UGENOME

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Cancer

Disease Report

REPORT CATEGORY

CANCER

Sample Client

Report date: 30 April 2026

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Personal information

NAME

Sample Client

SEX AT BIRTH

Male

HEIGHT

5ft 10" 178cm

WEIGHT

215lb 97.5kg

DISCLAIMER

This report does not diagnose this or any other health conditions. Please talk to a healthcare professional if this condition runs in your family, you think you might have this condition, or you have any concerns about your results.

Viewing this medical test requires a medical doctor or use one of our contracted genetic counselors. By accessing these results, you acknowledge and agree that you will consult with a licensed physician or one of our contracted genetic counselors to review and interpret the results, and you agree not to rely on this information as a substitute for professional medical advice, diagnosis, or treatment.

REPORT PROVIDED BY

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Summary

Genetic predisposition to cancer involves complex interactions between multiple genes and environmental factors that can influence an individual's susceptibility to various types of cancer. This comprehensive report examines genetic variants associated with cancer risk across major body systems, including blood, nervous system, digestive, reproductive, respiratory, head and neck, urinary tract, skin, and musculoskeletal cancers.

By analyzing these genetic factors, we can better understand personal risk profiles and inheritance patterns that may influence cancer development. However, it's important to note that genetic predisposition does not guarantee cancer development - rather, it provides insights into areas where preventive measures and screening may be particularly valuable. Environmental factors, lifestyle choices, and regular medical screening all play crucial roles in overall cancer risk management.

This report explores variations in genes involved in cell cycle regulation, DNA repair mechanisms, immune system function, and other pathways relevant to cancer development. Understanding these genetic factors can help inform personalized prevention strategies and enable proactive health management decisions in consultation with healthcare providers.

This summary report contains:

- **29** Genetic Results
- **15** Recommendations
- **3** Lifestyle Assessments

Overview of Your Results

Blood Cancers

TYPICAL LIKELIHOOD

Leukemia

Typical likelihood of leukemia

TYPICAL LIKELIHOOD

Multiple Myeloma

Typical likelihood of multiple myeloma

TYPICAL LIKELIHOOD

Non-Hodgkin's Lymphoma

Typical likelihood of non-Hodgkin's lymphoma

LESS LIKELY

Hodgkin's Lymphoma

Less likely to have Hodgkin's lymphoma

Nervous System Cancers

TYPICAL LIKELIHOOD

Brain Cancer

Typical likelihood of brain cancer

TYPICAL LIKELIHOOD

Neuroblastoma

Typical likelihood of neuroblastoma

LESS LIKELY

Meningioma

Less likely to have a meningioma

Digestive System Cancers

MORE LIKELY

Colorectal Cancer

More likely to get colorectal cancer

TYPICAL LIKELIHOOD

Gallbladder Cancer

Typical likelihood of gallbladder cancer

LESS LIKELY

Stomach Cancer

Less likely to have stomach cancer

LESS LIKELY

Esophageal Cancer

Less likely to have esophageal cancer

LESS LIKELY

Liver Cancer

Less likely to have liver cancer

LESS LIKELY

Pancreatic Cancer

Less likely to have pancreatic cancer

LESS LIKELY

Bile Duct Cancer

Less likely to have bile duct cancer

Reproductive System Cancers

MORE LIKELY

Prostate Cancer

More likely to get prostate cancer

LESS LIKELY

Testicular Cancer

Less likely to have testicular cancer

Respiratory System Cancers

TYPICAL LIKELIHOOD

Lung Cancer

Typical likelihood of lung cancer

LESS LIKELY

Laryngeal Cancer

Less likely to have laryngeal cancer

Head & Neck Cancers

TYPICAL LIKELIHOOD

Oropharyngeal Cancer

Typical likelihood of oropharyngeal cancer

TYPICAL LIKELIHOOD

Thyroid Cancer

Typical likelihood of thyroid cancer

LESS LIKELY

Tongue Cancer

Less likely to have tongue cancer

LESS LIKELY

Eye Cancer

Less likely to have eye cancer

Urinary Tract Cancers

TYPICAL LIKELIHOOD

Kidney Cancer

Typical likelihood of kidney cancer

TYPICAL LIKELIHOOD

Bladder Cancer

Typical likelihood of bladder cancer

Skin Cancers

MORE LIKELY

Melanoma

More likely to get melanoma

TYPICAL LIKELIHOOD

Basal Cell Carcinoma

Typical likelihood of basal cell carcinoma

LESS LIKELY

Squamous Cell Carcinoma

Less likely to have squamous cell carcinoma

Musculoskeletal Cancers

TYPICAL LIKELIHOOD

Sarcoma

Typical likelihood of sarcoma

LESS LIKELY

Bone Cancer

Less likely to have bone cancer

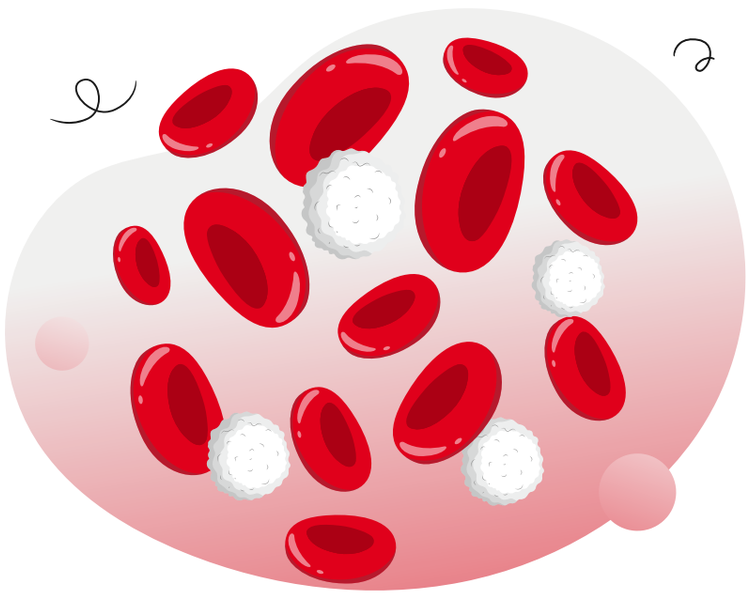
Recommendations Overview

Your recommendations are prioritized according to the likelihood of it having an impact for you based on your genetics, along with the amount of scientific evidence supporting the recommendation.

You'll likely find common healthy recommendations at the top of the list because they are often the most impactful and most researched.

		DOSAGE
1	Aerobic Exercise (Cardio)	1 hour
2	Maintain Optimal Vitamin D Levels	1000 iu
3	Methylfolate	400 mcg
4	Mediterranean Diet	
5	Cruciferous Vegetables	
6	Green Tea	400 mg
7	Avoid Asbestos	
8	Garlic Supplement	200 mg
9	Avoid Organochlorine Pesticide Exposure	
10	Curcumin	500 mg
11	Progressive Muscle Relaxation	10 minutes
12	Broccoli	
13	Strength Training	1 hour
14	Eat Fiber-Rich Foods	
15	Avoid Secondhand Smoke	

Your Results in Details



Blood Cancers

Genetic factors play a significant role in the development of blood cancers, which affect blood cells and the lymphatic system. This section examines genetic variants associated with leukemia, multiple myeloma, and both Hodgkin's and non-Hodgkin's lymphoma, providing insights into individual risk factors for these hematologic malignancies.

TYPICAL LIKELIHOOD

Leukemia

Typical likelihood of leukemia

TYPICAL LIKELIHOOD

Multiple Myeloma

Typical likelihood of multiple myeloma

TYPICAL LIKELIHOOD

Non-Hodgkin's Lymphoma

Typical likelihood of non-Hodgkin's lymphoma

LESS LIKELY

Hodgkin's Lymphoma

Less likely to have Hodgkin's lymphoma

Leukemia

Factors that may increase your risk of developing some types of leukemia include:

- Radiation or chemical exposure: Exposure to high levels of radiation or certain chemicals (like benzene) can increase the risk.
- Family history and genetic mutations
- Genetic disorders such as Down's syndrome
- Smoking

Treatment for leukemia depends on many factors. The doctor determines treatment options based on the patient's age and overall health, the type of leukemia, and whether it has spread to other parts of the body, including the central nervous system. Common treatments include [R]:

- Chemotherapy: The primary treatment for many types of leukemia, involving the use of drugs to kill cancer cells.
- Radiation therapy: Used in certain cases to target and kill leukemia cells.
- Targeted therapy: Drugs that specifically target abnormalities in leukemia cells, such as tyrosine kinase inhibitors for CML.
- Immunotherapy: Boosts the body’s immune system to fight the leukemia cells.
- Stem cell transplant: Replaces the diseased bone marrow with healthy stem cells from a donor.
- Monitoring: Some chronic forms of leukemia, like CLL, may not require immediate treatment and are closely monitored instead.

The prognosis for leukemia varies widely depending on the type, the patient’s age, the stage at diagnosis, and how well the leukemia responds to treatment. Acute leukemias generally require immediate treatment and can be life-threatening if not treated promptly, while chronic leukemias may be managed over many years.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn’t test for hereditary cancer syndromes or ‘cancer genes’. These are usually caused by rare mutations that can’t be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

TYPICAL LIKELIHOOD

Typical likelihood of leukemia based on 775,271 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
BCL2	rs77551289	AA
BMF	rs8024033	CC
PRKD2	rs874460	CC
MYC	rs2466029	GG
FAS	rs6586163	AA
ID3	rs34676223	CC
RHOU	rs41271473	GG
CAMK2D	rs1476569	GG
LEF1	rs7690934	CC
DMRTA1	rs1679013	CC
IRF4	rs9392504	AG
HLA-DQA1	rs9271176	AG
BAK1	rs210143	CT
USP28	rs61904987	TC
TERT	rs7705526	AC
C11ORF21	rs2651823	GA
ZBTB7A	rs7254272	AG
EOMES	rs9880772	GA
PRKD3	rs888096	AG
GRAMD1B	rs35923643	AA
BCL2L11	rs58055674	TT
SP140	rs34004493	AA
RFX7	rs142215530	AA
TLE3	rs11637565	AA
IRF8	rs391855	TT
SEPTIN2	rs3755397	AA
ILRUN	rs3800461	GG
CFLAR	rs7558911	GG
BANK1	rs71597109	TT

GENE	SNP	GENOTYPE
UBR5	rs2511713	AA
OAS1	rs6489882	AA
GPR37	rs2267708	CC
IPCEF1	rs4869818	AA
LMF2	rs140522	CC
CXXC1	rs1036935	GG
LPP	rs73192661	TT
IRF2	rs57214277	CC

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Multiple Myeloma

The exact cause of multiple myeloma is unknown, but several factors may increase the risk of developing the disease:

- Age: It primarily affects older adults, typically those over the age of 60.
- Gender: Men are slightly more likely to develop the disease than women.
- Race: African Americans are about twice as likely to develop multiple myeloma as white Americans.
- Family history: Having a sibling or parent with multiple myeloma increases your risk.
- Personal history: Having a personal history of a monoclonal gammopathy of undetermined significance (MGUS) is a known risk factor. MGUS is a precursor condition to multiple myeloma.
- Obesity: Higher body weight is associated with an increased risk of multiple myeloma.

Multiple myeloma is generally considered treatable but incurable. Treatment options include:

- Chemotherapy: To kill fast-growing myeloma cells.
- Targeted therapy: Uses drugs that specifically attack cancer cells with minimal effects on normal cells.
- Biological therapy: Uses treatment that helps your immune system recognize and attack myeloma cells.
- Radiation therapy: To target and reduce pain in specific areas with bone damage.
- Bone marrow transplant: Involves replacing diseased bone marrow with healthy marrow.
- Corticosteroids: To regulate the immune system to help control myeloma.

The prognosis for multiple myeloma varies widely based on the stage at diagnosis, the patient's age, and overall health. Advances in treatments have significantly improved survival rates and quality of life for many patients, though the disease typically involves cycles of remission and recurrence.

TYPICAL LIKELIHOOD

Typical likelihood of multiple myeloma based on 68,535 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
DTNB	rs7577599	TT
LRRC34	rs10936600	AA
CCHCR1	rs3132535	AA
ELL2	rs1423269	AA
TNFRSF13B	rs34562254	AG
CCSER1	rs72665486	GG
ULK4	rs6599192	AG
WAC	rs2790457	GG
TOM1	rs138747	AT
RFWD3	rs7193541	TC
CCDC71L	rs17507636	TC
RP1	rs28571765	TC
RNF40	rs8058578	CT
JARID2	rs34229995	CC
PREX1	rs6066835	TT
SOHLH2	rs76601148	AA
CBX7	rs139402	TT
SMARCD3	rs7781265	GG
PRDM1	rs9372120	TT
CDKN2B	rs2811710	CT
POU5F1B	rs1948915	TT
/	rs1034447	CC
/	rs6071887	GG

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Non-Hodgkin's Lymphoma

Some factors that may increase the risk of non-Hodgkin's lymphoma include [R]:

- Age: NHL risk increases with age, especially in people over 60.
- Immune system deficiency: People with weakened immune systems, such as those with HIV/AIDS or who have undergone organ transplantation, are at higher risk.
- Infections: Certain infections, such as Epstein-Barr virus (EBV), *Helicobacter pylori*, and human T-cell leukemia/lymphoma virus (HTLV-1), are associated with an increased risk.
- Autoimmune diseases: Conditions like rheumatoid arthritis or lupus can increase the risk.
- Exposure to chemicals: Prolonged exposure to certain chemicals, such as pesticides or herbicides, may increase the risk.
- Family history: A family history of lymphoma can slightly increase the risk.

However, most people diagnosed with non-Hodgkin's lymphoma don't have any obvious risk factors and many people who have risk factors for the disease never develop it.

Treatment for non-Hodgkin's lymphoma depends on its particulars of, such as the types of cells involved and whether it is aggressive. Doctors also consider the overall health and preferences. of the patient. If the lymphoma appears to be slow-growing (indolent) and doesn't cause signs and symptoms, the patient might not need treatment right away. Instead, the doctor may recommend regular checkups every few months to monitor the condition. Treatments for aggressive or symptomatic lymphomas may include [R]:

- Chemotherapy: The most common treatment, often combined with other therapies.
- Radiation therapy: Used to target and kill cancer cells, especially in localized disease.
- Targeted therapy: Drugs that specifically target lymphoma cells, such as rituximab for B-cell lymphomas.
- Immunotherapy: Treatment that enhances the body’s immune system to fight the cancer, including CAR-T cell therapy.
- Stem cell transplant: Replaces damaged bone marrow with healthy stem cells, used in certain cases, especially in relapsed lymphoma.
- Watchful waiting: For some indolent lymphomas that are not causing symptoms, close monitoring may be chosen instead of immediate treatment.

The prognosis varies widely depending on the specific type, stage at diagnosis, and response to treatment. Indolent lymphomas may remain stable for many years with minimal or no treatment, while aggressive lymphomas may require intensive treatment but can often be cured. Advances in treatment have improved outcomes for many types of NHL. Regular follow-up is essential, as the risk of relapse or secondary cancers exists, and long-term side effects of the treatment need to be managed.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn’t test for hereditary cancer syndromes or ‘cancer genes’. These are usually caused by rare mutations that can’t be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

TYPICAL LIKELIHOOD

Typical likelihood of non-Hodgkin's lymphoma based on 861,887 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
/	rs34102154	GG
SPATA4	rs10017639	TC
TRIM27	rs238883	GA
/	rs1342494	AT
HPS4	rs146427908	CC
NTM	rs112479596	AA
HLA-DRB5	rs2097442	GG
CLEC12A	rs3176779	CC
ONECUT3	rs77943404	GG
AIF1	rs2471960	GG
CCHCR1	rs1265080	GG
MYC	rs13255292	CC
HLA-DQB1	rs2858331	AA

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Hodgkin's Lymphoma

Some of the risk factors associated with Hodgkin’s lymphoma include [R]:

- Epstein-Barr virus (EBV) infection / Mononucleosis. People who have had infectious mononucleosis (often called “mono”) caused by the Epstein-Barr virus (EBV) have a slightly increased risk (1 in 1,000) of developing Hodgkin’s lymphoma.
- Age. Hodgkin’s lymphoma can occur at any age, but it is most common in early adulthood (especially in the 20s) and late adulthood (after age 55).
- Gender. Hodgkin’s lymphoma occurs slightly more often in males than in females.
- Family history. Brothers and sisters of young people with Hodgkin’s lymphoma have a higher risk. Although a family link is still uncommon, most people with Hodgkin’s lymphoma do not have a family history of it.
- Weakened immune system. Individuals infected with HIV (the virus that causes AIDS) have an increased risk of Hodgkin’s lymphoma.
- People who take immunosuppressive medications after organ transplants and those with autoimmune diseases are also at higher risk.

Hodgkin's lymphoma treatment can involve [R]:

- Chemotherapy: The primary treatment, often combined with radiation therapy.
- Radiation therapy: Used to target specific areas where cancer is present.
- Targeted therapy: For example, brentuximab vedotin (Adcetris) is a drug that targets CD30-positive Hodgkin's lymphoma cells.
- Immunotherapy: Drugs like pembrolizumab (Keytruda) or nivolumab (Opdivo) may be used, especially in recurrent or resistant cases.
- Stem cell transplant: Used in some cases, particularly if the lymphoma returns after initial treatment.

The prognosis for Hodgkin's lymphoma is generally very good, especially when diagnosed early. The five-year survival rate for early-stage Hodgkin's lymphoma can be over 90%. Advanced-stage Hodgkin's lymphoma also has a favorable prognosis, but treatment may be more intensive.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn’t test for hereditary cancer syndromes or ‘cancer genes’. These are usually caused by rare mutations that can’t be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

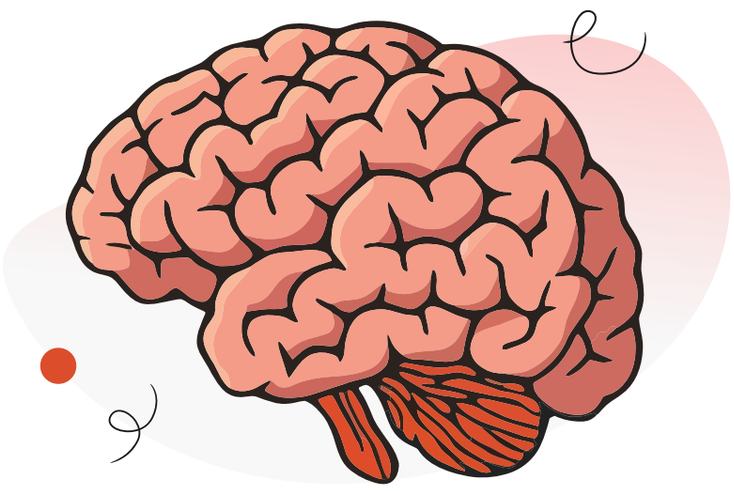
LESS LIKELY

Less likely to have Hodgkin's lymphoma based on 5,940 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
/	rs28383311	AA
HLA-DQA2	rs6903608	CT
HLA-DQA2	rs3129890	TT
AHI1	rs2757647	TT
GATA3	rs3824662	CA
AHI1	rs6928977	GG
GATA3	rs3781093	TC
LPP	rs4459895	AC
REL	rs1432297	AG
EOMES	rs3806624	AG
REL	rs1432295	AG
DEXI	rs34972832	GA
PDGFD	rs117953624	TT
MYC	rs2019960	TT
SLC22A5	rs2069757	GG
HLA-DPB1	rs3129198	GG
GATA3	rs501764	TT
CDC16	rs112998813	TT
MYC	rs13279159	AA
REL	rs13034020	AA
GATA3	rs444929	TT
THEMIS	rs9482849	TT
HBS1L	rs7745098	TT

The number of "risk" variants in this table doesn't necessarily reflect your overall result.



Nervous System Cancers

The development of nervous system cancers involves complex genetic pathways that influence cell growth and regulation in neural tissues. This section explores genetic factors related to brain cancer, meningioma, and neuroblastoma, helping understand personal risk profiles for these neurological malignancies.

TYPICAL LIKELIHOOD

Brain Cancer

Typical likelihood of brain cancer

TYPICAL LIKELIHOOD

Neuroblastoma

Typical likelihood of neuroblastoma

LESS LIKELY

Meningioma

Less likely to have a meningioma

Brain Cancer

In most people with primary brain tumors, the cause isn't clear. Nevertheless, doctors have identified some factors that may raise the risk [R]:

- Age: brain tumors can happen at any age, but they happen most often in older adults. Some brain tumors mostly affect adults but others happen most often in children.
- Race: some types are more common in specific ethnicities. For instance, gliomas are more common in Caucasians while meningiomas are more common in Black people.
- Exposure to radiation: people who have been exposed to ionizing radiation such as from radiation therapy or atomic bombs have an increased risk of brain tumors.
- Inherited syndromes: examples include the DNA changes that cause neurofibromatosis 1 and 2, tuberous sclerosis, Lynch syndrome, Li-Fraumeni syndrome, Von Hippel-Lindau disease, familial adenomatous polyposis, Cowden syndrome, and Gorlin syndrome.

Treatment depends on the type, location, and stage of the tumor, as well as the patient's overall health. Common treatment options include: [R]

- Surgery: Often the primary treatment to remove as much of the tumor as possible while preserving brain function.
- Radiation therapy: Uses high-energy rays to target and kill cancer cells. It may be used after surgery or as a primary treatment for inoperable tumors.
- Chemotherapy: Drugs used to kill or stop the growth of cancer cells. This can be administered orally or intravenously and may be used in conjunction with other treatments.
- Targeted therapy: Drugs that target specific molecular changes in cancer cells, which may be used for certain types of brain tumors.
- Immunotherapy: Treatments that help the immune system recognize and fight cancer cells. This is still an area of active research for brain cancer.

The prognosis for brain cancer varies widely based on factors such as the type and grade of the tumor, its location, and the patient's overall health. Some brain tumors, particularly low-grade gliomas, can have a relatively favorable prognosis with appropriate treatment. Others, like glioblastomas, tend to be more aggressive and challenging to treat, though advances in treatment are ongoing.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

TYPICAL LIKELIHOOD

Typical likelihood of brain cancer based on 1,670 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
STMN3	rs2297440	CC
MPZL2	rs12803321	GG
NPAS3	rs10131032	GG
STMN3	rs6010620	GG
TERT	rs10069690	TC
EGFR	rs723527	AA
FAM181B	rs11233250	CC
AKT3	rs12076373	GG
RAVER2	rs12752552	TT
HBZ	rs2562152	TT
C2ORF80	rs7572263	AA
TCF7L2	rs11599775	GG
PHLDA1	rs1275600	TT
LRIG1	rs11706832	CC
TREH	rs498872	GA
ACTRT3	rs3772190	GG
ZBTB16	rs648044	AG
MDM4	rs4252707	GA
HEATR3	rs10852606	CT
MAML2	rs7107785	TC
BAIAP2L2	rs2235573	GA
STN1	rs11598018	AC
TP53	rs78378222	TT
GSDMC	rs55705857	AA
EGFR	rs75061358	TT
CDKN2B	rs634537	TT
MYC	rs4295627	TT
ETFA	rs77633900	GG
TERT	rs2736100	CA

GENE	SNP	GENOTYPE
LMF1	rs3751667	CC

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Neuroblastoma

The prognosis and treatment options for neuroblastoma can differ significantly based on the age of the child, the location and size of the tumor, and whether the cancer has spread (metastasized) to other parts of the body. Early-stage neuroblastoma may sometimes resolve on its own, while other cases require a combination of surgery, chemotherapy, radiation therapy, stem cell transplant, and immunotherapy.

Recent genetic and molecular research into this disease has improved doctors' ability to classify the risk associated with each neuroblastoma, tailoring treatment plans more effectively to increase survival rates. Despite the severity of the condition, advances in treatment have led to improved outcomes for many children with neuroblastoma.

TYPICAL LIKELIHOOD

Typical likelihood of neuroblastoma based on 1,714 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
HACE1	rs72990858	GG
LMO1	rs2168101	CC
PRL	rs4712656	CC
LIN28B	rs17065417	AC
CPZ	rs3796727	AG
C1ORF174	rs4436359	AA
PHTF1	rs2153977	CC
XPO4	rs12430409	AA
SNX29	rs6498326	GG
CENPU	rs7660927	CC
CPNE1	rs2425226	CC
ARHGAP24	rs4693128	TC
USP40	rs1604144	TC
HSD17B12	rs11606658	CT
SMLR1	rs7761842	TG
TP53	rs35850753	CC
NFX1	rs151155266	GG
BARD1	rs58430496	CC
HSD17B12	rs10742682	CC
RARRES1	rs6441201	GG
HLA-DQB1	rs35508382	AA
SPIRE2	rs9745545	AA
GSTO1	rs11591710	AA
CTSK	rs11204752	CC
CHODL	rs2591643	TT

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Meningioma

The management of meningioma takes into account the size, location, and growth rate of the tumor, as well as the overall health and age of the individual. Treatment may not be immediately necessary for smaller, asymptomatic tumors, which can be monitored for growth or change.

For symptomatic meningiomas, surgical removal is typically the first-line treatment, aiming to eliminate or reduce the pressure on adjacent brain structures and alleviate symptoms. In some cases, radiation therapy or radiosurgery may be employed, especially if the meningioma cannot be completely removed or recurs after surgery.

LESS LIKELY

Less likely to have a meningioma based on 10 genetic variants we looked at

13th

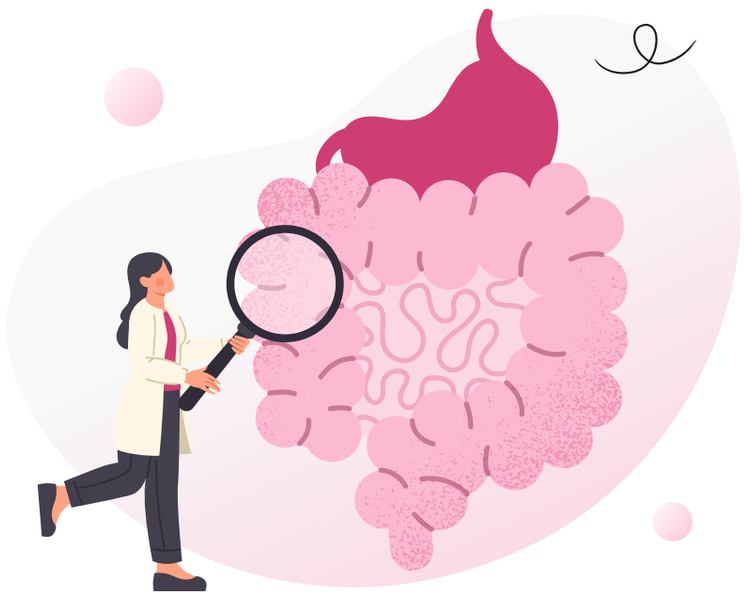
PERCENTILE

Your risk is **greater than 13% of the population** and **lower than 87% of the population.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SLC5A12	rs1017602	TT
PSMD13	rs2686876	TA
CCDC179	rs2240941	CA
POPDC3	rs2105297	CG
IGSF21	rs749917	CT
/	rs62248541	GG
RGCC	rs12428241	GG
CAAP1	rs117837262	CC
CELF4	rs1941941	TT
RGL4	rs11090280	TT

The number of "risk" variants in this table doesn't necessarily reflect your overall result.



Digestive System Cancers

Cancers of the digestive system can arise from genetic predispositions affecting various points along the gastrointestinal tract. This section examines genetic variants linked to colorectal, stomach, esophageal, liver, pancreatic, gallbladder, and bile duct cancers, offering insights into personal risk factors for these digestive system malignancies.

MORE LIKELY

Colorectal Cancer

More likely to get colorectal cancer

TYPICAL LIKELIHOOD

Gallbladder Cancer

Typical likelihood of gallbladder cancer

LESS LIKELY

Stomach Cancer

Less likely to have stomach cancer

LESS LIKELY

Esophageal Cancer

Less likely to have esophageal cancer

LESS LIKELY

Liver Cancer

Less likely to have liver cancer

LESS LIKELY

Pancreatic Cancer

Less likely to have pancreatic cancer

LESS LIKELY

Bile Duct Cancer

Less likely to have bile duct cancer

Colorectal Cancer

While the exact cause of colorectal cancer is not fully understood, several factors increase the risk of developing this disease [R]:

- Age: The majority of cases occur in people aged 50 and older, though incidence rates are rising among younger populations.
- Family history: Having a family history of colorectal cancer or polyps increases one's risk.
- Personal history: Those with a history of inflammatory bowel disease (like Crohn's disease or ulcerative colitis), or who have had colorectal cancer or adenomatous polyps before are at higher risk.
- Genetic syndromes: Genetic mutations passed through generations, such as familial adenomatous polyposis (FAP) and hereditary non-polyposis colorectal cancer (Lynch syndrome), significantly increase the risk.
- Lifestyle factors: A diet high in red or processed meats, physical inactivity, obesity, smoking, and heavy alcohol use are known risk factors.
- Racial and ethnic background: African Americans have a higher incidence rate of colorectal cancer than other racial groups in the United States.

Treatment for colorectal cancer depends on the stage of the disease, the location of the tumor, and the patient's overall health [R]:

- Surgery: The primary treatment for localized cancer, surgery involves removing the tumor and surrounding tissue. For some cases, resection of part of the colon or rectum may be necessary.
- Chemotherapy: Used before or after surgery to shrink tumors and kill any cancer cells that may remain.
- Radiation therapy: Often used alongside chemotherapy, especially for rectal cancer, to reduce tumor size before surgery or eliminate remaining cells postoperatively.
- Targeted therapy: Drugs that target specific abnormalities in cancer cells. It's used for cancers that have specific gene mutations.
- Immunotherapy: Uses the body’s immune system to fight cancer. It’s typically reserved for advanced colorectal cancer.

Preventive measures include:

- Regular screening: Beginning at age 45 for average-risk adults, as recommended by the American Cancer Society.
- Diet and lifestyle: A diet rich in fruits, vegetables, and whole grains, limited red and processed meats, regular physical activity, maintaining a healthy weight, not smoking, and moderating alcohol intake can reduce risk.
- Genetic testing and counseling: Recommended for those with a family history indicative of genetic syndromes.

Colorectal cancer, when discovered early, is often treatable and frequently curable, highlighting the importance of regular screening and awareness of risk factors and symptoms.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn’t test for hereditary cancer syndromes or ‘cancer genes’. These are usually caused by rare mutations that can’t be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

MORE LIKELY

More likely to get colorectal cancer based on 1,049,410 genetic variants we looked at

84th

PERCENTILE

Your risk is **greater than 84% of the population** and **lower than 16% of the population.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
ZPLD1	rs116265807	GG
MYH3	rs1078643	AA
ACTL8	rs11203467	GG
COX7A2L	rs13426988	GG
MAF	rs140851213	TT
MYL2	rs17550549	CC
PRICKLE1	rs11610543	GG
LRP1	rs7398375	CC
GRM7	rs2163735	GG
NUDT2	rs62558833	TT
CAMSAP1	rs74995296	CC
THSD4	rs4777372	CC
PTPN2	rs8083786	AA
PITX1	rs7722513	CG
CHRDL2	rs3824999	GG
/	rs10795668	AG
SMAD7	rs4939827	TC
PITX1	rs35917784	GA
UTP23	rs6469654	GC
RHPN2	rs10411210	CT
PREX1	rs6066825	GA

GENE	SNP	GENOTYPE
CDKN1A	rs1321311	AC
USP44	rs11108175	AG
ABCC4	rs12855244	AG
SLC6A3	rs2735940	AG
COLCA2	rs3802842	CA
POU5F1B	rs6983267	TT
PARP11	rs12818766	GG
MICB	rs3830041	CC
BMP2	rs6085662	GG
TCF7L2	rs11196172	GG
TRAPPC4	rs11217091	TT
PLCB1	rs8117408	AA
BMP2	rs4813802	TT
VANGL1	rs2226738	TT
MAF	rs9930005	AA
MAP2K5	rs7171219	AA
ETS2	rs2242936	TT
CCDC195	rs35413825	GG
UBQLN1	rs12235741	TT

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Gallbladder Cancer

Several factors can increase the risk of developing gallbladder cancer [R]:

- Gender and age: It is more common in women and older adults.
- Gallstones: The presence of gallstones is the most significant risk factor, as about 75-90% of gallbladder cancer cases are associated with gallstones.
- Gallbladder inflammation: Chronic inflammation, often due to gallstones, increases cancer risk.
- Obesity: Being overweight can increase the risk of gallstones and inflammation, thus indirectly raising cancer risk.
- Family history: A family history of gallbladder cancer increases the risk.
- Ethnicity and geography: Certain ethnic groups and geographical regions have higher rates of gallbladder cancer, including Native Americans and people living in South America and Eastern Europe.
- Other conditions: Polyps in the gallbladder, porcelain gallbladder (calcification of the gallbladder wall), and certain bile duct conditions can also increase risk.

Treatment options for gallbladder cancer depend on the stage and overall health of the patient [R]:

- Surgery: The primary treatment, especially for early-stage cancer. It may involve cholecystectomy (removal of the gallbladder) and, in some cases, parts of the liver and nearby lymph nodes.
- Chemotherapy: Used to kill cancer cells or slow their growth, often used in advanced stages or after surgery.
- Radiation therapy: Sometimes used in combination with surgery or chemotherapy to target cancer cells.
- Targeted therapy: Focuses on specific molecular targets involved in cancer growth.

Due to its vague symptoms and the deep location of the gallbladder, this cancer is often diagnosed at a later stage, which makes treatment more challenging.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

TYPICAL LIKELIHOOD

Typical likelihood of gallbladder cancer based on 29,484 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
MCTP1	rs6869388	TT
TEK	rs13294589	AA
TRNT1	rs975334	GG
/	rs10953615	AG
DCC	rs7504990	CC
ABCB4	rs17209837	TT
ABCB4	rs1558375	TT

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Stomach Cancer

Risk factors for stomach cancer include [R]:

- *Helicobacter pylori* infection: This bacterium is a major risk factor for stomach cancer.
- Diet: A diet high in red meat, processed meats, and salty foods may increase the risk of stomach cancer.
- Smoking
- Family history
- Other factors: Certain medical conditions, such as anemia and pernicious anemia, may also increase the risk of stomach cancer.

Treatment depends on the stage of the cancer and the patient's overall health [R]:

- Surgery: removing part or all of the stomach, sometimes along with nearby lymph nodes.
- Chemotherapy: uses drugs to kill cancer cells or stop them from growing.
- Radiation therapy: uses high-energy rays to target and kill cancer cells.
- Targeted therapy: drugs that specifically target cancer cells without affecting normal cells.
- Immunotherapy: boosts the body's immune system to fight cancer cells.

The prognosis for stomach cancer depends on several factors, including the stage at diagnosis, the patient's overall health, and how well the cancer responds to treatment. Early detection improves the chances of successful treatment.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

LESS LIKELY

Less likely to have stomach cancer based on 16,655 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
LMNA	rs138554234	GG
OR10C1	rs77454196	CC
VPS35L	rs117430025	GG
THBS3	rs7366775	GA
KIAA2026	rs343471	TT
LYPD2	rs10105842	CC
HLA-A	rs28749114	AA
CLPTM1L	rs2853669	AA
ZSCAN26	rs2799081	TT
SMARCA2	rs10491697	AA
KCNU1	rs11775036	TC
BRMS1L	rs11851309	TC
ANKEF1	rs6039695	AG
SNX13	rs11560253	AG
IRF2	rs793885	TC
MICA	rs3128983	CT
IRAK2	rs2544001	TT
NOC3L	rs10509670	AA
PRKAA1	rs10074991	AA
SPRY2	rs61291112	CC
CCDC32	rs999197	CC
C7	rs2675982	CC
PTGER4	rs114080964	GG
H2BC12	rs9461366	GG
ZSCAN9	rs16893741	TT
ANKRD50	rs11937064	AA
LRIG3	rs11172733	TT
UNC5CL	rs9381024	GG
ZFP36L2	rs12471190	TT

GENE	SNP	GENOTYPE
TUBB	rs2267637	CC
/	rs10202299	CC
ZNF248	rs2475206	AA

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Esophageal Cancer

Risk factors for esophageal cancer include [R]:

- Chronic gastroesophageal reflux disease (GERD): Prolonged exposure to stomach acids can damage the lining of the esophagus and may lead to Barrett's esophagus.
- Barrett's esophagus: Increases the risk of adenocarcinoma.
- Smoking: A significant risk factor for squamous cell carcinoma.
- Heavy alcohol consumption: Especially increases the risk for squamous cell carcinoma.
- Obesity: Associated with a higher risk of adenocarcinoma.
- Diet: A diet low in fruits and vegetables may increase the risk.
- Achalasia: A rare disorder that makes it difficult for food and liquid to pass into the stomach, raising the risk of squamous cell carcinoma.
- Drinking hot liquids: Regularly consuming very hot beverages may irritate the lining of the esophagus, which can increase the risk.

Treatment depends on the stage of the cancer, the patient's overall health, and other factors. It may include [R]:

- Surgery: To remove the tumor and some surrounding healthy tissue, and possibly nearby lymph nodes. In advanced cases, part or all of the esophagus may be removed.
- Radiation therapy: Often used alongside chemotherapy before surgery to shrink the tumor or after surgery to eliminate any remaining cancer cells.
- Chemotherapy: Used to kill cancer cells, often in combination with radiation therapy either before surgery or as a standalone treatment in cases where surgery isn't an option.
- Targeted therapy: Uses drugs or other substances to precisely identify and attack cancer cells, usually while doing little damage to normal cells.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

LESS LIKELY

Less likely to have esophageal cancer based on 939,366 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CCDC71L	rs114448224	CC
/	rs10417850	GG
STAT4	rs113702517	TT
PPP4R1	rs78048962	GG
SALL4	rs16996300	CC
SCG2	rs714943	CC
FAM120AOS	rs12379660	AG
ABHD11	rs7806956	AT
SPATA6	rs11205513	CG
PPP3R1	rs1868403	CT
CHRM3	rs10802794	TC
CDCA2	rs1365016	CT
CHST10	rs147274464	AA
MYO1B	rs142741123	TT
UBE3D	rs115648060	GG
AMTN	rs148725713	CC
TNFRSF10C	rs531841075	GG
SLC16A14	rs35963873	TT
PCM1	rs144188626	GG
CSTF2T	rs143380404	TT
/	rs73365656	CC
UBXN2B	rs114039795	CC
SALL1	rs115523423	CC
GINS2	rs112854191	TT
ZFYVE16	rs79319332	GG
/	rs9783765	AA
C15ORF48	rs73412484	AA
GPM6A	rs4532186	GG
RBBP8	rs62093212	TT

GENE	SNP	GENOTYPE
PTCH1	rs4744456	CC

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Liver Cancer

Several factors can increase the risk of liver cancer [R]:

- Chronic hepatitis B or C infection: long-term infection with these viruses can lead to liver damage and increase cancer risk.
- Cirrhosis: scarring of the liver from various causes, including alcohol use, nonalcoholic fatty liver disease (NAFLD), or chronic hepatitis.
- Alcohol abuse
- Nonalcoholic fatty liver disease (NAFLD)
- Aflatoxin exposure: this substance is produced by certain molds found on crops like peanuts and grains.
- Family history

Treatment options depend on the stage of the cancer, the liver's overall condition, and the patient's health. Common treatments include [R]:

- Partial hepatectomy: removal of the tumor and a portion of the liver.
- Liver transplant: replacing the diseased liver with a healthy one from a donor, often used for early-stage liver cancer.
- Ablation therapy: Methods like radiofrequency ablation (RFA) or microwave ablation use heat to destroy cancer cells.
- Transarterial chemoembolization (TACE): A procedure that delivers chemotherapy directly to the liver tumor and blocks its blood supply.
- Radiation therapy: Using high-energy rays to target and kill cancer cells, though it's less commonly used for liver cancer.
- Targeted Therapy: Drugs that specifically target cancer cells with certain genetic changes or growth pathways.
- Immunotherapy: Treatments that help the immune system recognize and attack cancer cells, though it's still under investigation for liver cancer.

The prognosis for liver cancer varies widely based on factors such as the cancer's stage, the patient's overall health, and how well the cancer responds to treatment. Early-stage liver cancer often has a better prognosis, while advanced stages may require more complex management.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

LESS LIKELY

Less likely to have liver cancer based on 276,371 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
AGA	rs117413665	CC
SAMM50	rs2896019	GG
KIF1B	rs17401966	GA
HS3ST1	rs35523062	CT
SAMM50	rs2294915	TT
ETV3L	rs4661093	GA
CYP26B1	rs17007417	TC
SAMM50	rs2143571	AG
HLA-DQA2	rs9275319	AA
AEN	rs4932397	GC
PNPLA3	rs738409	GG
HLA-DQA2	rs9275572	AG
TERT	rs2242652	AG
MRPL55	rs708113	AT
GRIK1	rs455804	CA
GTPBP10	rs10272859	CG
STAT4	rs7574865	TG
DLC1	rs77236434	CC
/	rs9272105	GG
TCP10L	rs2833856	CC
PAK4	rs8107030	AA
MAU2	rs58542926	CC
MICA	rs2596542	CT
MAU2	rs58489806	CC

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Pancreatic Cancer

Several factors can increase the risk of pancreatic cancer, including:

- Smoking: Tobacco use is a significant risk factor.
- Age: Most cases occur in people over 65.
- Family history: A family history of pancreatic cancer or genetic syndromes like *BRCA2* mutations, Lynch syndrome, or familial pancreatic cancer increase the risk.
- Chronic pancreatitis
- Diabetes, especially if newly developed in older age.
- Obesity
- Certain genetic conditions like Peutz-Jeghers syndrome or cystic fibrosis
- Drinking a lot of alcohol

Treatment options depend on the stage of the cancer and may include [R]:

- Surgery: The Whipple procedure (pancreaticoduodenectomy) is the most common surgery for pancreatic cancer, removing the head of the pancreas, part of the small intestine, and other nearby structures.
- Chemotherapy: Drugs used to kill cancer cells or stop their growth, often used in combination with other treatments.
- Radiation therapy: Using high-energy rays to target and kill cancer cells, usually combined with chemotherapy.
- Targeted therapy: Drugs that target specific molecular changes in cancer cells.
- Immunotherapy: Treatments that help the immune system recognize and attack cancer cells, though this is less common for pancreatic cancer.

The prognosis for pancreatic cancer can be challenging due to its typically late-stage diagnosis. Survival rates vary based on the stage of the cancer, the patient's overall health, and the effectiveness of the treatment. Early-stage pancreatic cancer has a better prognosis, but the majority of cases are diagnosed at a more advanced stage.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

LESS LIKELY

Less likely to have pancreatic cancer based on 35,160 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
CLPTM1L	rs35226131	CC
ABO	rs505922	CC
NR5A2	rs3790844	AA
MKLN1	rs6971499	TT
NR5A2	rs2816938	AA
TERT	rs2736098	CC
CLPTM1L	rs401681	TT
BCAR1	rs7190458	GA
GRP	rs1517037	CC
HNF1B	rs4795218	GG
/	rs1561927	TT
RHOC	rs351365	CC
C12ORF43	rs1182933	TT
TTPAL	rs6073450	AA
TNS3	rs73328514	TA
MYC	rs10094872	TA
ARL6IP6	rs12478462	TG
INHBA	rs17688601	AC
HNF4G	rs2941471	AG
TP63	rs9854771	GA
EDNRA	rs6537481	GA
MICAL3	rs450960	CT
SMC2	rs10991043	CT
SMC2	rs2417487	AG
PLEKHN1	rs13303010	AA
SOX9	rs7214041	CC
KLF5	rs9543325	TT
IGFBP4	rs77038344	CC
PDX1	rs9581943	GG

GENE	SNP	GENOTYPE
XBP1	rs16986825	CC
ETAA1	rs1486134	TT
FOXF1	rs7200646	TT

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Bile Duct Cancer

The exact cause of bile duct cancer is not fully understood, but several factors are associated with an increased risk [R]:

- Chronic liver diseases: Cirrhosis, a condition in which the liver slowly deteriorates and malfunctions due to chronic injury, can increase the risk.
- Biliary tract diseases: Conditions such as primary sclerosing cholangitis, chronic biliary irritation, and choledochal cysts are linked to higher rates of cholangiocarcinoma.
- Infections: Parasitic infections, particularly with liver flukes, increase the risk of bile duct cancer.
- Age: Most people diagnosed with bile duct cancer are over the age of 50.
- Other factors: History of gallstones, hepatitis, smoking, and exposure to certain chemicals, such as thorotrast (a previously used radiographic contrast agent), may increase the risk.

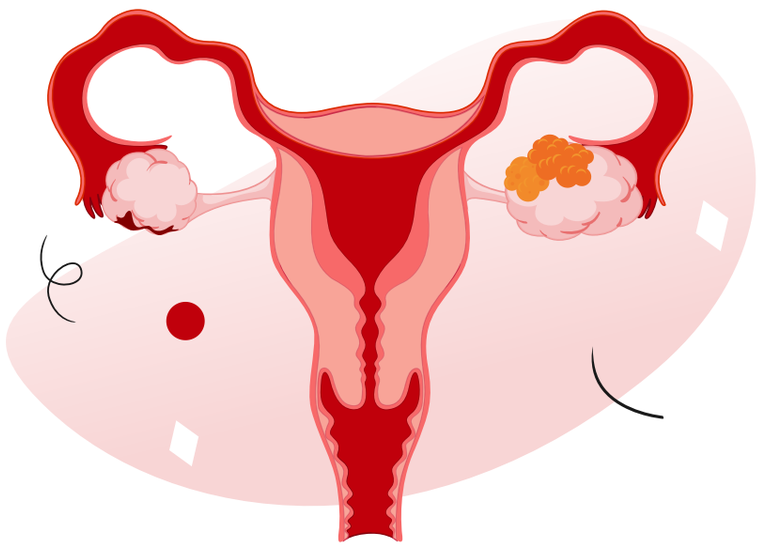
Treatment depends on the stage of the cancer, its location, and the patient's overall health [R]:

- Surgery: If possible, surgery is the preferred treatment, which may involve removing part of the bile duct, liver, and lymph nodes.
- Liver transplant: It may be an option for certain early bile duct cancers where the tumor is confined to the bile ducts in the liver.
- Radiation therapy and chemotherapy: Used to slow the progression of the disease and manage symptoms, especially if surgery is not an option.
- Palliative treatments: Procedures like biliary drainage or stenting can relieve symptoms such as jaundice in cases where the cancer is advanced.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

LESS LIKELY

Less likely to have bile duct cancer based on 33,541 genetic variants we looked at



Reproductive System Cancers

Genetic factors significantly influence the risk of reproductive system cancers. For women, this section explores genetic variants associated with ovarian, cervical, endometrial, and breast cancers. For men, it examines genetic factors linked to prostate and testicular cancers. Understanding these sex-specific genetic predispositions provides valuable insights into individual risk factors for reproductive system malignancies.

MORE LIKELY

Prostate Cancer

More likely to get prostate cancer

LESS LIKELY

Testicular Cancer

Less likely to have testicular cancer

Prostate Cancer

The exact cause of prostate cancer is not clearly understood, but several factors have been identified that increase the risk of developing this disease [R]:

- Age: The risk increases significantly after age 50, and it is most common in men over 65.
- Family history: Having a father or brother with prostate cancer more than doubles a man's risk.
- Race/Ethnicity: African-American men have a higher risk of prostate cancer than men of other races. They are also more likely to develop prostate cancer at an earlier age and have more aggressive tumors.
- Genetics: Genetic changes, including mutations in the *BRCA1* and *BRCA2* genes, which are also linked to breast and ovarian cancer in women, can increase risk.
- Diet: A diet high in red meat or high-fat dairy products and low in fruits and vegetables might increase the risk, although studies are not conclusive.

Treatment options vary depending on the stage of the cancer and other factors, including the patient's overall health and personal preferences [R]:

- Active surveillance: For low-risk cancers, monitoring the cancer closely with PSA tests, rectal exams, and ultrasounds may be recommended until tests show the cancer is growing.
- Surgery: Radical prostatectomy involves removing the prostate gland and some of the surrounding tissue.
- Radiation therapy: This can be used both as an initial treatment for cancer that has not spread beyond the prostate and as a way to relieve symptoms of advanced cancer.
- Hormone therapy: Also known as androgen deprivation therapy (ADT), aims to reduce levels of male hormones, androgens, which can stimulate the growth of prostate cancer cells.
- Chemotherapy: Used for more advanced prostate cancer that has spread to other parts of the body and does not respond to hormone therapy.
- Targeted therapy and immunotherapy: Newer forms of treatment that target specific aspects of cancer cells or utilize the body's immune system to fight the cancer.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

MORE LIKELY

More likely to get prostate cancer based on 1,049,413 genetic variants we looked at

95th

PERCENTILE

Your risk is **greater than 95% of the population** and **lower than 5% of the population.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
FSTL5	rs7691481	CC
POU5F1B	rs4582524	CC
CNTNAP4	rs74025012	CC
RGS6	rs75316101	AA
FCGR3A	rs147090771	TT
/	rs554511356	CC
/	rs760187366	GG
FGF9	rs781386326	GG
GINS4	rs56336841	CC
/	rs567149703	GG
TTC5	rs566891904	CC
/	rs563535708	CC
IBTK	rs111530166	GG
/	rs769602090	TT
/	rs576948661	AA
KCND2	rs73429913	CC
TNFSF11	rs532873142	CC
/	rs559455928	GG
/	rs142847236	GG
LBR	rs116033837	TT
/	rs544563896	GG

GENE	SNP	GENOTYPE
/	rs369133350	AA
/	rs528765618	GG
ATF7IP2	rs74007078	GG
/	rs767101980	TT
ATF7IP2	rs74009335	TT
HOXB13	rs138213197	CC
CDK5RAP3	rs568360281	CC
/	rs185055152	AA
PCP4L1	rs570264784	GG
/	rs750424210	CC
/	rs771304040	AA
CNTNAP2	rs1614837	TT
/	rs755238767	TT
WDR49	rs576596571	AA
PDCD10	rs180800414	TT
/	rs753950595	AA
PCARE	rs201947297	AA
ARHGAP21	rs187133192	CC
/	rs772533608	TT
FICD	rs148664833	CC
/	rs752830148	TT
FAM240B	rs182782495	CC
/	rs575059233	TT
GFRA2	rs147531216	CC
/	rs79056267	GG
HOXB8	rs559612720	TT
/	rs572623710	GG
BTG1	rs545740817	CC
COPZ2	rs554574584	GG

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Testicular Cancer

Several factors can increase the risk of developing testicular cancer:

- Undescended testicle at birth
- Family history
- Personal history
- Age: Most common in men between 15 and 35.
- Ethnicity: More common in Caucasian men compared to African-American men.

There's no way to prevent testicular cancer but some healthcare providers recommend regular testicle self-exams.

Treatment options depend on the cancer’s stage and type and may include [R]:

- Surgery: The primary treatment is often a radical inguinal orchiectomy, where the affected testicle is removed through an incision in the groin.
- Radiation therapy: Used primarily for certain types of testicular cancer, such as seminomas, often after surgery.
- Chemotherapy: Drugs used to kill cancer cells, especially for cancers that have spread or are considered high risk.
- Surveillance: In some cases, particularly for early-stage cancers, doctors may recommend regular monitoring with follow-up exams and tests instead of immediate treatment.

Testicular cancer generally has a high cure rate, especially when detected early. The prognosis is usually very good, with a high survival rate even for advanced stages, due to effective treatments available. The exact prognosis depends on factors such as the type of testicular cancer, its stage at diagnosis, and the patient’s overall health.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn’t test for hereditary cancer syndromes or ‘cancer genes’. These are usually caused by rare mutations that can’t be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

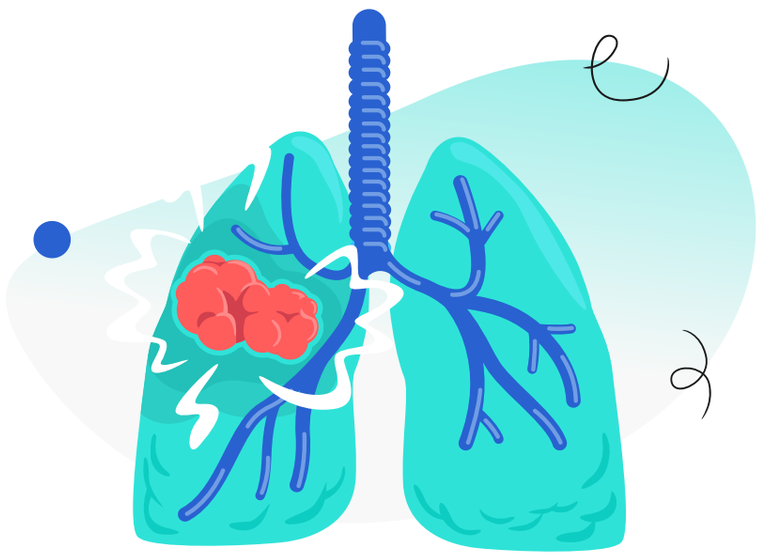
LESS LIKELY

Less likely to have testicular cancer based on 981,211 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
KITLG	rs1907702	AA
KITLG	rs995030	GG
C12ORF29	rs11104702	TT
DMRT3	rs7863616	CC
DMRT1	rs755383	TT
ZNF681	rs61193264	TT
MANBA	rs7659556	TT
ATF7IP	rs2900333	CC
CLPTM1L	rs36115365	GC
HEATR3	rs8046148	GA
MCM3AP	rs2839186	TC
RFTN1	rs10510452	AG
MANBA	rs2720460	GA
MPO	rs9905704	GT
UCK2	rs3790672	CT
NELL1	rs186464019	AA
SIM2	rs56016578	CC
DEPDC1	rs185424124	GG
/	rs80348946	AA
ARL8A	rs61823671	TT
ACTL8	rs111581773	GG
SPRY4	rs4624820	GG
ALCAM	rs9862599	TT
BAK1	rs210138	AA
PRTG	rs10851590	CC
CLPTM1L	rs4635969	GA
PITX1	rs3805663	AG
PRDM14	rs7010162	TC
SLC25A44	rs2072499	AA

The number of "risk" variants in this table doesn't necessarily reflect your overall result.



Respiratory System Cancers

The development of respiratory cancers involves interactions between genetic predispositions and environmental factors. This section examines genetic variants linked to lung and laryngeal cancers, helping understand personal risk profiles for these respiratory tract malignancies.

TYPICAL LIKELIHOOD

Lung Cancer

Typical likelihood of lung cancer

LESS LIKELY

Laryngeal Cancer

Less likely to have laryngeal cancer

Lung Cancer

Exposure to cigarette smoke is by far the main risk factor for lung cancer. Other factors that may increase the risk include [R]:

- Exposure to asbestos and other substances
- Exposure to radon
- Previous radiation therapy to the chest
- Family history

Treatment for lung cancer usually begins with surgery to remove the tumor. If it's very large or has spread to other parts of the body, surgery may not be possible. Treatment might start with chemotherapy and radiation instead depending on factors such as overall health, cancer type and stage, and preferences of the patient. If the side effects of the treatment could outweigh its potential benefits, patients may be offered palliative care [R].

TYPICAL LIKELIHOOD

Typical likelihood of lung cancer based on 849,819 genetic variants we looked at

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

Laryngeal Cancer

Diagnosing laryngeal cancer usually involves a combination of physical examinations, imaging tests such as CT scans or MRIs, and tissue biopsies. Treatment options for laryngeal cancer may include surgery to remove the tumor, radiation therapy, chemotherapy, or a combination thereof, depending on the stage and location of the cancer.

Surgery can range from minimally invasive procedures that preserve the larynx to more extensive surgeries that may require a partial or total laryngectomy, which involves the removal of part or all of the larynx. Following treatment, patients often require rehabilitative services, such as speech therapy, to adapt to changes in speaking or breathing.

LESS LIKELY

Less likely to have laryngeal cancer based on 17,726 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
EPHA7	rs9445023	GG
C16ORF72	rs40129	GG
RBM19	rs10492336	AC
RTTN	rs142021700	TT
AKR1C2	rs77045180	GG
FADS2	rs174549	GG
VCAN	rs310518	GG

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Head & Neck Cancers

Head and neck cancers involve complex genetic factors affecting various tissues in these regions. This section explores genetic variants associated with oropharyngeal, tongue, thyroid, and eye cancers, providing insights into individual risk factors for these specialized malignancies.

TYPICAL LIKELIHOOD

Oropharyngeal Cancer

Typical likelihood of oropharyngeal cancer

TYPICAL LIKELIHOOD

Thyroid Cancer

Typical likelihood of thyroid cancer

LESS LIKELY

Tongue Cancer

Less likely to have tongue cancer

LESS LIKELY

Eye Cancer

Less likely to have eye cancer

Oropharyngeal Cancer

Several factors can increase the risk of developing oropharyngeal cancer [R]:

- Human papillomavirus (HPV) infection: HPV, particularly HPV type 16, is a significant risk factor, especially for tonsillar and base of tongue cancers.
- Smoking cigarettes or using other tobacco products
- Heavy and prolonged alcohol use, particularly when combined with tobacco use
- Age: risk increases with age, typically affecting people over 50.
- Gender: men are more likely to develop oropharyngeal cancer than women.
- Excessive exposure to UV radiation can increase the risk of lip cancer, which can also affect the oropharynx.
- Chronic irritation from poor dental hygiene or ill-fitting dentures.

Treatment options depend on the type and stage of oropharyngeal cancer, as well as the patient's overall health [R]:

- Surgery: transoral robotic surgery (a minimally invasive technique using robotic assistance to remove tumors from the oropharynx) or pharyngectomy (surgical removal of part or all of the pharynx).
- Radiation therapy: using high-energy rays to target and kill cancer cells, often combined with surgery or chemotherapy.
- Chemotherapy: systemic treatment using drugs to kill cancer cells, often used in combination with radiation therapy (chemoradiation).
- Targeted therapy: drugs that specifically target cancer cells' molecular changes, sometimes used for advanced cases or in clinical trials.
- Immunotherapy: uses the body's immune system to fight cancer, including checkpoint inhibitors.

The prognosis for oropharyngeal cancer depends on factors such as the cancer's stage at diagnosis, the specific type of cancer, the patient's overall health, and their response to treatment. Early-stage cancers generally have a better prognosis, while advanced stages may require more aggressive treatment and have a more variable outlook.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

TYPICAL LIKELIHOOD

Typical likelihood of oropharyngeal cancer based on 13,377 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SIRT5	rs78671973	AA
SATB2	rs62178732	GG
SLC7A7	rs12433985	GG
LAMTOR5	rs17358800	AA
ADAMTS15	rs1021455	CC
HLA-DQA1	rs115210925	CG
RIPK2	rs150615	AG
GREM2	rs1832905	GA
/	rs3828805	TC
PWP1	rs35189640	CC
PADI3	rs12079362	GG
RERGL	rs140471080	TT
CD28	rs189602139	GG
CCDC192	rs17696932	TT
CPS1	rs149882261	AA
/	rs77645982	CC
ATXN7L3B	rs181745657	TT
/	rs111651905	CC
RBFOX1	rs146952371	CC
TFAP2A	rs1051512	CC
FMNL2	rs72861983	CC
SLC12A9	rs111276691	CC
FAM221A	rs74393397	GG
IL1B	rs34017101	CC
SELENON	rs61776819	CC
TRNT1	rs75622279	GG
ADH1B	rs1229984	CT
/	rs116168967	GG
ALDH9A1	rs77570135	TT

GENE	SNP	GENOTYPE
WWOX	rs4284656	CC
ZNF429	rs73018258	CC
/	rs720441	GG
PAOX	rs11101731	GG
ZC3H12A	rs75778090	CC
IRS2	rs55864736	GG
HMMR	rs729353	TT
UNC13C	rs12593171	GG
MCFD2	rs7574514	CC
CAPN13	rs2216824	CC
HLA-G	rs2734963	CC

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Thyroid Cancer

Several factors can increase the risk of developing thyroid cancer [R]:

- Female sex: thyroid cancer occurs more often in women than in men. Experts think it may be related to the hormone estrogen.
- Family history: a family history of thyroid cancer or genetic conditions like multiple endocrine neoplasia (MEN) syndromes.
- Radiation exposure: previous radiation treatments to the head, neck, or chest, particularly during childhood.
- Gender and age: Women are more likely to develop thyroid cancer, and it most commonly occurs in people between the ages of 30 and 60.
- Genetic factors: Certain genetic mutations can increase risk, such as those associated with hereditary thyroid cancer syndromes.

Treatment options depend on the type and stage of thyroid cancer, as well as the patient's overall health. They may include [R]:

- Surgery: it can involve thyroidectomy (removal of part or all of the thyroid gland or lymph node dissection (removal of nearby lymph nodes if cancer has spread).
- Radioactive iodine therapy: used after surgery, particularly for papillary and follicular thyroid cancers, to destroy remaining thyroid tissue or cancer cells.
- Thyroid hormone replacement: after surgery, patients will need to take synthetic thyroid hormone to replace the hormones normally produced by the thyroid gland.
- External beam radiation therapy: may be used for anaplastic thyroid cancer or other cases where radioactive iodine is not effective.
- Targeted therapy: newer treatments that target specific genetic mutations in cancer cells, used in cases that do not respond well to traditional treatments.
- Chemotherapy: rarely used but may be considered for anaplastic thyroid carcinoma or other advanced forms.

The prognosis for thyroid cancer is generally good, particularly for papillary and follicular types, which have high survival rates. Anaplastic thyroid carcinoma has a poorer prognosis due to its aggressive nature. The overall outlook depends on the type of thyroid cancer, its stage at diagnosis, and how well it responds to treatment.

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TYPICAL LIKELIHOOD

Typical likelihood of thyroid cancer based on 542,633 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
IGFBP5	rs16857609	TT
MECOM	rs139566210	TT
TRMO	rs7030280	CC
TRMO	rs1588635	AA
TRMO	rs12002967	CC
TERT	rs7734992	CC
NRG1	rs2466074	CC
CTSO	rs555678255	CA
ARRDC4	rs77166399	TT
EPB41L4A	rs73227498	AA
NRG1	rs3802160	GA
PCNX2	rs12129938	AA
TGFB2	rs6697759	TT
LRRC34	rs6793295	TT
CHST3	rs72806259	TG
/	rs11693806	GC
RALGAPA1	rs368187	GC
NRG1	rs2466076	GT
MAF	rs17767904	AG
SMAD3	rs2289261	GC
TERT	rs10069690	TC
NKX2-1	rs116909374	CC
S100P	rs11947482	CC
HMGA2	rs9971770	GG
CNEP1R1	rs117401978	GG
SPINK2	rs114692817	CC
HTATIP2	rs74518511	CC
LARP7	rs76032629	GG
GSTO1	rs7902587	CC

GENE	SNP	GENOTYPE
AAGAB	rs56062135	CC

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Tongue Cancer

Several factors can increase the risk of developing tongue cancer [R]:

- Tobacco use
- Heavy alcohol consumption, particularly when combined with tobacco use
- Human papillomavirus (HPV) infection: certain strains of HPV, especially HPV-16, are associated with increased risk.
- Age: risk increases with age, typically affecting adults over 50.
- Gender: men are more likely to develop tongue cancer than women.
- Chronic irritation from poor dental hygiene or ill-fitting dentures
- Excessive exposure to UV radiation can increase the risk of lip cancer, which can sometimes affect the tongue.

Treatment options for tongue cancer depend on the type, stage of the cancer, and the patient's overall health [R]:

- Surgery: partial glossectomy (removal of part of the tongue) or total glossectomy (removal of the entire tongue, often followed by reconstruction to restore function).
- Radiation therapy: using high-energy rays to target and kill cancer cells, often combined with surgery.
- Chemotherapy: systemic treatment using drugs to kill cancer cells, often used in combination with radiation therapy (chemoradiation) for more advanced cases.
- Targeted therapy: drugs that specifically target cancer cells' molecular changes, used in clinical trials or for certain types of tongue cancer.
- Immunotherapy: uses the body's immune system to fight cancer, including checkpoint inhibitors, though it is more commonly used for other cancers and in clinical trials for tongue cancer.

The prognosis for tongue cancer depends on several factors, including the stage of the cancer at diagnosis, the type of tongue cancer, the extent of the spread, and the patient's overall health. Early-stage tongue cancer generally has a better prognosis, while advanced stages may require more aggressive treatment and have a more variable outlook.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

LESS LIKELY

Less likely to have tongue cancer based on 12,271 genetic variants we looked at

Eye Cancer

Risk factors for eye cancer include:

- Age: certain types, like retinoblastoma, are more common in children, while others, like uveal melanoma, are more common in adults.
- Genetics: genetic conditions like retinoblastoma or von Hippel-Lindau syndrome increase risk.
- Prolonged exposure to ultraviolet (UV) light is a risk factor for ocular surface cancers.
- Skin color: lghter-skinned individuals may be at higher risk for certain types of eye cancers.
- Family history

Treatment options for eye cancer depend on the type and stage of the cancer, as well as the patient's overall health:

- Surgery: enucleation (removal of the eye, typically used for large tumors or when vision cannot be preserved) or local excision: (removal of the tumor and some surrounding healthy tissue).
- Radiation therapy: brachytherapy (placement of radioactive sources near the tumor) or external beam radiation (targeting the tumor from outside the body).
- Chemotherapy: systemic treatment using drugs to kill cancer cells, often used for cancers that have spread or in combination with other treatments.
- Cryotherapy: using extreme cold to destroy cancer cells, sometimes used for small tumors.
- Laser therapy: using high-energy light to target and destroy cancer cells.

The prognosis for eye cancer varies based on the type, stage, and location of the cancer, as well as the patient's overall health and response to treatment. Early detection and treatment generally improve outcomes. For cancers like retinoblastoma, the prognosis can be excellent with prompt treatment, while other types, like uveal melanoma, may have a more variable prognosis depending on the extent of the disease.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn’t test for hereditary cancer syndromes or ‘cancer genes’. These are usually caused by rare mutations that can’t be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

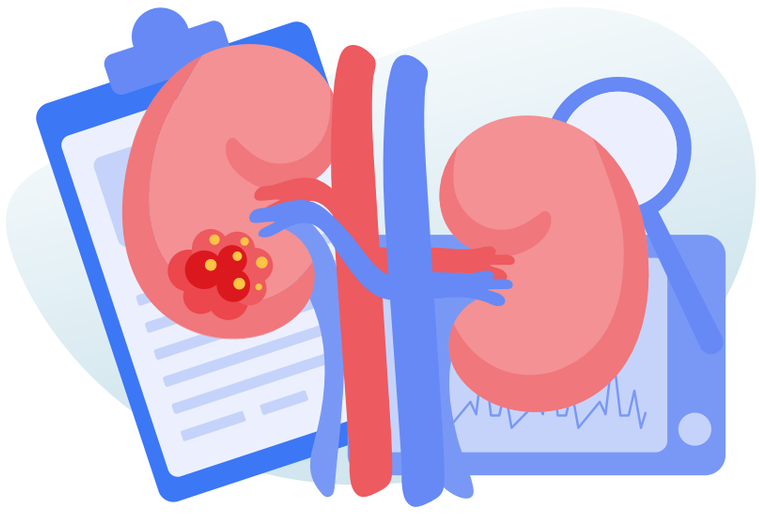
LESS LIKELY

Less likely to have eye cancer based on 17,504 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
DSP	rs2076295	GG
LRRC37A	rs2957316	TT
MAPT	rs1981997	GG
DISP2	rs2034650	AA
ATP11A	rs1278769	GG
MUC2	rs7934606	CT
PRRT1	rs3132946	AG
TERT	rs2736100	CA
TRIM4	rs4727443	AC
DPP9	rs12610495	AG
STN1	rs11191865	AG
DEPTOR	rs7005380	AG
/	rs116906005	CC
MUC5B	rs35705950	GG
SPDL1	rs116483731	GG
CSMD1	rs1379326	TT
TERT	rs7734992	CC
CTNNA3	rs2441727	AA
TASL	rs6631122	T
LRRC34	rs6793295	TT
FAM13A	rs2609255	TT
AKAP13	rs6496044	AA

The number of "risk" variants in this table doesn't necessarily reflect your overall result.



Urinary Tract Cancers

Genetic predispositions can influence the development of cancers in the urinary system. This section examines genetic variants linked to kidney and bladder cancers, offering understanding of personal risk factors for these urological malignancies.

TYPICAL LIKELIHOOD

Kidney Cancer

Typical likelihood of kidney cancer

TYPICAL LIKELIHOOD

Bladder Cancer

Typical likelihood of bladder cancer

Kidney Cancer

Several factors can increase the risk of developing kidney cancer [R]:

- Smoking
- Obesity
- High blood pressure
- Family history: a family history of kidney cancer or genetic conditions such as von Hippel-Lindau (VHL) syndrome or hereditary papillary renal cell carcinoma.
- Chronic kidney disease
- Exposure to certain substances like asbestos or cadmium
- Gender: Men are more likely to develop kidney cancer than women.

Treatment options for kidney cancer depend on the type and stage of cancer, as well as the patient's overall health. They may include [R]:

- Surgery: partial nephrectomy (removal of the tumor and part of the kidney, preserving kidney function) or radical nephrectomy (removal of the entire kidney, often including nearby tissues and lymph nodes).
- Ablation therapy: techniques like radiofrequency ablation (RFA) or cryoablation destroy tumors using heat or cold, respectively, often used for smaller tumors or in patients who are not surgical candidates.
- Radiation therapy: using high-energy rays to target cancer cells, though it is less commonly used for kidney cancer.
- Chemotherapy: generally less effective for RCC but may be used for some types of kidney cancer or in clinical trials.
- Targeted therapy: drugs that target specific molecular changes in cancer cells, such as tyrosine kinase inhibitors (e.g., sunitinib, pazopanib).
- Immunotherapy: uses the body's immune system to fight cancer, including checkpoint inhibitors (e.g., nivolumab, pembrolizumab).

The prognosis for kidney cancer varies based on factors such as the stage of the cancer at diagnosis, the type of kidney cancer, and the patient's overall health. Early-stage kidney cancer generally has a good prognosis with appropriate treatment. Advanced stages may require more aggressive treatment and have a more variable outlook.

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TYPICAL LIKELIHOOD

Typical likelihood of kidney cancer based on 139,915 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
GRB10	rs56200772	CC
SLC6A3	rs12513763	CC
MYC	rs6470588	CC
AKT1	rs61758556	AA
ACTRT3	rs55735727	AA
MYEOV	rs11263432	TT
EPAS1	rs11125068	AA
AKAP12	rs4869977	CC
DPF3	rs4903064	CT
TERT	rs7734992	CC
DCAF4	rs4140952	GG
DCAF4	rs78627435	TC
SSPN	rs12814794	GA
SCARB1	rs10846749	GC
MYEOV	rs11263445	CT
DCAF4	rs1990443	TC
CDKN1A	rs762624	CA
INCENP	rs2277283	TC
SCARB1	rs10846758	TC
DCAF4	rs11158985	AT
VHL	rs7629500	GG
EMID1	rs132383	CC
TP53	rs78378222	TT
POGLUT3	rs141379009	TT
ARL13B	rs114427493	CC
CLPTM1L	rs34685900	TT
CLPTM1L	rs33987166	TT
XBP1	rs9625483	GG
ZEB2	rs13401103	GG

GENE	SNP	GENOTYPE
MAD1L1	rs28970524	CC
EPAS1	rs35366004	GG
DCAF4	rs11561560	GG
RTEL1-TNFRSF6B	rs6011023	AA
MYC	rs73710038	GG
EPAS1	rs72797404	TT
PHF23	rs4069805	CC
GSTO1	rs11813268	CC
CRELD1	rs139729777	AA
PMF1	rs1052067	GG

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Bladder Cancer

Several factors can increase the risk of developing bladder cancer [R]:

- Smoking: tobacco use is a major modifiable risk factor.
- Chemical exposure: working with certain chemicals, such as those used in the dye industry, can increase risk.
- Chronic irritation: conditions like chronic bladder infections or long-term use of urinary catheters increase the risk.
- Family history
- Previous cancer treatments: prior treatment with certain chemotherapy drugs, like cyclophosphamide, can increase risk.
- Age and gender: more common in older adults and more frequent in men than women.

Treatment options depend on the stage and grade of the cancer, as well as the patient's overall health. They may include [R]:

- Surgery: it may consist of transurethral resection of bladder tumors (a procedure to remove tumors from the bladder using a scope inserted through the urethra), partial cystectomy (removal of part of the bladder, often used for localized tumors), and radical cystectomy (removal of the entire bladder, usually for more advanced cases).
- Intravesical therapy: administering chemotherapy or immunotherapy directly into the bladder to target cancer cells.
- Chemotherapy: systemic treatment using drugs to kill cancer cells, often used before or after surgery or in combination with other treatments.
- Radiation therapy: using high-energy rays to target and kill cancer cells, though it's less commonly used for bladder cancer.
- Immunotherapy: drugs that help the immune system recognize and attack cancer cells, such as Bacillus Calmette-Guérin (BCG) therapy, which is often used for superficial bladder cancer.

The prognosis for bladder cancer depends on several factors, including the stage of the cancer at diagnosis, the type of bladder cancer, and the patient's overall health. Most bladder cancers are diagnosed at an early stage, when the cancer is highly treatable. Because even early-stage bladder cancers can come back after successful treatment, people with bladder cancer typically need follow-up tests for years after treatment to look for recurrence.

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TYPICAL LIKELIHOOD

Typical likelihood of bladder cancer based on 1,675 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
MYC	rs9642880	TT
TACC3	rs798766	CT
UGT1A1	rs11892031	AA
P3H2	rs13063162	AA
FAM53A	rs11724531	GA
PSCA	rs2294008	TC
MYC	rs10094872	TA
PSCA	rs2920281	TC
NAT2	rs1495741	AG
APOBEC3A	rs1014971	CT
SLC14A1	rs10775480	TC
CLPTM1L	rs401681	TT
PAK4	rs111249728	GG
SH3BP4	rs111812445	GG
SOX4	rs76088467	AA
P3H2	rs710521	TT
CCNE1	rs8102137	TT
APOBEC3B	rs56297045	GG
CLPTM1L	rs2736103	TT
AMDHD1	rs10777753	GG

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Skin Cancers

The development of skin cancers involves interactions between genetic susceptibility and environmental exposures. This section explores genetic variants associated with melanoma, basal cell carcinoma, and squamous cell carcinoma, providing insights into individual risk factors for these dermatological malignancies.

MORE LIKELY

Melanoma

More likely to get melanoma

TYPICAL LIKELIHOOD

Basal Cell Carcinoma

Typical likelihood of basal cell carcinoma

LESS LIKELY

Squamous Cell Carcinoma

Less likely to have squamous cell carcinoma

Melanoma

Factors that may increase the risk of melanoma include [R]:

- High exposure to UV radiation: Exposure to UV radiation from the sun or tanning beds is the primary risk factor for melanoma.
- Fair skin: melanoma is most common in people with fair skin, hair, and eyes.
- History of sunburns: Severe, blistering sunburns, particularly in childhood, increase the risk.
- Multiple atypical moles: Having a large number of moles or atypical (dysplastic) moles increases the risk.
- Weakened immune system: Individuals with weakened immune systems, such as those who have had organ transplants, are at higher risk.
- Living closer to the Earth's equator or at high elevation
- Family history

Treatment options vary depending on the stage and may include [R]:

- Surgery: The primary treatment for early-stage melanoma, which involves removing the tumor along with a margin of healthy tissue.
- Lymph node dissection: If the melanoma has spread to nearby lymph nodes, these may be surgically removed.
- Immunotherapy: Drugs like pembrolizumab (Keytruda) or nivolumab (Opdivo) boost the body's immune system to fight the cancer.
- Targeted therapy: For melanomas with specific genetic mutations, drugs that target those mutations (e.g., BRAF inhibitors like vemurafenib) can be effective.
- Radiation therapy: May be used in cases where surgery is not possible or if the melanoma has spread.
- Chemotherapy: Less commonly used for melanoma, but may be considered in certain advanced cases.

The prognosis for melanoma depends on the stage at diagnosis. Early-stage melanomas that are detected and treated before they spread have a very high cure rate. However, once melanoma has spread to other parts of the body, it becomes more challenging to treat. Advances in immunotherapy and targeted therapy have improved outcomes for many patients with advanced melanoma.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

MORE LIKELY

More likely to get melanoma based on 1,049,396 genetic variants we looked at

92nd

PERCENTILE

Your risk is **greater than 92% of the population** and **lower than 8% of the population.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SLC45A2	rs35407	GG
TERT	rs139996880	AG
TYR	rs1393350	AG
FLACC1	rs13016963	GA
MX2	rs45430	TC
CCND1	rs498136	AC
AGR2	rs1636744	CT
SOX4	rs6914598	CT
LINC02218	rs187843643	CC
ASIP	rs910873	GG
SPATA2L	rs258322	GG
ASIP	rs1885120	GG
MC1R	rs1805007	CC
ASIP	rs6059655	GG
DBNDD1	rs4785763	CC
IRF4	rs62389423	GG
SLK	rs2995264	AA
IRX3	rs16953002	GG
CTSS	rs7412746	CC
/	rs10739221	CC
CYP1B1	rs6750047	GG

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Basal Cell Carcinoma

Unlike other forms of skin cancer, basal cell carcinoma rarely spreads (metastasizes) beyond the original tumor site. However, it can be disfiguring if not treated promptly and can cause considerable destruction and disfigurement by invading surrounding tissues.

It's important to monitor changes in the skin and seek medical advice if any suspicious growths or new lesions appear, especially in areas that receive a lot of sun exposure. Treatment options vary depending on the severity and can include surgical excision, topical medications, cryotherapy, laser therapy, or radiation, with the aim to remove or destroy the cancerous cells.

TYPICAL LIKELIHOOD

Typical likelihood of basal cell carcinoma based on 33,751 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SLC45A2	rs16891982	GG
RHOU	rs61824911	GA
LPP	rs2049218	TT
PADI6	rs12122129	AG
EDN2	rs2781249	CC
TYR	rs1126809	AG
FOXP1	rs35768603	CT
BNC2	rs10810657	TA
CTLA4	rs1427676	CT
RNASET2	rs4710154	TA
KANK1	rs1323262	CG
IRF4	rs62389423	GG
FANCA	rs12931267	CC
ASIP	rs56238684	GG
KRT5	rs11170164	CC
ASIP	rs17401449	AA
HLA-F	rs29243	GG
NDRG3	rs55804368	CC
EXO1	rs4149909	AA
CTSS	rs41271951	AA
NEK9	rs7145468	AA
OCA2	rs1800407	CC
NCR3	rs61447909	GG
HLA-DQB1	rs9268847	AA
/	rs2572140	GG
SOX4	rs55775505	CC
TICAM1	rs10425559	AA
CTSH	rs2289702	CC
CCDC88B	rs663743	GG

GENE	SNP	GENOTYPE
GRHL1	rs6741117	GG

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Squamous Cell Carcinoma

Symptoms of squamous cell carcinoma include persistent, scaly red patches with irregular borders, open sores that may crust or bleed, an elevated growth with a central depression, or warts; these might itch or be painless. Unlike benign skin blemishes, these lesions often do not heal without treatment.

Squamous cell carcinoma is usually caused by cumulative ultraviolet (UV) exposure over time; thus, protecting the skin from the sun and avoiding tanning beds are critical preventative measures. Treatments include surgical excision, freezing (cryotherapy), laser therapy, or topical medications, depending on the tumor's size, depth, and location.

LESS LIKELY

Less likely to have squamous cell carcinoma based on 8,836 genetic variants we looked at

1st

PERCENTILE

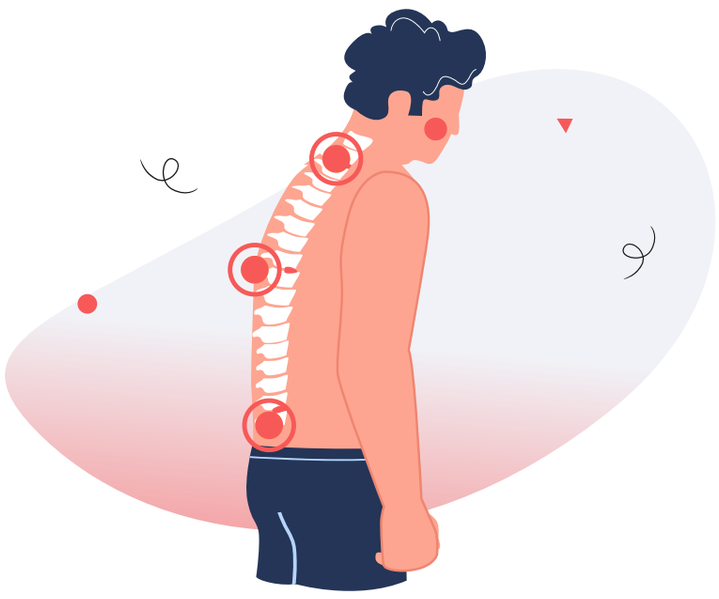
Your risk is **greater than 1% of the population** and **lower than 99% of the population.**

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
SLC45A2	rs16891982	GG
CPVL	rs117744081	AA
LPP	rs60946162	TT
BACH2	rs72928038	GG
TYR	rs1126809	AG
TRPS1	rs7834300	GG
HAL	rs3213737	GG
BNC2	rs10810657	TA
FOXP1	rs9853632	CT
CTLA4	rs231729	AT
ADO	rs16917546	TC
IRF4	rs12203592	CC
MC1R	rs1805007	CC
ASIP	rs6059655	GG
ASIP	rs4911466	TT
CNBD2	rs75653149	CC
AHR	rs62444531	AA
OCA2	rs1800407	CC
HLA-DQA2	rs4455710	CC
CHMP4B	rs74645632	TT
MROH8	rs73094911	TT

GENE	SNP	GENOTYPE
CHMP4B	rs403598	GG
AP3M2	rs12542910	TT
NCR3	rs61447909	GG
ENTR1	rs34302850	AA
CTSS	rs41271951	AA
FLACC1	rs7582362	GG
WEE1	rs7939541	TT

The number of "risk" variants in this table doesn't necessarily reflect your overall result.



Musculoskeletal Cancers

Cancers affecting bones and soft tissues involve specific genetic pathways and risk factors. This section examines genetic variants linked to bone cancer and sarcoma, helping understand personal risk profiles for these musculoskeletal malignancies.

TYPICAL LIKELIHOOD

Sarcoma

Typical likelihood of sarcoma

LESS LIKELY

Bone Cancer

Less likely to have bone cancer

Sarcoma

The disease manifests variably depending on the sarcoma's location and type but often presents as a painless lump. Some sarcomas might be initially asymptomatic and only cause discomfort as they grow large enough to compress surrounding tissues or organs.

Diagnosis typically involves a combination of imaging techniques, such as MRI or CT scans, and biopsy to analyze the tumor cells. Treatment for sarcoma may include surgery, radiation therapy, and chemotherapy, and the approach depends on the sarcoma's size, type, location, and metastatic spread, if any, as well as the patient's overall health and preferences.

TYPICAL LIKELIHOOD

Typical likelihood of sarcoma based on 286,588 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
XRN2	rs112837127	GG
C1ORF127	rs9430161	GG
RREB1	rs7744366	GG
/	rs7832583	TT
ADO	rs224278	CT
XRN2	rs2296730	AA
XRN2	rs12106193	GG
KIZ	rs6106336	TT
SRP14	rs4924410	CC

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Bone Cancer

The exact causes of bone cancer are not well understood, but several factors can increase the risk [R]:

- Genetic disorders: Certain inherited genetic disorders, such as hereditary retinoblastoma and Li-Fraumeni syndrome, are linked to a higher risk of bone cancer.
- Previous radiation therapy: Exposure to high doses of radiation, such as those used in previous cancer treatments, can increase the risk.
- Paget's disease: This bone condition, mostly seen in elderly people, may increase the risk of developing osteosarcoma.
- Bone marrow transplantation: This medical treatment might slightly increase the risk of developing bone cancer later in life.

Treatment depends on the type, stage, location of the cancer, and the patient's overall health [R]:

- Surgery: The primary treatment for bone cancer is surgically removing the entire tumor while preserving as much normal bone and function as possible.
- Chemotherapy: Often used before surgery to shrink the tumor and after to kill any remaining cancer cells.
- Radiation therapy: Used if surgical removal isn't possible, or to reduce symptoms in advanced cases.
- Targeted therapy: Drugs that specifically target cancerous cells without affecting normal cells are being developed and used in some types of bone cancer.

The prognosis for bone cancer depends on factors such as the type of cancer, the extent of its spread, and how well it responds to treatment. Early diagnosis and advanced treatments have improved the prognosis for many people with bone cancer, especially for those with localized disease.

Please note: This report is not diagnostic and can't be used to make any medical decisions. Most cancers are uncommon and have a strong environmental component. Even if your genetic predisposition is high, you will most likely not develop the disease. This report doesn't test for hereditary cancer syndromes or 'cancer genes'. These are usually caused by rare mutations that can't be analyzed by our test. If you're concerned about your risk of hereditary cancer, consider getting a specialized test at a reference laboratory.

LESS LIKELY

Less likely to have bone cancer based on 24,472 genetic variants we looked at

Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
TASOR2	rs2797501	AA
/	rs7591996	CA
PARM1	rs17248137	AA
LRMDA	rs17465450	AA
GLDC	rs55933544	CC
SNTB1	rs6986444	CC
MECOM	rs6797464	GG
GPD1L	rs4955138	AA
HSPB8	rs12146774	CT
ARVCF	rs9332377	TC
AGMO	rs7777171	CT
GRM4	rs1906953	TC
ADAMTS17	rs2086452	GA
ADAMTS6	rs17206779	TC
DLEU7	rs573666	CC

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

Recommendations Details

1 Aerobic Exercise (Cardio)

Engage in at least 150 minutes of moderate-intensity aerobic exercise or 75 minutes of vigorous-intensity activity each week. Distribute this time over at least 3 days per week, avoiding consecutive days of vigorous exercise to allow for recovery.

TYPICAL STARTING DOSE

1 hour

Helps with these Symptoms & Conditions:

- Allergies
- Anxiety
- High Blood Pressure
- Migraines

Helps with these Goals:

- Energy
- Immunity
- Mood

Helps with these DNA Risks:

- Colorectal Cancer
- Melanoma
- Prostate Cancer

Helps with these Lifestyle Risks:

- Prostate Cancer

2 Maintain Optimal Vitamin D Levels

Check your vitamin D levels, they should ideally be in the 30-66 ng/mL range. If your levels are lower than that, take a vitamin D supplement, 1000-4000 IU daily, to reach an optimal range.

TYPICAL STARTING DOSE

1000 iu

Helps with these Symptoms & Conditions:

- Allergies
- Anxiety
- High Blood Pressure
- Migraines

Helps with these Goals:

Energy

Immunity

Mood

Muscle Growth

Helps with these DNA Risks:

Colorectal Cancer

Melanoma

Prostate Cancer

Helps with these Lifestyle Risks:

Prostate Cancer

Stomach Cancer

3 Methylfolate

Take an L-methyl folate supplement (400-800 micrograms daily), ideally with a meal, to improve absorption. This dosage is recommended for adults, including pregnant women, to support overall health, especially to reduce the risk of neural tube defects in developing fetuses. Continue daily use as part of your regular supplement routine.

TYPICAL STARTING DOSE

400 mcg

Helps with these Symptoms & Conditions:

High Blood Pressure

Helps with these Goals:

Immunity

Mood

Helps with these DNA Risks:

Colorectal Cancer

Melanoma

Helps with these Lifestyle Risks:

Stomach Cancer

4 Mediterranean Diet

Incorporate a variety of primarily plant-based foods, such as fruits, vegetables, whole grains, nuts, and legumes, into every meal. Choose healthy fats, like olive oil, over saturated fats and consume fish and poultry at least twice a week. Limit red meat to a few times a month and include a moderate amount of

dairy products. Opt for water and red wine in moderation as your beverages.

Helps with these Symptoms & Conditions:

Allergies | High Blood Pressure

Helps with these Goals:

Energy | Mood

Helps with these DNA Risks:

Colorectal Cancer | Melanoma | Prostate Cancer

Helps with these Lifestyle Risks:

Prostate Cancer | Stomach Cancer

5 Cruciferous Vegetables

Incorporate a serving of cruciferous vegetables, such as broccoli, cauliflower, Brussels sprouts, kale, or cabbage, into at least one meal each day. A serving size is about a half cup cooked or one cup raw. Try to maintain this habit consistently over time for the best health outcomes.

Helps with these Symptoms & Conditions:

High Blood Pressure

Helps with these Goals:

Immunity

Helps with these DNA Risks:

Colorectal Cancer | Prostate Cancer

Helps with these Lifestyle Risks:

Prostate Cancer | Stomach Cancer

6 Green Tea

Consume 400 mg of green tea extract daily. This can be taken in the form of capsules or tablets available that specify the amount of green tea extract. Ensure the supplement is taken according to the product's specific instructions, usually once a day with water.

TYPICAL STARTING DOSE

400 mg

Helps with these Symptoms & Conditions:

- Anxiety
- High Blood Pressure

Helps with these Goals:

- Energy
- Immunity
- Mood

Helps with these DNA Risks:

- Colorectal Cancer
- Prostate Cancer

Helps with these Lifestyle Risks:

- Prostate Cancer
- Stomach Cancer

7 Avoid Asbestos

Check for the presence of asbestos in materials in old buildings, especially those built before the 1980s, before doing any renovations or demolitions. Avoid disturbing materials that might contain asbestos, such as insulation, tiles, and roofing. If asbestos needs to be removed, hire professionals who specialize in asbestos abatement.

Helps with these DNA Risks:

- Colorectal Cancer
- Prostate Cancer

Helps with these Lifestyle Risks:

- Prostate Cancer
- Stomach Cancer

8 Garlic Supplement

Take a garlic supplement, such as a garlic extract or aged garlic supplement, in a dosage of 600-1,200 mg per day, divided into separate doses. This should be taken with meals to minimize digestive issues. Continue daily for at least 8-12 weeks to evaluate its effects on health markers like blood pressure or cholesterol.

TYPICAL STARTING DOSE

200 mg

Helps with these Symptoms & Conditions:

- High Blood Pressure

Helps with these Goals:

- Exercise Recovery
- Immunity

Helps with these DNA Risks:

- Colorectal Cancer
- Prostate Cancer

Helps with these Lifestyle Risks:

- Prostate Cancer

9 Avoid Organochlorine Pesticide Exposure

Minimize exposure by choosing organic fruits and vegetables, thoroughly washing produce before consumption, and avoiding areas where organochlorine pesticides are applied. Consider using air purifiers in homes close to agricultural areas to reduce indoor pesticide levels.

Helps with these Symptoms & Conditions:

- High Blood Pressure

Helps with these DNA Risks:

- Colorectal Cancer
- Prostate Cancer

Helps with these Lifestyle Risks:

- Prostate Cancer

10 Curcumin

Take a 500 mg curcumin supplement daily with food. To enhance absorption, take it with a meal that contains fats or oils since curcumin is fat-soluble.

TYPICAL STARTING DOSE

500 mg

Helps with these Symptoms & Conditions:

Allergies | Anxiety | High Blood Pressure

Helps with these Goals:

Energy | Exercise Recovery | Immunity | Mood

Helps with these DNA Risks:

Colorectal Cancer | Prostate Cancer

Helps with these Lifestyle Risks:

Prostate Cancer | Stomach Cancer

11 Progressive Muscle Relaxation

Set aside at least 10-15 minutes daily in a quiet, comfortable spot where you won't be disturbed. Start by tensing the muscles in your feet for 5 seconds, then relax for 30 seconds, and progressively work your way up through the major muscle groups of your body, tensing then relaxing each for 5 and 30 seconds respectively.

TYPICAL STARTING DOSE

10 minutes

Helps with these Symptoms & Conditions:

Anxiety | High Blood Pressure | Migraines

Helps with these Goals:

Energy | Exercise Recovery | Mood

Helps with these DNA Risks:

- Colorectal Cancer
- Prostate Cancer

Helps with these Lifestyle Risks:

- Prostate Cancer

12 Broccoli

Incorporate at least one cup of chopped broccoli, either steamed or raw, into your daily diet. This can be as part of a meal or snack. Continue this practice daily for ongoing health benefits.

Helps with these Symptoms & Conditions:

- High Blood Pressure

Helps with these Goals:

- Immunity

Helps with these DNA Risks:

- Colorectal Cancer

Helps with these Lifestyle Risks:

- Stomach Cancer

13 Strength Training

Engage in strength training exercises, such as weight lifting or bodyweight exercises, for 60 minutes per session, 2 to 3 times per week. Ensure you work all major muscle groups and rest each muscle group for at least 48 hours before exercising it again.

TYPICAL STARTING DOSE

1 hour

Helps with these Symptoms & Conditions:

Anxiety

High Blood Pressure

Helps with these Goals:

Immunity

Mood

Muscle Growth

Helps with these DNA Risks:

Colorectal Cancer

14 Eat Fiber-Rich Foods

Incorporate foods high in fiber, such as fruits, vegetables, whole grains, and legumes, into your daily meals. Aim for a total dietary fiber intake of 25 to 30 grams per day, spread out over all meals.

Helps with these DNA Risks:

Colorectal Cancer

15 Avoid Secondhand Smoke

Implementing a smoke-free lifestyle involves communicating your needs to family, friends, and coworkers, requesting they respect your choice by smoking away from you. At home, establish strict no-smoking policies indoors. When out, choose smoke-free venues and accommodations. Advocate for smoke-free environments in your community and support legislation that promotes public health by reducing exposure to secondhand smoke. Utilize air purifiers at home to reduce any residual particles.

Helps with these Symptoms & Conditions:

High Blood Pressure

Helps with these Goals:

Immunity

Helps with these DNA Risks:

Melanoma

Prostate Cancer

Helps with these Lifestyle Risks:

- Prostate Cancer

Next Steps

Remember, your genes only tell one important part of your health story!

Now that you've seen your DNA-based results for this health topic, let's take a look at other contributing factors.

Your Lifestyle Assessments

Ever heard of the term Nature vs. Nurture?

The thing is, both DNA and environment play a role in determining your health risks. The following assessments shows how much of an impact your lifestyle, environment and medical history are having on your health risks.

LIFESTYLE

You have a slightly increased risk of prostate cancer based on the answers you provided.

Factors impacting your risk:

Your BMI:
30.77
Increasing Risk

Do you smoke tobacco?
No, never
Decreasing Risk

What is your ethnicity?
Other
No impact

What is your height?
178 cm
No impact

What is your current weight?
97.5 kg
No impact

LIFESTYLE

You have an average risk of stomach cancer based on the answers you provided.

Factors impacting your risk:

Do you ever add salt to your meal after it has been prepared and seasoned?

Almost always

Increasing Risk

Have you ever been diagnosed with H. pylori infection?

Yes, but it has not been fully treated

Increasing Risk

Your BMI:

30.77

Increasing Risk

Do you smoke tobacco?

No, never

Decreasing Risk

How much alcohol do you drink on a typical day?
Calculate your alcohol consumption in units here

0 units

Decreasing Risk

Do you regularly eat 5 or more servings of fruit or vegetables a day?

Yes

Decreasing Risk

What is your blood type?

AB

Decreasing Risk

Do you have a parent or sibling who has ever been diagnosed with stomach cancer?

No

Decreasing Risk

What is your height?

178 cm

No impact

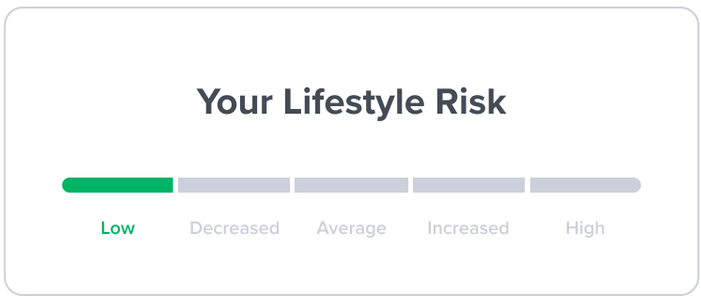
What is your current weight?

97.5 kg

No impact

LIFESTYLE

You have a reduced risk of pancreatic cancer based on the answers you provided.



Factors impacting your risk:

What is your blood type?

AB

Increasing Risk

Have you ever been diagnosed with chronic pancreatitis (pancreas inflammation)?

Yes

Increasing Risk

Your BMI:

30.77

Increasing Risk

Have you ever been diagnosed with diabetes?

No

Decreasing Risk

Do you smoke tobacco?

No, never

Decreasing Risk

How much alcohol do you drink on a typical day?
Calculate your alcohol consumption in units here

0 units

Decreasing Risk

Do you have a parent or sibling who has ever been diagnosed with pancreatic cancer?

No

Decreasing Risk

What is your height?

178 cm

No impact

What is your current weight?

97.5 kg

No impact

What is your sex?

Male

No impact