-298-6470   ✉️ billing@sema4.com