

# Cancer Risk Factors

A **cancer risk factor** is anything that increases a person’s risk of developing cancer. **Non-modifiable** cancer risk factors include age, sex, race and ethnicity, family history, and genetics (e.g., changes in DNA). **Modifiable** cancer risk factors include health behaviors and lifestyle factors (e.g., tobacco and alcohol use, obesity). Environmental risk factors for cancer such as radiation, infectious agents, and workplace exposures may be non-modifiable or modifiable. The causes of cancer vary greatly by the type of cancer, and many risk factors have yet to be identified. It is often not just one factor that increases a person’s risk of developing cancer; rather, cancer most often results from a complex interaction of multiple factors.

Tobacco use remains the leading preventable cause of death in the United States. According to the American Cancer Society, about 30% of all cancer deaths are caused by smoking cigarettes. In addition, an estimated 18% of cancer cases are attributable to the combined effects of excess body weight, alcohol consumption, physical inactivity, and an unhealthy diet. The most effective way to prevent cancer is to control or change known, modifiable risk factors. Avoidance of chemicals and other substances in the environment may also reduce the risk of developing cancer. Non-modifiable, modifiable, and environmental risk factors by cancer site/type are presented in the following table.

Site / Type	Non-Modifiable Risk Factors	Modifiable and Environmental Risk Factors
<b>Brain &amp; Other Central Nervous System (CNS) Major Types:</b>  <b>• Meningioma:</b> The most common type of benign (nonmalignant) brain tumor.  <b>• Glioma:</b> The most common type of malignant brain tumor.	<p><b>Age:</b> The risk of meningioma increases steadily with age. The relationship between age and glioma risk varies by tumor histology: Pilocytic astrocytoma typically occurs in children and young adults; oligodendrogliomas are most common in the 35-44 age group; and, the incidence of anaplastic astrocytoma and glioblastoma increases with age.</p> <p><b>Sex:</b> Meningiomas occur twice as often in women than men; it has been hypothesized that hormones (endogenous and exogenous) may increase risk of meningiomas among women. Gliomas are more common in men than women, with 55% of gliomas occurring in men. Medulloblastomas and primitive neuroectodermal tumors are more common in boys than girls.</p> <p><b>Race and Ethnicity:</b> In the United States, meningiomas are 20% more common in Blacks than whites. Gliomas are more common in non-Hispanic whites than Hispanics, Blacks, or Asians.</p> <p><b>Gene mutations:</b> There is an increased risk of brain and other CNS cancer in individuals with specific genetic syndromes including: neurofibromatosis types 1 and 2 (NF1, NF2), tuberous sclerosis, von-Hippel-Lindau disease, Li-Fraumeni syndrome, Gorlin syndrome (basal cell nevus syndrome), Turcot syndrome, Cowden syndrome, hereditary retinoblastoma, and Rubinstein-Taybi syndrome.</p> <p><b>Family History:</b> There is a small increased risk of brain tumors among relatives of brain tumor patients.</p>	<p><b>Ionizing Radiation:</b> Therapeutic radiation to the head, e.g., for treatment of ringworm or another cancer, increases the risk of developing brain tumors.</p> <p><b>Uncertain Risk Factors:</b> The following may increase CNS cancer risk: exposure to certain chemicals (e.g., vinyl chloride, petroleum products), advanced parental age, birth defects, high birth weight, computed tomography (CT) scans (diagnostic ionizing radiation), maternal dietary intake of N-nitroso compounds (NOCs), and residential pesticide exposure.</p>

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<b>Bladder</b>	<p><b>Age:</b> The risk of bladder cancer increases with age. About nine out of 10 people with bladder cancer are older than 55.</p> <p><b>Sex:</b> Bladder cancer is much more common in men than in women.</p> <p><b>Race and Ethnicity:</b> Whites are about twice as likely to develop bladder cancer as Blacks. Non-Hispanics are twice as likely to develop bladder cancer as Hispanics.</p> <p><b>Chronic Bladder Irritation and Infections:</b> Urinary infections, kidney and bladder stones, bladder catheters left in place for a long time, and other causes of chronic bladder irritation have been linked with bladder cancer.</p> <p><b>Family history:</b> People who have family members with bladder cancer have a higher risk of getting it themselves. The increased risk among family members may be due to exposure to the same cancer-causing chemicals (such as those in tobacco smoke).</p> <p><b>Genetics:</b> People with specific genetic characteristics have a higher bladder cancer risk. These include HRAS mutation (Costello Syndrome, Facio-Cutaneous-Skeletal Syndrome), Rb1 mutation, PTEN/MMAC1 mutation (Cowden Syndrome), NAT2 slow acetylator phenotype, and GSTM1 null phenotype.</p>	<p><b>Smoking:</b> Tobacco smoking is the most important risk factor for bladder cancer. Tobacco smoking causes about half of all bladder cancer cases.</p> <p><b>Chemotherapy:</b> Taking the chemotherapy drug cyclophosphamide or ifosfamide increases the risk of bladder cancer.</p> <p><b>Radiation Therapy:</b> People who are treated with radiation to the pelvis are more likely to develop bladder cancer.</p> <p><b>Arsenic:</b> Arsenic, including that in drinking water, has been linked with a higher risk of bladder cancer in some parts of the world.</p> <p><b>Workplace Exposures:</b> Certain industrial chemicals have been linked with bladder cancer. Painters and workers in the dye, rubber, leather, and aluminum industries have an increased risk.</p>
<b>Breast</b>	<p><b>Age:</b> Risk of developing breast cancer increases with age. Most breast cancers are found in women age 55 and older.</p> <p><b>Sex:</b> Breast cancer is about 100 times more common among women than men.</p> <p><b>Race and Ethnicity:</b> Nationally, white women are slightly more likely to develop breast cancer than Black women. However, in women younger than 45, breast cancer is more common in Black women. At any age, Black women are more likely to die from breast cancer. Asian, Hispanic, and Native American women have a lower risk of developing and dying from breast cancer.</p> <p><b>Genetic Alterations:</b> About 5-10% of cases are hereditary and result from gene mutations, most commonly mutations of the BRCA1 and BRCA2 genes. Ashkenazi Jews are at increased risk due to increased prevalence of BRCA1 and BRCA2 mutations.</p> <p><b>High Breast Density:</b> Women with high breast tissue density (the amount of glandular tissue relative to fatty tissue measured on a mammogram) have a higher risk of breast cancer.</p> <p><b>Family History:</b> Risk is higher if a first-degree relative has had breast cancer, especially if the family member was diagnosed before age 50.</p> <p><b>Personal History:</b> Women who have had breast cancer have an increased risk of developing a new breast cancer (either in the other breast or a different part of the same breast). In addition, women.</p> <p><b>Long Menstrual History:</b> Women who started menstruating before age 12 or who went through menopause after age 55 have a higher risk.</p> <p><b>Diethylstilbestrol (DES):</b> Women who were given DES during pregnancy and women whose mother took DES while pregnant have slightly increased risk.</p>	<p><b>Having Children After 30 or Not Having Children:</b> Women who have had no children or who had their first child after age 30 have a slightly higher breast cancer risk.</p> <p><b>Oral Contraceptive Use:</b> Women who currently or recently used oral contraceptives have a slightly increased risk, compared with women who stopped using them more than 10 years ago or never used them.</p> <p><b>Use of Menopausal Hormone Therapy:</b> Women who use combined estrogen and progesterone menopausal hormone therapy for two or more years are at increased risk. This increased risk goes away within five years of nonuse.</p> <p><b>Not Breastfeeding:</b> Women who have never nursed have a slightly increased risk, compared with women who nursed.</p> <p><b>Overweight and Obesity:</b> Women who are overweight or obese after menopause have an increased risk of breast cancer.</p> <p><b>Not Being Physically Active:</b> Women who are not physically active have a higher risk, compared with women who are.</p> <p><b>Alcohol:</b> The more alcohol a woman drinks, the greater her risk of breast cancer.</p> <p><b>Previous Breast / Chest Radiation:</b> Women who had radiation therapy to the chest area before age 40 as treatment for another cancer or other medical conditions have increased risk.</p>

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<b>Cervix</b>	<p><b>Age:</b> Women between the ages of 45 and 60 are at the highest risk for cervical cancer.</p> <p><b>Race and Ethnicity:</b> More Black and Hispanic women are diagnosed with cervical cancer than women of other races and ethnicities.</p> <p><b>DES:</b> Being exposed to DES while in the mother's womb increases the risk of cervical dysplasia and clear cell adenocarcinoma of the cervix.</p>	<p><b>Human Papillomavirus (HPV) Infection:</b> Infection of the cervix with HPV spread through sexual contact is almost always the cause of cervical cancer. The vaccine Gardasil 9 helps to prevent diseases caused by certain types of HPV, including cervical cancer, in adolescents and young adults.</p> <p><b>Among Women Who Are Infected With Hpv, The Following Factors Further Increase Risk:</b></p> <ul style="list-style-type: none"> <li>• <b>Smoking:</b> Women who smoke are about twice as likely as nonsmokers to develop cervical cancer.</li> <li>• <b>Oral Contraceptives:</b> Long-term use of oral contraceptives increases risk of cervical cancer.</li> <li>• <b>Giving Birth to Many Children:</b> Risk of cervical is higher among women who have a high number of childbirths (estimated seven or more).</li> </ul>
<b>Colon &amp; Rectum</b>	<p><b>Age:</b> Risk of colon and rectum cancer increases with age. Younger adults can get it, but it's much more common after age 50.</p> <p><b>Sex:</b> Males have a higher incidence rate of colon and rectum cancer, compared with females.</p> <p><b>Race:</b> Blacks have the highest incidence rate of colon and rectum cancer.</p> <p><b>Ethnicity:</b> Ashkenazi Jews are at increased risk of colon and rectum cancer.</p> <p><b>Colon and Rectum Polyps:</b> Polyps, which are growths on the inner wall of the colon or rectum, are common in people older than 50. Most polyps are benign, but some polyps (high-risk adenomas) can continue to grow and become cancerous.</p> <p><b>Family History Of Colon And Rectum Cancer Or Adenomatous Polyps:</b> Having a parent, sibling, or offspring who has had colon and rectum cancer or adenomatous polyps increases risk, especially if more than one has been diagnosed or the relative was diagnosed at a young age.</p> <p><b>Genetic Alterations:</b> Lynch syndrome, also known as hereditary nonpolyposis colon cancer (HNPCC), is an inherited condition that increases colon and rectum cancer risk. Familial adenomatous polyposis (FAP), caused by a change in a gene called adenomatous polyposis coli (APC), is a rare, inherited condition in which hundreds of polyps form in the colon and rectum, which increases colon and rectum cancer risk.</p> <p><b>Personal History of Certain Cancers or Adenomatous Polyps:</b> A person who has already had colon and rectum cancer may develop colon and rectum cancer a second time. Also, women with a history of cancer of the ovary are at higher risk. A person with a history of adenomatous polyps has an increased risk of colon and rectum cancer, especially if the polyps were numerous or large.</p> <p><b>Ulcerative Colitis or Crohn's Disease:</b> A person who has had a condition that causes inflammatory bowel disease (such as ulcerative colitis or Crohn's disease) for many years is at increased risk of developing colon and rectum cancer.</p>	<p><b>Excessive Alcohol Use:</b> Having three or more drinks of alcohol per day increases risk.</p> <p><b>Obesity:</b> Obesity is linked to an increased risk.</p> <p><b>Smoking:</b> Cigarette smoking increases the risk of colon and rectum cancer.</p>

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<b>Esophagus</b>	<p><b>Age:</b> The chance of getting esophageal cancer increases with age. Fewer than 15% of cases are found in people younger than age 55.</p> <p><b>Sex:</b> Men are more likely than women to get esophageal cancer.</p> <p><b>Personal History:</b> People who have had certain other cancers such as lung cancer, mouth cancer, and throat cancer have a high risk of getting squamous cell carcinoma of the esophagus as well. This may be because these cancers can also be caused by smoking.</p>	<p><b>Tobacco:</b> The use of tobacco products, including cigarettes, cigars, pipes, and chewing tobacco, is a major risk factor for squamous cell carcinoma of the esophagus.</p> <p><b>Alcohol:</b> Drinking alcohol increases risk. Combining smoking and drinking alcohol increases the risk of squamous cell carcinoma of the esophagus much more than using either alone.</p> <p><b>Reflux or Barrett's Esophagus:</b> Long-term irritation of the lining of the esophagus, as happens with gastroesophageal reflux disease (GERD) and Barrett's esophagus, may increase risk of adenocarcinoma of the esophagus.</p> <p><b>Overweight or Obesity:</b> People who are overweight or obese have a higher risk of adenocarcinoma of the esophagus.</p>
<b>Hodgkin Lymphoma</b>	<p><b>Age:</b> Risk of Hodgkin lymphoma (HL) is highest among persons 15-30 and 55 and older.</p> <p><b>Family History:</b> Brothers and sisters of young people with this disease have a higher risk for HL. The risk is very high for an identical twin of a person with HL.</p>	<p><b>Epstein-Barr Virus Infection / Mononucleosis:</b> People who have had infectious mononucleosis (often called mono), an infection caused by the Epstein-Barr virus (EBV), have a small increased risk of HL.</p> <p><b>Human Immunodeficiency Virus (HIV) Infection:</b> People infected with HIV, the virus that causes AIDS, have an increased risk of HL.</p>
<b>Kidney &amp; Renal Pelvis</b>	<p><b>Age:</b> Kidney and renal pelvis cancer is usually diagnosed in adults age 50-70.</p> <p><b>Sex:</b> Kidney and renal pelvis cancer is two to three times more common in men than in women.</p> <p><b>Race:</b> Blacks and American Indians/Alaskan Natives have higher rates of kidney and renal pelvis cancer, compared with whites.</p> <p><b>Family History:</b> People with a strong family history of kidney and renal pelvis cancer have a higher chance of developing this cancer. This risk is highest in brothers or sisters of those with kidney and renal pelvis cancer.</p> <p><b>Advanced Kidney Disease:</b> People with advanced kidney disease, especially those needing dialysis, have a higher risk of kidney and renal pelvis cancer.</p> <p><b>Rare Inherited Conditions:</b> People who have been diagnosed with von-Hippel-Lindau disease, hereditary papillary renal cell carcinomas (RCC), hereditary leiomyoma-RCC, Birt-Hogg-Dube syndrome, and familial renal cancer have increased risk of kidney and renal pelvis cancer.</p>	<p><b>Smoking:</b> Smoking approximately doubles the risk of developing kidney and renal pelvis cancer.</p> <p><b>Obesity:</b> People who are overweight have a higher risk of RCC, possibly due to changes in certain hormones.</p> <p><b>Workplace Exposures:</b> Workplace exposure to certain substances (cadmium, some herbicides, and organic solvents, particularly trichloroethylene) increases the risk for kidney and renal pelvis cancer.</p> <p><b>Overuse of Certain Medications:</b> Diuretics and analgesic pain pills, such as aspirin, acetaminophen, and ibuprofen have been linked to kidney and renal pelvis cancer.</p> <p><b>High Blood Pressure:</b> High blood pressure, or the medicines used to treat high blood pressure, increases risk.</p>

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<b>Larynx</b>	<p><b>Age:</b> More than half of all people diagnosed with laryngeal cancer are age 65 or older. Sex: Cancer of the larynx is about four times more common in men than women.</p> <p><b>Race and Ethnicity:</b> Cancer of the larynx is more common among Blacks and whites than among Asians and Hispanics.</p>	<p><b>Smoking:</b> Smoking tobacco causes most laryngeal cancers.</p> <p><b>Alcohol:</b> Moderate or heavy alcohol use increases the risk of laryngeal cancer, although not as much as smoking. Using alcohol and tobacco together increases the risk many times more than using either alone.</p> <p><b>Occupational Exposures:</b> Long and intense exposures to wood dust, paint fumes, and certain chemicals used in the metalworking, petroleum, plastics, and textile industries can increase risk.</p>
<b>Leukemia</b>	<p><b>Age:</b> Acute lymphocytic leukemia (ALL) is most commonly diagnosed among children; whereas, acute myeloid leukemia (AML), chronic lymphocytic leukemia (CLL), and chronic myeloid leukemia (CML) occur mainly in adults.</p> <p><b>Sex:</b> Leukemia is more common among men than women.</p> <p><b>Race:</b> Whites have higher rates of leukemia than Blacks.</p> <p><b>Family History:</b> While it is rare for more than one person in a family to have leukemia, family history does increase risk of CLL.</p> <p><b>Down Syndrome and Other Inherited Diseases:</b> Down syndrome and certain other inherited diseases increase risk of developing acute leukemia (ALL and AML).</p> <p><b>Myelodysplastic Syndrome and Certain Other Blood Disorders:</b> People with certain blood disorders are at increased risk of AML.</p>	<p><b>Radiation:</b> People exposed to very high levels of radiation are much more likely than others to get AML, CML, or ALL. Radiation exposure resulting from medical treatment for cancer and other conditions can increase risk.</p> <p><b>Benzene:</b> Exposure to benzene in the workplace can cause AML. It may also cause CML and ALL. Benzene is found primarily in the chemical industry, cigarette smoke, and gasoline.</p> <p><b>Chemotherapy:</b> Cancer patients treated with certain types of cancer treatment drugs sometimes later get AML or ALL.</p> <p><b>Smoking:</b> Smoking cigarettes increases risk of AML.</p> <p><b>Human T-cell Leukemia Virus Type I (HTLV-I):</b> People with HTLV-I infection are at increased risk of a rare type of leukemia known as adult T-cell leukemia.</p>
<b>Liver &amp; Intrahepatic Bile Duct</b>	<p><b>Age:</b> Most liver cancers occur in people who are 60 years of age or older.</p> <p><b>Sex:</b> Liver cancer is more than twice as common in men as women.</p> <p><b>Race and Ethnicity:</b> In the United States, Asians/Pacific Islanders, American Indians/Alaskan Natives, and Hispanics have the highest rates of liver cancer, followed by Blacks. Whites have the lowest rates of liver cancer.</p> <p><b>Inherited Metabolic Diseases:</b> Diseases such as hemochromatosis (a disease in which too much iron is absorbed from food) increase liver cancer risk. Other rare diseases that increase the risk of liver cancer include: tyrosinemia, alpha1-antitrypsin deficiency, porphyria cutanea tarda, glycogen storage diseases, and Wilson's disease.</p> <p><b>Inflammatory Bowel Disease:</b> People with ulcerative colitis and Crohn's disease are at increased risk for bile duct cancer.</p> <p><b>Chronic Inflammation of the Bile Ducts:</b> Risk for bile duct cancer increases for individuals who have chronic inflammation of the bile ducts.</p>	<p><b>Cirrhosis:</b> Individuals with cirrhosis, a disease where liver cells are damaged and replaced with scar tissue, are at increased risk for liver cancer. Most people who develop liver cancer have cirrhosis. Cirrhosis is often caused by alcohol abuse, chronic hepatitis B virus (HBV) infection, chronic hepatitis C virus (HCV) infection, or obesity. Primary biliary cirrhosis, an autoimmune disease, can also cause cirrhosis.</p> <p><b>Obesity/overweight:</b> Excess body weight accounts for approximately one-third of liver cancers in the United States. Liver cancer risk increases by 26% for every 5 kilograms per square meter increase in body mass index (BMI). People with non-alcoholic fatty liver disease, a condition common in obese people, can develop cirrhosis and are therefore more likely to develop liver cancer.</p> <p><b>Chronic Infection with HBV or HCV:</b> Chronic HCV infection is a leading cause of liver cancer in the United States, accounting for about 25% of liver cancers. While HBV infection is the most common cause of liver cancer worldwide, it accounts for approximately 5% of liver cancers in the United States. Hepatitis is transmitted through sharing contaminated needles, unprotected sex, or childbirth.</p>

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<b>Liver &amp; Intrahepatic Bile Duct (Continued)</b>	<p><b>Age:</b> Most liver cancers occur in people who are 60 years of age or older.</p> <p><b>Sex:</b> Liver cancer is more than twice as common in men as women.</p> <p><b>Race and Ethnicity:</b> In the United States, Asians/Pacific Islanders, American Indians/Alaskan Natives, and Hispanics have the highest rates of liver cancer, followed by Blacks. Whites have the lowest rates of liver cancer.</p> <p><b>Inherited Metabolic Diseases:</b> Diseases such as hemochromatosis (a disease in which too much iron is absorbed from food) increase liver cancer risk. Other rare diseases that increase the risk of liver cancer include: tyrosinemia, alpha1-antitrypsin deficiency, porphyria cutanea tarda, glycogen storage diseases, and Wilson's disease.</p> <p><b>Inflammatory Bowel Disease:</b> People with ulcerative colitis and Crohn's disease are at increased risk for bile duct cancer.</p> <p><b>Chronic Inflammation of the Bile Ducts:</b> Risk for bile duct cancer increases for individuals who have chronic inflammation of the bile ducts.</p>	<p><b>Smoking:</b> Smoking increases the risk of liver cancer by about 50%.</p> <p><b>Heavy Alcohol Use:</b> Heavy alcohol use increases the risk of liver cancer.</p> <p><b>Type 2 Diabetes:</b> Individuals with type 2 diabetes are at increased risk of liver cancer.</p> <p><b>Anabolic Steroids:</b> There is a slight increased risk of liver cancer for long-term anabolic steroid users.</p> <p><b>Exposure to Chemicals:</b> Exposure to vinyl chloride, a heavily regulated chemical used in making some plastics, increases risk of liver cancer. Thorium dioxide (Thorotrast) exposure, used in the past in certain X-ray tests, also increases risk.</p> <p><b>Arsenic:</b> Drinking water from wells contaminated with naturally occurring arsenic over a long period of time increases liver cancer risk.</p> <p><b>Aflatoxins:</b> While more common in tropical climates, long-term exposure to grains or nuts contaminated with aflatoxins (a cancer-causing substance produced by a fungus) increases risk of liver cancer. Food in the United States is tested for aflatoxins.</p> <p><b>Infection with Parasites:</b> Infection with the parasite that causes schistosomiasis increases liver cancer risk. While this parasite is not found in the United States, infection can occur in Asia, Africa, and South America.</p>
<b>Lung &amp; Bronchus</b>	<p><b>Age:</b> About two out of three people diagnosed with lung and bronchus cancer are older than 65. <b>Sex:</b> Lung and bronchus cancer is more common among men, compared with women.</p> <p><b>Race:</b> In the United States, lung and bronchus cancer is more common among whites and Blacks than among Asians or Pacific Islanders.</p>	<p><b>Smoking:</b> Tobacco smoking is the most important risk factor for lung cancer. Cigarette, cigar, and pipe smoking all increase the risk of lung cancer. Tobacco smoking causes about nine out of 10 cases of lung cancer in men and about eight out of 10 cases of lung cancer in women. Risk increases with the amount and duration of use.</p> <p><b>Secondhand Smoke:</b> Exposure to secondhand (environmental) tobacco smoke increases risk. Nonsmokers exposed to secondhand smoke have approximately 20% increased risk of lung and bronchus cancer.</p> <p><b>Radon:</b> Radon is a cancer-causing gas and is the second leading cause of lung cancer.</p> <p><b>Radiation:</b> Being exposed to radiation is a risk factor for lung cancer. Sources include radiation therapy and imaging tests.</p> <p><b>Occupational Exposure:</b> Workplace exposure to asbestos, arsenic, crystalline silica dust, beryllium, cadmium, nickel compounds, chromium (VI) compounds, tar and soot, mustard gas, chloromethyl ethers, and diesel exhaust increases risk.</p> <p><b>Air Pollution:</b> Exposure to outdoor air pollution, specifically small particles, increases risk.</p>

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<b>Melanoma of the Skin</b>	<p><b>Age:</b> Melanoma is more likely to occur in older people, but it is also found in younger people. In fact, melanoma is one of the most common cancers in people younger than 30 (especially younger women). Melanoma that runs in families may occur at a younger age.</p> <p><b>Sex:</b> Nationally, men have a higher rate of melanoma than women, although this varies by age. Before age 50, the risk is higher for women; after age 50 the risk is higher for men.</p> <p><b>Race:</b> Melanoma is much more common among whites than other races.</p> <p><b>Certain Physical Characteristics:</b> Having fair (pale) skin that burns in the sun easily, blue or green eyes, red or blond hair, or many freckles increases the risk of skin cancer.</p> <p><b>Dysplastic Nevi:</b> A dysplastic nevus is a type of mole that looks similar to a common mole but is often bigger and has an abnormal shape or color. Dysplastic nevi often run in families and may develop into melanomas.</p> <p><b>Many Moles:</b> Usually, a common mole is smaller than a pea, has an even color (pink, tan, or brown), and is round or oval with a smooth surface. Having many common moles increases melanoma risk.</p> <p><b>Family History:</b> People with a family history of melanoma (particularly in one or more first-degree relatives) have an increased risk of developing melanoma.</p> <p><b>Personal history:</b> People who have had melanoma have an increased risk of developing other melanomas.</p>	<p><b>Ultraviolet (UV) radiation:</b> High lifetime exposure to UV radiation is a major risk factor for most skin cancers. UV exposure primarily comes from the following sources:</p> <ul style="list-style-type: none"> <li>• <b>Sunlight:</b> Sunlight is the main source of UV radiation.</li> <li>• <b>Sunlamps and Tanning Booths / Beds:</b> These artificial sources of UV radiation can cause skin damage and skin cancer.</li> </ul> <p><b>Blistering Sunburns:</b> People who have a history of many blistering sunburns, especially as a child or teenager, are at increased risk of melanoma.</p>
<b>Multiple Myeloma</b>	<p><b>Age:</b> Multiple myeloma is an age-dependent cancer — most people diagnosed with this cancer are at least 65 years old. Less than 1% of cases are diagnosed in people younger than 35.</p> <p><b>Sex:</b> Men are more likely to develop multiple myeloma than women.</p> <p><b>Race:</b> Blacks are more than twice as likely to develop multiple myeloma than whites.</p> <p><b>Having Other Plasma Cell Diseases:</b> People with monoclonal gammopathy of undetermined significance (MGUS) or plasmacytoma are at higher risk of developing multiple myeloma than people who do not have these diseases.</p>	<p><b>Being Exposed To Radiation Or Certain Chemicals:</b> Multiple myeloma has been linked to ionizing radiation exposure. Organic solvent exposure in painters has been associated with multiple myeloma. Exposure to unspecified pesticides among applicators, manufacturers, and agricultural workers has been associated with multiple myeloma.</p>



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<b>Non-Hodgkin Lymphoma (NHL)</b>	<p><b>Age:</b> Risk of NHL increases with advancing age.</p> <p><b>Sex:</b> Overall, the risk of NHL is higher in men, compared with women, but there are certain types of NHL that are more common in women.</p> <p><b>Race:</b> Whites are more likely to develop NHL than Blacks or Asians/Pacific Islanders.</p> <p><b>Weakened Immune System:</b> The risk of developing NHL is increased by having a weakened immune system (such as from an inherited condition or certain drugs used after an organ transplant).</p>	<p><b>Certain Viruses:</b> Having an infection with the Epstein-Barr virus (EBV), HIV, Helicobacter pylori, human herpes virus 8 (HHV8), or human T-cell leukemia/lymphoma virus type I (HTLV-1) increases risk of developing NHL.</p> <p><b>Certain Chemicals:</b> Chemicals such as benzene and certain herbicides and insecticides (weed- and insect-killing substances) are linked with an increased risk of NHL.</p> <p><b>Radiation:</b> Studies of survivors of atomic bombs and nuclear reactor accidents have shown they have an increased risk of developing NHL. Patients treated with radiation therapy for some other cancers, such as HL, have a slightly higher risk of developing NHL later in life.</p>
<b>Oral Cavity &amp; Pharynx</b>	<p><b>Age:</b> Most patients with oral cavity and pharynx cancers are older than 55.</p> <p><b>Sex:</b> Oral cavity and pharynx cancers are about twice as common in men as in women.</p> <p><b>Race:</b> Oral cavity and pharynx cancer incidence rates among whites are approximately 50% higher than rates among Blacks and more than double those of Asians/Pacific Islanders.</p> <p><b>Personal History:</b> People who have had oral cavity and pharynx cancer are at increased risk of developing another oral cavity and pharynx cancer.</p> <p><b>Genetics:</b> People with certain genetic conditions (e.g., Fanconi anemia, dyskeratosis congenita) have a very high risk of oral cavity and pharynx cancers.</p>	<p><b>Tobacco:</b> Smoking cigarettes, cigars, or pipes causes oral cavity and pharynx cancer, and using smokeless tobacco (such as snuff and chewing tobacco) causes oral cavity cancer. For cigarette smokers, risk increases with the number of cigarettes smoked per day. The risk is greater for people who use both tobacco and alcohol than for those who use either tobacco or alcohol.</p> <p><b>Heavy Alcohol Use:</b> People who are heavy drinkers are more likely to develop oral cavity cancer than people who do not drink alcohol. The risk increases with the amount of alcohol that a person drinks.</p> <p><b>Hpv Infection:</b> Some members of the HPV family of viruses can infect the mouth and throat. Cancer at the base of the tongue, at the back of the throat, in the tonsils, or in the soft palate is linked with HPV infection. HPV DNA is found in approximately two-thirds of oropharyngeal cancers and may be associated with an increase in oral sex.</p> <p><b>Sun:</b> Cancer of the lip can be caused by exposure to the sun. The risk of cancer of the lip increases if the person also smokes.</p> <p><b>Betel Nut Use:</b> Most common in Asia, chewing betel nut (a type of palm seed wrapped with a betel leaf and sometimes mixed with spices, sweeteners and tobacco) causes oral cancer. The risk increases even more if the person also drinks alcohol and uses tobacco.</p> <p><b>Weakened Immune System:</b> Oral cavity and pharynx cancers are more common in people who have a weak immune system.</p> <p><b>Graft-versus-host Disease:</b> Graft-versus-host disease (GVHD) is a condition that sometimes occurs after a stem cell transplant. GVHD can affect many tissues of the body, including those in the mouth, which increases the risk of oral cancer.</p>



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Ovary	<p><b>Age:</b> Ovarian cancer risk increases with age.</p> <p><b>Family History:</b> A woman whose mother or sister had ovarian cancer has an increased risk of ovarian cancer. A woman with two or more relatives with ovarian cancer also has an increased risk of ovarian cancer.</p> <p><b>Genetics:</b> Women who have certain inherited mutations (e.g., BRCA1 or BRCA2) or genetic conditions (e.g., Lynch syndrome) are at increased risk.</p> <p><b>Endometriosis:</b> Women who have endometriosis have an increased risk of ovarian cancer.</p>	<p><b>Hormone Replacement Therapy:</b> Women who ever used estrogen by itself or estrogen combined with progesterone have an increased risk of ovarian cancer, compared with never-users.</p>
Pancreas	<p><b>Age:</b> The risk of developing pancreatic cancer increases as people age. About two-thirds of people with pancreatic cancer are 65 or older.</p> <p><b>Sex:</b> Men are slightly more likely to develop pancreatic cancer than women.</p> <p><b>Race:</b> Blacks are slightly more likely to develop pancreatic cancer than whites.</p> <p><b>Family History:</b> Pancreatic cancer seems to run in some families, possibly due to an inherited genetic syndrome (explained below).</p> <p><b>Inherited Genetic Syndromes:</b> Inherited gene changes can be passed from parent to child. Examples of genetic syndromes that can cause exocrine pancreatic cancer include: hereditary breast and ovarian cancer syndrome, familial atypical multiple mole melanoma (FAMM) syndrome, Lynch syndrome, Peutz-Jeghers syndrome, Von Hippel-Lindau syndrome, neurofibromatosis type 1, multiple endocrine neoplasia type 1 (MEN1), and BRCA1 and BRCA2.</p> <p><b>Chronic Pancreatitis:</b> Chronic pancreatitis, a long-term inflammation of the pancreas, increases the risk of pancreatic cancer.</p>	<p><b>Tobacco:</b> The risk of getting pancreatic cancer is about twice as high among smokers, compared with those who have never smoked. Use of smokeless tobacco products also increases risk.</p> <p><b>Overweight and Obesity:</b> Being overweight is a risk factor for pancreatic cancer. People who are obese are about 20% more likely to develop pancreatic cancer.</p> <p><b>Diabetes:</b> Pancreatic cancer is more common in people with type 2 diabetes.</p>
Prostate	<p><b>Age:</b> Approximately 57% of all prostate cancers are diagnosed in men older than 65 years, and 99% are diagnosed in men at least 45 years of age.</p> <p><b>Race/ethnicity:</b> Black men are more likely to be diagnosed with prostate cancer than white men and often at a more advanced stage. Prostate cancer is less common among Asian and Hispanic men, compared with non-Hispanic white men.</p> <p><b>Family history:</b> Having a father or brother with prostate cancer more than doubles a man's risk of developing this disease. Risk is even higher for men with several affected relatives, particularly if their relatives were young at the time of diagnosis.</p> <p><b>Genetic changes:</b> Men with genetic changes in one or more specific regions of certain chromosomes have increased risk. Risk increases with the number of genetic changes. In addition, changes in the BRCA1 and BRCA2 genes increase risk. Men with Lynch syndrome also have an increased risk.</p>	

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<b>Stomach</b>	<p><b>Age:</b> Risk increases with age, with most cases occurring after age 60.</p> <p><b>Sex:</b> Males are about twice as likely to develop stomach cancer, compared with females.</p> <p><b>Race and Ethnicity:</b> Blacks, Asians/Pacific Islanders, and Hispanics are more likely to develop stomach cancer, compared with other races and non-Hispanics.</p> <p><b>Helicobacter Pylori Infection:</b> H. pylori is a bacterium that commonly infects the inner lining (the mucosa) of the stomach. Infection with H. pylori can cause stomach inflammation and peptic ulcers. It also increases the risk of stomach cancer, but only a small number of infected people develop stomach cancer.</p> <p><b>Long-term Inflammation of the Stomach:</b> People who have conditions associated with long-term stomach inflammation (such as the blood disease pernicious anemia) are at increased risk of stomach cancer. Also, people who have had part of their stomach removed may have long-term stomach inflammation and increased risk of stomach cancer many years after their surgery.</p>	<p><b>Tobacco Smoking:</b> Smokers are more likely than nonsmokers to develop stomach cancer. Heavy smokers are at highest risk.</p> <p><b>Family History:</b> A person who has close relatives (parents, brothers, sisters, or children) with a history of stomach cancer are somewhat more likely to develop the disease themselves. If many close relatives have a history of stomach cancer, the risk is even greater.</p> <p><b>Poor Diet, Lack of Physical Activity, and Obesity:</b> Studies suggest that people who eat a diet high in foods that are smoked, salted, or pickled have an increased risk for stomach cancer. On the other hand, people who eat a diet high in fresh fruits and vegetables may have a lower risk of this disease. A lack of physical activity may increase the risk of stomach cancer. Also, people who are obese may have an increased risk of cancer developing in the upper part of the stomach.</p>
<b>Testis</b>	<p><b>Age:</b> Half of all testicular cancers occur in men ages 20-34.</p> <p><b>Race:</b> Risk of testicular cancer is higher among whites than Blacks and Asians/Pacific Islanders.</p> <p><b>Family History:</b> Risk is higher in men with a family history of testicular cancer, particularly if a father or brother has had testicular cancer.</p> <p><b>Cryptorchidism:</b> This condition, in which the testicles do not descend into the scrotum before birth, increases risk.</p> <p><b>Personal History:</b> A man who has developed cancer in one testicle has increased risk of developing cancer in the other.</p>	
<b>Thyroid</b>	<p><b>Age:</b> Risk peaks earlier for women (who are most often in their 40s or 50s when diagnosed) than for men (who are usually in their 60s or 70s).</p> <p><b>Sex:</b> For unclear reasons, thyroid cancers and other diseases of the thyroid occur about three times more often in women than in men.</p> <p><b>Hereditary Conditions and Family History:</b> Several inherited conditions and family history have been linked to different types of thyroid cancer, such as a history of goiter or thyroid nodules, a family history of thyroid cancer, an abnormal RET gene, which causes a hereditary form of thyroid cancer (familial medullary thyroid carcinoma), and certain rare genetic syndromes, such as familial adenomatous polyposis (FAP).</p>	<p><b>Radiation:</b> Exposure to ionizing radiation is a proven risk factor. Sources of such radiation include certain medical treatments and radiation fallout from power plant accidents or nuclear weapons. Head or neck radiation treatments in childhood are also a risk factor.</p> <p><b>Diet Low in Iodine:</b> Follicular thyroid cancers are more common in areas of the world where people's diets are low in iodine. In the United States, most people get enough iodine in their diet because it is added to table salt and other foods.</p>

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<b>Uterus</b>	<p><b>Age:</b> The average age at diagnosis of uterine cancer is 60 years. Women ages 55-84 years have higher risk than women younger than 55 and women 85 years and older.</p> <p><b>Race:</b> White women are at greater risk of being diagnosed with uterine cancer; however, Black women are at greater risk of dying from uterine cancer.</p> <p><b>History Of Endometrial Hyperplasia And Breast And Ovarian Cancer:</b> Women diagnosed with endometrial hyperplasia, an increased growth of the endometrium, or with breast or ovarian cancer are at greater risk.</p> <p><b>Genetic Predisposition / Inherited Syndromes:</b> Women diagnosed with Lynch syndrome, Cowden syndrome, or polycystic ovary syndrome have a higher risk of uterine cancer.</p> <p><b>Family History:</b> Women with at least one first-degree relative with uterine cancer are at greater risk.</p> <p><b>Late Menopause:</b> Women who go through menopause after age 55 years have increased risk.</p>	<p><b>Obesity, Weight Gain, And Physical Inactivity:</b> An estimated 70% of uterine cancers are attributable to excess body weight and insufficient physical activity. Obesity and abdominal fatness likely increase the amount of circulating estrogen, which is a strong risk factor.</p> <p><b>Postmenopausal Estrogen:</b> Use of estrogen after menopause, but not estrogen plus progestin, increases risk.</p> <p><b>Not Having Children And Low Duration Of Lactation:</b> Not having children and no or low lactation increases risk as a result of prolonged endogenous estrogen exposure.</p> <p><b>Tamoxifen:</b> Taking the drug Tamoxifen, used to prevent breast cancer, for two or more years increases risk slightly because it has estrogen-like effects on the uterus.</p>

**Sources:** National Cancer Institute website, [www.cancer.gov](http://www.cancer.gov); American Cancer Society website, [www.cancer.org](http://www.cancer.org).



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