

Hereditary Cancer Genetic Test

| What is the Hereditary Cancer Genetic Test?

The Hereditary Cancer Genetic Test analyzes 29 genes linked to inherited risks for common cancers, including breast, colorectal, uterine, ovarian, prostate, and more. This test may also include analysis of 20 genes that impact how your body may process certain medications. This test can provide valuable insights to help you and your healthcare providers plan for early detection, preventive measures, and personalized care. Additionally, it provides insights into genetic ancestry and traits, allowing you to discover how your genes may influence your preferences, appearance, and other fun genetic facts.

| What Does This Test Look For?



Hereditary Cancer Genetic Test: Analyzes 29 genes for genetic variants (also called mutations) that may increase your risk for common hereditary cancer types. These genes include:

APC, ATM, BAP1, BARD1, BMPR1A, BRCA1, BRCA2, BRIP1, CDH1, CDK4, CDKN2A (p14ARF and p16INK4a), CHEK2, EPCAM, GREM1, MTF, MLH1, MSH2, MSH6, MUTYH, PALB2, PMS2, POLD1, POLE, PTEN, RAD51C, RAD51D, SMAD4, STK11, TP53



Medication Response Genetic Test: Analyzes 20 genes that affect how your body processes medications, helping guide safer, more effective treatments. These genes include:

ABCG2, CACNA1S, CYP1A2, CYP2C cluster, CYP2C19, CYP2C9, CYP2D6, CYP3A4, CYP3A5, CYP4F2, DPYD, F5, G6PD, IFNL3, NUDT15, RYR1, SLCO1B1, TPMT, UGT1A1, VKORC1

To learn more, see the Gene Tables on page 3.



Discovery: Explores insights about your genetic ancestry and learn about how your genes influence unique characteristics such as lactose intolerance, alcohol flush response, cilantro preference, and more.

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| What are the possible results?

Something important is found

A meaningful genetic change is identified that could impact your health.

Nothing significant is found

No increased risk for the hereditary conditions were found in the genes tested.

| How can these results impact my healthcare?

Earlier interventions, at every step: Insights into your hereditary cancer risk can guide your healthcare providers in recommending regular screenings or lifestyle changes that suit your needs.

Medication choices: Your results can help guide your doctor in selecting the safest and most effective medications for you.

Family health insights: Your results may also provide useful health information for family members, as some genetic risks can be shared among relatives.

| What happens after I get my results?

Color's care team will ensure you understand the result and the next steps associated with the result to take action on your health. We recommend that you share your Color test results with your healthcare provider. This can help you and your provider create a personalized healthcare plan. If you don't have your own healthcare provider, Color's care team can help get you connected to one in your area.

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Gene	Hereditary Condition	Associated Cancers
<i>APC</i>	Familial adenomatous polyposis (FAP), Attenuated FAP	Colon, thyroid, brain, stomach, small bowel
<i>ATM</i>	Hereditary breast and pancreatic cancer	Breast, pancreatic
<i>BAP1</i>	BAP1 tumor predisposition syndrome	Melanoma, kidney, lung
<i>BARD1</i>	Hereditary breast cancer	Breast
<i>BMPR1A</i>	Juvenile polyposis syndrome	Colon, stomach
<i>BRCA1</i>	Hereditary breast and ovarian cancer syndrome	Breast, ovarian, pancreatic, prostate
<i>BRCA2</i>	Hereditary breast and ovarian cancer syndrome	Breast, ovarian, melanoma, pancreatic, prostate
<i>BRIP1</i>	Hereditary ovarian cancer	Ovarian
<i>CDH1</i>	Hereditary diffuse gastric cancer	Breast, stomach
<i>CDK4</i>	Familial atypical mole-malignant melanoma syndrome	Melanoma, pancreatic
<i>CDKN2A</i> (p14ARF and p16INK4a)	FAMMM, Melanoma and neural system tumor syndrome	Melanoma, pancreatic, nervous system
<i>CHEK2</i>	Hereditary breast cancer	Breast, prostate
<i>EPCAM</i>	Lynch syndrome	Colon, uterine, ovarian, stomach, pancreatic, prostate
<i>GREM1</i>	Hereditary mixed polyposis syndrome	Colon
<i>MITF</i>	Hereditary melanoma and kidney cancer	Melanoma, kidney
<i>MLH1</i>	Lynch syndrome	Colon, uterine, ovarian, stomach, pancreatic, prostate
<i>MSH2</i>	Lynch syndrome	Colon, uterine, ovarian, stomach, pancreatic, prostate
<i>MSH6</i>	Lynch syndrome	Colon, uterine, ovarian, stomach, prostate
<i>MUTYH</i>	MUTYH-associated polyposis	Colon, uterine, ovarian, stomach, prostate
<i>PALB2</i>	Hereditary breast and ovarian cancer	Breast, ovarian, pancreatic
<i>POLD1</i>	Polymerase proofreading-associated polyposis	Colon
<i>POLE</i>	Polymerase proofreading-associated polyposis	Colon
<i>PMS2</i>	Lynch syndrome	Colon, uterine, ovarian, stomach
<i>PTEN</i>	PTEN hamartoma tumor syndrome	Breast, thyroid, uterine, kidney, colon
<i>RAD51C</i>	Hereditary breast and ovarian cancer	Breast, ovarian
<i>RAD51D</i>	Hereditary breast and ovarian cancer	Breast, ovarian
<i>SMAD4</i>	Juvenile polyposis syndrome	Colon, stomach
<i>STK11</i>	Peutz-Jeghers syndrome	Breast, colon, stomach
<i>TP53</i>	Li-Fraumeni syndrome	Breast, colon, brain, pancreatic, sarcoma

Medication Response Genetic Test

Gene	Star alleles and variants analyzed
<i>ABCG2</i>	rs2231142
<i>CACNA1S</i>	ENST00000362061: c.520C>T, c.3257G>A
<i>CYP1A2</i>	*1, *1F, *1K
<i>CYP2C</i> cluster	rs12777823
<i>CYP2C9</i>	*1, *2, *3, *4, *5, *6, *8, *9, *11, *12, *13, *14, *15, *16, *23, *24, *26, *29, *31, *33, *35, *36 (whole gene deletion), *37 (partial gene deletion), *39, *42, *43, *44, *45, *46, *55, *61
<i>CYP2C19</i>	*1, *2, *3, *4, *5, *6, *7, *8, *9, *10, *16, *17, *19, *22, *24, *25, *26, *35, *38
<i>CYP2D6</i>	*1, *2, *3, *4, *4N (hybrid, a.k.a. *4.013), *5 (whole gene deletion), *6, *7, *8, *9, *10, *11, *12, *13 (hybrid), *14, *15, *17, *18, *19, *21, *29, *31, *32, *35, *36 (hybrid), *40, *41, *42, *45, *49, *54, *55, *56, *59, *68 (hybrid), *69, *114, *119, *xN
<i>CYP3A4</i>	*1, *20, *22
<i>CYP3A5</i>	*1, *3, *6, *7
<i>CYP4F2</i>	*1, *2, *3, *4, rs2108622
<i>DPYD</i>	ENST00000370192: reference (*1), c.299_302del (*7), c.557A>G, c.703C>T (*8), c.868A>G, c.1129-5923C>G (HapB3), c.1156G>T (*12), c.1314T>G, c.1475C>T, c.1679T>G (*13), c.1774C>T, c.1898del (*3), c.1905+1G>A (*2A), c.2279C>T, c.2639G>T, c.2846A>T, c.2983G>T (*10), rs3918290, rs55886062.1 A>C, rs75017182, rs56038477, rs67376798, rs115232898
<i>F5</i>	rs6025
<i>G6PD</i>	"A", "A- 202A_376G", "A- 968C_376G", "Asahi", "B (reference)", "Canton, Taiwan-Hakka, Gifu-like, Agrigento-like", "Chatham", "Chinese-5", "Gaohe", "Illesha", "Kaiping, Anant, Dhon, Sapporo-like, Wosera", "Kalyan-Kerala, Jamnaga, Rohini", "Malaga", "Mediterranean, Dallas, Panama, Sassari, Cagliari, Birmingham", "Orissa", "Quing Yuan, Chinese-4", "Seattle, Lodi, Modena, Ferrara II, Athens-like", "Sierra Leone", "Ube Konan", "Union, Maewo, Chinese-2, Kalo", "Viangchan, Jammu"
<i>IFNL3</i>	rs12979860
<i>NUDT15</i>	*1, *2, *3, *4, *6, *9, *14, rs116855232
<i>RYR1</i>	ENST00000359596: c.38T>G, c.97A>G, c.103T>C, c.130C>T, c.131G>A, c.463C>A, c.487C>T, c.488G>T, c.529C>T, c.533A>G, c.742G>A, c.742G>C, c.982C>T, c.1021G>A, c.1021G>C, c.1201C>T, c.1202G>A, c.1202G>T, c.1565A>C, c.1565A>G, c.1589G>A, c.1597C>T, c.1615T>C, c.1615T>G, c.1630G>T, c.1654C>T, c.1655G>A, c.1840C>T, c.1841G>A, c.1841G>T, c.3166G>C, c.5183C>T, c.6349G>C, c.6387C>G, c.6487C>T, c.6488G>A, c.6488G>C, c.6488G>T, c.6502G>A, c.6612C>G, c.6617C>G, c.6617C>T, c.6628G>T, c.6757C>T, c.6838G>A, c.7007G>A, c.7035C>A, c.7036G>A, c.7042_7044del, c.7043A>G, c.7048G>A, c.7060G>A, c.7063C>T, c.7076G>A, c.7084G>A, c.7090T>G, c.7123G>A, c.7124G>C, c.7282G>A, c.7291G>A, c.7291G>T, c.7300G>A, c.7304G>A, c.7304G>T, c.7310C>T, c.7354C>T, c.7358T>C, c.7360C>T, c.7361G>A, c.7372C>T, c.7373G>A, c.7373G>T, c.7522C>T, c.7523G>A, c.7879G>C, c.8026C>T, c.9310G>A, c.11315G>A, c.11708G>A, c.11947C>T, c.11958C>G, c.11969G>T, c.12149C>A, c.12700G>C, c.12700G>T, c.14209C>T, c.14210G>A, c.14477C>T, c.14497C>T, c.14512C>G, c.14539G>C, c.14545G>A, c.14627A>G, c.14803G>A, c.14918C>T
<i>SLCO1B1</i>	*1, *5, *9, *14, *15, *20, *31, *46, *47, rs2306283, rs4149056
<i>TPMT</i>	*1, *2, *3A, *3B, *3C, *4, *8, *11, *14, *15, *23, *24, *29, *41, *42
<i>UGT1A1</i>	*1, *6, *27, *28, *36, *37