* [Cancer](https://www.medicinenet.com/cancer_101_pictures_slideshow/article.htm" \t "_blank) is the uncontrolled growth of abnormal cells anywhere in a body.
* There are over 200 types of [cancer](https://www.medicinenet.com/cancer_quiz/quiz.htm).
* Anything that may cause a normal body cell to develop abnormally potentially can cause cancer; general categories of cancer-related or causative agents are as follows: chemical or toxic compound exposures, ionizing [radiation](https://www.medicinenet.com/radiation_therapy/article.htm), some pathogens, and human genetics.
* [Cancer symptoms](https://www.medicinenet.com/cancer_101_pictures_slideshow/article.htm) and signs depend on the specific type and grade of cancer; although general signs and symptoms are not very specific the following can be found in patients with different cancers: [fatigue](https://www.medicinenet.com/fatigue/article.htm), [weight loss](https://www.medicinenet.com/weight_loss/article.htm), pain, skin changes, change in bowel or bladder function, unusual bleeding, persistent [cough](https://www.medicinenet.com/chronic_cough/article.htm) or voice change, [fever](https://www.medicinenet.com/aches_pain_fever/article.htm), lumps, or tissue masses.
* Although there are many tests to screen and presumptively diagnose cancer, the definite diagnosis is made by examination of a biopsy sample of suspected cancer tissue.
* Cancer staging is often determined by biopsy results and helps determine the cancer type and the extent of cancer spread; staging also helps caregivers determine treatment protocols. In general, in most staging methods, the higher the number assigned (usually between 0 to 4), the more aggressive the cancer type or more widespread is the cancer in the body. Staging methods differ from cancer to cancer and need to be

| Cancer Type | Estimated New Cases | Estimated Deaths |
| --- | --- | --- |
| Bladder | 76,960 | 16,390 |
| Breast (Female -- Male) | 246,660 -- 2,600 | 40,450 -- 440 |
| Colorectal Cancer | 134,490 | 49,190 |
| Endometrial | 60,050 | 10,470 |
| Kidney (Renal Cell and Renal Pelvis) Cancer | 62,700 | 14,240 |
| [Leukemia](https://www.medicinenet.com/leukemia/article.htm) (All Types) | 60,140 | 24,400 |
| Lung (Including Bronchus) | 224,390 | 158,080 |
| [Melanoma](https://www.medicinenet.com/melanoma/article.htm) | 76,380 | 10,130 |
| Non-Hodgkin [Lymphoma](https://www.medicinenet.com/cancer_101_pictures_slideshow/article.htm) | 72,580 | 20,150 |
| Pancreatic | 53,070 | 41,780 |
| Prostate | 180,890 | 26,120 |
| Thyroid | 64,300 | 1,980 |

The three most common cancers in men, women, and children in the U.S. are as follows:

* Men: Prostate, lung, and [colorectal](https://www.medicinenet.com/colorectal_cancer_pictures_slideshow/article.htm)
* Women: Breast, lung, and colorectal
* Children: [Leukemia](https://www.medicinenet.com/leukemia_quiz/quiz.htm), brain tumors, and lymphoma

The incidence of cancer and cancer types are influenced by many factors such as age, gender, race, local environmental factors, [diet](https://www.medicinenet.com/diet_plans_and_programs/article.htm), and genetics. Consequently, the incidence of cancer and cancer types vary depending on these variable factors. For example, the World Health Organization (WHO) provides the following general information about cancer worldwide:

* Cancer is a leading cause of death worldwide. It accounted for 8.2 million deaths (around 22% of all deaths not related to communicable diseases; most recent data from WHO).
* Lung, stomach, [liver](https://www.medicinenet.com/liver_anatomy_and_function/article.htm), colon, and breast cancer cause the most cancer deaths each year.
* Deaths from cancer worldwide are projected to continue rising, with an estimated 13.1 million deaths in 2030 (about a 70% increase).

Different areas of the world may have cancers that are either more or less predominant then those found in the U.S. One example is that [stomach cancer](https://www.medicinenet.com/stomach_cancer/article.htm) is often found in Japan, while it is rarely found in the U.S. This usually represents a combination of environmental and genetic factors.

The objective of this article is to introduce the reader to general aspects of cancers. It is designed to be an overview of cancer and cannot cover every cancer type. This article will also attempt to help guide the reader to more detailed sources about specific cancer types.

[[](https://www.medicinenet.com/cancer_101_pictures_slideshow/article.htm)](https://www.medicinenet.com/cancer_101_pictures_slideshow/article.htm" \t "_blank)

[SLIDESHOW](https://www.medicinenet.com/cancer_101_pictures_slideshow/article.htm" \t "_blank)

[Understanding Cancer: Metastasis, Stages of Cancer, and MoreSee Slideshow](https://www.medicinenet.com/cancer_101_pictures_slideshow/article.htm" \t "_blank)

What are risk factors and causes of cancer?

Anything that may cause a normal body cell to develop abnormally potentially can cause cancer. Many things can cause cell abnormalities and have been linked to cancer development. Some [cancer causes](https://www.medicinenet.com/cancer_101_pictures_slideshow/article.htm) remain unknown while other cancers have environmental or lifestyle triggers or may develop from more than one known cause. Some may be developmentally influenced by a person's genetic makeup. Many patients develop cancer due to a combination of these factors. Although it is often difficult or impossible to determine the initiating event(s) that cause a cancer to develop in a specific person, research has provided clinicians with a number of likely causes that alone or in concert with other causes, are the likely candidates for initiating cancer. The following is a listing of major causes and is not all-inclusive as specific causes are routinely added as research advances:

Chemical or toxic compound exposures: Benzene, [asbestos](https://www.medicinenet.com/asbestos-related_disorders/article.htm), nickel, cadmium, vinyl chloride, benzidine, N-nitrosamines, tobacco or [cigarette](https://www.medicinenet.com/smoking_and_quitting_smoking/article.htm) smoke (contains at least 66 known potential carcinogenic chemicals and toxins), asbestos, and aflatoxin

Ionizing radiation: Uranium, [radon](https://www.medicinenet.com/radon_symptoms_poisoning_tests_cancer_causes/article.htm), ultraviolet rays from sunlight, radiation from alpha, beta, gamma, and X-ray-emitting sources

Pathogens: [Human papillomavirus](https://www.medicinenet.com/hpv_infection_human_papillomavirus/article.htm) ([HPV](https://www.medicinenet.com/hpv_infection_human_papillomavirus/article.htm)), [EBV](https://www.medicinenet.com/epstein-barr_virus_ebv/article.htm) or [Epstein-Barr virus](https://www.medicinenet.com/epstein-barr_virus_ebv/article.htm), [hepatitis](https://www.medicinenet.com/viral_hepatitis/article.htm) [viruses](https://www.medicinenet.com/viral_infections_pictures_slideshow/article.htm) B and C, Kaposi's sarcoma-associated [herpes](https://www.medicinenet.com/stds_pictures_slideshow/article.htm) virus (KSHV), Merkel cell polyomavirus, *[Schistosoma](https://www.medicinenet.com/schistosomiasis/article.htm)* spp., and [*Helicobacter pylori*](https://www.medicinenet.com/helicobacter_pylori/article.htm); other bacteria are being researched as possible agents.

Genetics: A number of specific cancers have been linked to human genes and are as follows: breast, ovarian, colorectal, prostate, skin and [melanoma](https://www.medicinenet.com/skin_cancer_melanoma_quiz/quiz.htm); the specific genes and other details are beyond the scope of this general article so the reader is referred to the [National Cancer Institute](http://www.cancer.gov/cancertopics/genetics) for more details about genetics and cancer.

It is important to point out that most everyone has risk factors for cancer and is exposed to cancer-causing substances (for example, sunlight, secondary cigarette smoke, and [X-rays](https://www.medicinenet.com/x-rays/article.htm)) during their lifetime, but many individuals do not develop cancer. In addition, many people have the genes that are linked to cancer but do not develop it. Why? Although researchers may not be able give a satisfactory answer for every individual, it is clear that the higher the amount or level of cancer-causing materials a person is exposed to, the higher the chance the person will develop cancer. In addition, the people with genetic links to cancer may not develop it for similar reasons (lack of enough stimulus to make the genes function). In addition, some people may have a heightened immune response that controls or eliminates cells that are or potentially may become cancer cells. There is evidence that even certain dietary lifestyles may play a significant role in conjunction with the immune system to allow or prevent cancer cell survival. For these reasons, it is difficult to assign a specific cause of cancer to many individuals.

Recently, other risk factors have been added to the list of items that may increase cancer risk. Specifically, red meat (such as beef, lamb, and pork) was classified by the International Agency for Research on Cancer as a high-risk agent for potentially causing cancers; in addition processed meats (salted, smoked, preserved, and/or cured meats) were placed on the carcinogenic list. Individuals that eat a lot of barbecued meat may also increase risk due to compounds formed at high temperatures. Other less defined situations that may increase the risk of certain cancers include [obesity](https://www.medicinenet.com/obesity_weight_loss/article.htm), lack of [exercise](https://www.medicinenet.com/exercise/article.htm), chronic inflammation, and hormones, especially those hormones used for replacement therapy. Other items such as cell phones have been heavily studied. In 2011, the World Health Organization classified cell phone low energy radiation as "possibly carcinogenic," but this is a very low risk level that puts cell phones at the same risk as [caffeine](https://www.medicinenet.com/caffeine/article.htm) and pickled vegetables.

Proving that a substance does not cause or is not related to increased cancer risk is difficult. For example, antiperspirants are considered to possibly be related to breast cancer by some investigators and not by others. The official stance by the NCI is "additional research is needed to investigate this relationship and other factors that may be involved." This unsatisfying conclusion is presented because the data collected so far is contradictory. Other claims that are similar require intense and expensive research that may never be done. Reasonable advice might be to avoid large amounts of any compounds even remotely linked to cancer, although it may be difficult to do in complex, technologically advanced modern societies.

Latest Cancer News

* [Approach to Pancreatic Cyst Prevent Dreaded Cancer](https://www.medicinenet.com/script/main/art.asp?articlekey=221238)
* [Poor Diet Might Raise Your Cancer Risk](https://www.medicinenet.com/script/main/art.asp?articlekey=221264)
* [Computers Detect Lung Cancer on Scans Like Docs Do](https://www.medicinenet.com/script/main/art.asp?articlekey=221149)
* [Mustaches Are More Than Just Manly](https://www.medicinenet.com/script/main/art.asp?articlekey=221167)
* [Colon Cancer Increasingly Striking the Young](https://www.medicinenet.com/script/main/art.asp?articlekey=221096)
* Want More News? Sign Up for MedicineNet Newsletters!

Daily Health News

* [Dog Lick Death From Capnocytophaga Canimorsus](https://www.medicinenet.com/script/main/art.asp?articlekey=226198)
* [Air Pollution and Memory Decline](https://www.medicinenet.com/script/main/art.asp?articlekey=226194)
* [Watch Detects Heart Attack](https://www.medicinenet.com/script/main/art.asp?articlekey=226213)
* [Too Much Screen Time](https://www.medicinenet.com/script/main/art.asp?articlekey=226200)
* [Regular Fasting for Longer Life](https://www.medicinenet.com/script/main/art.asp?articlekey=226195)
* [[XML](https://www.medicinenet.com/current_health_news/article.htm) More Health News »](https://www.medicinenet.com/current_health_news/article.htm)

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* [Flu Vaccine](https://www.medicinenet.com/flu_vaccination/article.htm)
* [Norovirus Infection](https://www.medicinenet.com/norovirus_infection/article.htm)
* [Mumps](https://www.medicinenet.com/mumps/article.htm)
* [Hepatitis C (HCV)](https://www.medicinenet.com/hepatitis_c/article.htm)
* [Measles (Rubeola)](https://www.medicinenet.com/measles_rubeola/article.htm)

What are cancer symptoms and signs?

* [Read Doctor's View](https://www.medicinenet.com/10_cancer_symptoms_that_men_ignore/views.htm)
* [Readers Comments 10](https://comments.medicinenet.com/cancer/patient-comments-618.htm" \o "What were the symptoms of your cancer?" \t "_blank)
* [Share Your Story](https://comments.medicinenet.com/script/main/submit-patient-comments.asp?questionid=618)

Symptoms and signs of cancer depend on the type of cancer, where it is located, and/or where the cancer cells have spread. For example, breast cancer may present as a lump in the breast or as [nipple discharge](https://www.medicinenet.com/breast_discharge/symptoms.htm) while metastatic breast cancer may present with symptoms of pain (if spread to bones), extreme [fatigue](https://www.medicinenet.com/causes_of_fatigue_pictures_slideshow/article.htm) ([lungs](https://www.medicinenet.com/image-collection/lungs_picture/picture.htm)), or [seizures](https://www.medicinenet.com/seizures_symptoms_and_types/article.htm) (brain). A few patients show no signs or symptoms until the cancer is far advanced.

The American Cancer Society describes seven warning signs and/or symptoms that a cancer may be present, and which should prompt a person to seek medical attention. The word CAUTION can help you remember these.

* Change in bowel or bladder habits
* A [sore throat](https://www.medicinenet.com/sore_throat_pharyngitis/article.htm) that does not heal
* Unusual bleeding or discharge (for example, [nipple](https://www.medicinenet.com/breast_anatomy/article.htm) secretions or a "sore" that will not heal that oozes material)
* Thickening or lump in the breast, testicles, or elsewhere
* [Indigestion](https://www.medicinenet.com/dyspepsia/article.htm) (usually chronic) or [difficulty swallowing](https://www.medicinenet.com/swallowing/article.htm)
* Obvious change in the size, color, shape, or thickness of a wart or mole
* Nagging [cough](https://www.medicinenet.com/cold_flu_cough_relief_pictures_slideshow/article.htm) or [hoarseness](https://www.medicinenet.com/hoarseness/article.htm)

Other signs or symptoms may also alert you or your doctor to the possibility of your having some form of cancer. These include the following:

* Unexplained loss of weight or [loss of appetite](https://www.medicinenet.com/loss_of_appetite/symptoms.htm)
* A new type of pain in the bones or other parts of the body that may be steadily worsening, or come and go, but is unlike previous pains one has had before
* Persistent [fatigue](https://www.medicinenet.com/fatigue_and_tiredness/symptoms.htm), [nausea](https://www.medicinenet.com/nausea_and_vomiting/article.htm), or [vomiting](https://www.medicinenet.com/nausea_and_vomiting/article.htm)
* Unexplained low-grade fevers with may be either persistent or come and go
* Recurring infections which will not clear with usual treatment

Anyone with these signs and symptoms should consult their doctor; these symptoms may also arise from noncancerous conditions.

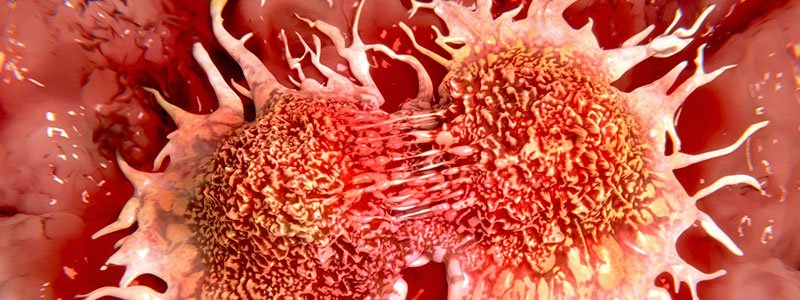
Many cancers will present with some of the above general symptoms but often have one or more symptoms that are more specific for the cancer type. For example, [lung cancer](https://www.medicinenet.com/lung_cancer_pictures_slideshow/article.htm) may present with common symptoms of pain, but usually the pain is located in the chest. The patient may have unusual bleeding, but the bleeding usually occurs when the patient [coughs](https://www.medicinenet.com/chronic_cough/article.htm). Lung cancer patients often become short of breath and then become very fatigued.

Because there are so many cancer types (see next section) with so many nonspecific and sometimes more specific symptoms, the best way to learn about signs and symptoms of specific cancer types is to spend a few moments researching symptoms of a specific body area in question. Conversely, a specific body area can be searched to discover what signs and symptoms a person should look for in that area that is suspected of having cancer. The following examples are two ways to proceed to get information on symptoms:

* Use a search engine (Google, Bing) to find links to cancer by listing the symptom followed by the term "cancer" or if you know the type you want information about, (lung, brain, breast) use MedicineNet’s search option. For example, listing "[blood in urine](https://www.medicinenet.com/blood_in_urine/article.htm) and cancer" will bring a person to web sites that list possible organs and body systems where cancer may produce the listed symptoms.
* Use a search engine as above and list the suspected body area and cancer (for example, bladder and cancer), and the person will see sites that list the signs and symptoms of cancer in that area ([blood in urine](https://www.medicinenet.com/blood_in_urine/symptoms.htm) being one of several symptoms listed).
* Be aware that many web sites are not necessarily reviewed by a health care professional and could contain information that is not accurate. Your health care professional is ultimately the best resource if you have concerns.

In addition, if the cancer type is known (diagnosed), then even more specific searches can be done listing the diagnosed cancer type and whatever may be questioned about the cancer (symptoms, tumor grades, treatments, prognosis, and many other items).

One's own research should not replace consulting a health care provider if someone is concerned about cancer.

[[](https://www.medicinenet.com/cancer_quiz/quiz.htm)](https://www.medicinenet.com/cancer_quiz/quiz.htm" \t "_blank)

[QUESTION](https://www.medicinenet.com/cancer_quiz/quiz.htm" \t "_blank)

[Cancer is the result of the uncontrolled growth of abnormal cells anywhere in the body.See Answer](https://www.medicinenet.com/cancer_quiz/quiz.htm" \t "_blank)

What are the different types of cancer?

There are over 200 types of cancer; far too numerous to include in this introductory article. However, the NCI lists several general categories (see list in first section of this article). This list is expanded below to list more specific types of cancers found in each general category; it is not all inclusive and the cancers listed in quotes are the general names of some cancers:

* Carcinoma: Cancer that begins in the skin or in tissues that line or cover internal organs -- "skin, lung, colon, pancreatic, ovarian cancers," epithelial, squamous and basal cell carcinomas, melanomas, papillomas, and adenomas
* Sarcoma: Cancer that begins in bone, cartilage, fat, muscle, blood vessels, or other connective or supportive tissue -- "bone, soft tissue cancers," [osteosarcoma](https://www.medicinenet.com/bone_cancer_overview/article.htm), synovial sarcoma, liposarcoma, angiosarcoma, rhabdosarcoma, and fibrosarcoma
* Leukemia: Cancer that starts in blood-forming tissue such as the bone marrow and causes large numbers of abnormal blood cells to be produced and enter the blood -- "leukemia," lymphoblastic leukemias (ALL and CLL), myelogenous leukemias (AML and CML), T-cell leukemia, and hairy-cell leukemia
* Lymphoma and myeloma: Cancers that begin in the cells of the immune system -- "lymphoma," T-cell [lymphomas](https://www.medicinenet.com/non-hodgkins_lymphomas/article.htm), B-cell lymphomas, Hodgkin lymphomas, non-Hodgkin lymphoma, and lymphoproliferative lymphomas
* Central nervous system cancers: Cancers that begin in the tissues of the brain and spinal cord -- "brain and spinal cord tumors," gliomas, meningiomas, pituitary adenomas, vestibular schwannomas, primary CNS lymphomas, and primitive neuroectodermal tumors

Not included in the above types listed are metastatic cancers; this is because metastatic cancer cells usually arise from a cell type listed above and the major difference from the above types is that these cells are now present in a tissue from which the cancer cells did not originally develop. Consequently, if the terms "metastatic cancer" is used, for accuracy, the tissue from which the cancer cells arose should be included. For example, a patient may say they have or are diagnosed with "metastatic cancer" but the more accurate statement is "metastatic (breast, lung, colon, or other type) cancer with spread to the organ in which it has been found." Another example is the following: A doctor describing a man whose [prostate cancer](https://www.medicinenet.com/prostate_cancer/article.htm) has spread to his bones should say the man has metastatic [prostate cancer](https://www.medicinenet.com/prostate_cancer_pictures_slideshow/article.htm) to bone. This is not "bone cancer," which would be cancer that started in the bone cells. Metastatic prostate cancer to bone is treated differently than lung cancer to bone.

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What specialists treat cancer?

A doctor who specializes in the treatment of cancer is called an oncologist. He or she may be a surgeon, a specialist in radiation therapy, or a medical oncologist. The first uses surgery to treat the cancer; the second, radiation therapy; the third, chemotherapy and related treatments. Each may consult with the others to develop a treatment plan for the particular patient.

In addition, other specialists may be involved depending upon where the cancer is located. For example, ob-gyn specialists may be involved with [uterine cancer](https://www.medicinenet.com/uterine_cancer/article.htm) while an immunologist maybe involved in treatment of cancers that occur in the immune system. Your primary care physician and main oncologist will help you to determine what specialists are best to be members of your treatment team.

How do health care professionals diagnose cancer?

* [Readers Comments 1](https://comments.medicinenet.com/cancer/patient-comments-2300.htm" \o "What form of cancer do you have? How was it diagnosed? Please share your story." \t "_blank)
* [Share Your Story](https://comments.medicinenet.com/script/main/submit-patient-comments.asp?questionid=2300)

Some cancers are diagnosed during routine screening examinations. These are usually tests that are routinely done at a certain age. Many cancers are discovered when you present to your health care professional with specific symptoms.

A physical exam and medical history, especially the history of symptoms, are the first steps in diagnosing cancer. In many instances, the medical [caregiver](https://www.medicinenet.com/caregiving/article.htm) will order a number of tests, most of which will be determined by the type of cancer and where it is suspected to be located in or on the person's body. In addition, most caregivers will order a [complete blood count](https://www.medicinenet.com/complete_blood_count/article.htm), electrolyte levels and, in some cases, other blood studies that may give additional information.

Imaging studies are commonly used to help physicians detect abnormalities in the body that may be cancer. X-rays, [CT](https://www.medicinenet.com/cat_scan/article.htm) and [MRI](https://www.medicinenet.com/mri_scan/article.htm) scans, and [ultrasound](https://www.medicinenet.com/ultrasound/article.htm) are common tools used to examine the body. Other tests such as [endoscopy](https://www.medicinenet.com/endoscopy/article.htm), which with variations in the equipment used, can allow visualization of tissues in the intestinal tract, throat, and bronchi that may be cancerous. In areas that cannot be well visualized (inside bones or some [lymph nodes](https://www.medicinenet.com/image-collection/lymph_nodes_picture/picture.htm), for example), radionuclide scanning is often used. The test involves ingestion or IV injection of a weakly radioactive substance that can be concentrated and detected in abnormal tissue.

The preceding tests can be very good at localizing abnormalities in the body; many clinicians consider that some of the tests provide presumptive evidence for the diagnosis of cancer. However, in virtually all patients, the definitive diagnosis of cancer is based on the examination of a tissue sample taken in a procedure called a biopsy from the tissue that may be cancerous, and then analyzed by a pathologist. Some biopsy samples are relatively simple to procure (for example, [skin biopsy](https://www.medicinenet.com/skin_biopsy/article.htm) or intestinal tissue biopsy done with a device called an endoscope equipped with a biopsy attachment). Other biopsies may require as little as a carefully guided needle, or as much as a surgery (for example, brain tissue or [lymph node](https://www.medicinenet.com/swollen_lymph_nodes/article.htm) biopsy). In some instances, the surgery to diagnose the cancer may result in a cure if all of the cancerous tissue is removed at the time of biopsy.

The biopsy can provide more than the definitive diagnosis of cancer; it can identify the cancer type (for example, the type of tissue found may indicate that the sample is from a primary [started there] or metastatic type of [brain cancer](https://www.medicinenet.com/brain_cancer/article.htm) [spread from another [primary tumor](https://www.medicinenet.com/cancer_101_pictures_slideshow/article.htm) arising elsewhere in the body]) and thereby help to stage the cancer. The stage, or cancer staging, is a way for clinicians and researchers to estimate how extensive the cancer is in the patient's body.

Is the cancer that has been found localized to its site of origin, or is it spread from that site to other tissues? A localized cancer is said to be at an early stage, while one which has spread is at and advanced stage. The following section describes the general staging methods for cancers.

From WebMD Logo

Cancer Resources

* [Types of Immunotherapy for Lung Cancer](https://www.webmd.com/lung-cancer/immunotherapy-lung-19/lung-cancer-immunotherapy-overview)
* [Finding the Right Treatment for Your Breast Cancer](https://www.webmd.com/breast-cancer/metastatic-bc-forward-18/breast-cancer-treatment-explorer)
* [Chronic Lymphocytic Leukemia](https://www.webmd.com/cancer/lymphoma/chronic-lymphocytic-leukemia-rare#1)

Featured Centers

* [Psoriasis, Psoriatic Arthritis, and Your Body](https://www.webmd.com/skin-problems-and-treatments/psoriasis/interact-psoriasis-skin-areas)
* [Do I Have Scoliosis?](https://www.webmd.com/back-pain/do-i-have-scioliosis#1)
* [Newly Diagnosed: What You Need to Know About HIV](https://www.webmd.com/hiv-aids/hiv-diagnosis-19/hiv-newly-diagnosed)

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* [Get Tips to Make Life With Macular Degeneration Easier](https://www.webmd.com/eye-health/macular-degeneration/amd-assessment/default.htm)
* [11 Things Not to Do If You Want to Get Pregnant](https://www.webmd.com/baby/get-pregnant-18/fertility-no-nos)

How do physicians determine cancer staging?

There are a number of different staging methods used for cancers and the specific staging criteria varies among cancer types. According to the NCI, the common elements considered in most staging systems are as follows:

* Site of the primary tumor
* Tumor size and number of tumors
* Lymph node involvement (spread of cancer into lymph nodes)
* Cell type and [tumor grade](https://www.medicinenet.com/tumor_grade/article.htm) (how closely the cancer cells resemble normal tissue cells)
* The presence or absence of metastasis

However, there are two main methods that form the basis for the more specific or individual cancer type staging. The TMN staging is used for most solid tumors while the Roman numeral or stage grouping method is used by some clinicians and researchers on almost all cancer types.

The TNM system is based on the extent of the tumor (T), the extent of spread to the lymph nodes (N), and the presence of distant metastasis (M). A number is added to each letter to indicate the size or extent of the primary tumor and the extent of cancer spread (higher number means bigger tumor or more spread).

The following is how the NCI describes the TNM staging system:

1. Primary tumor (T)
   * TX - Primary tumor cannot be evaluated
   * T0 - No evidence of primary tumor
   * Tis - [Carcinoma in situ](https://www.medicinenet.com/cancer_101_pictures_slideshow/article.htm) (CIS; abnormal cells are present but have not spread to neighboring tissue; although not cancer, CIS may become cancer and is sometimes called pre-invasive cancer)
   * T1, T2, T3, T4 - Size and/or extent of the primary tumor
2. Regional lymph nodes (N)
   * NX - Regional lymph nodes cannot be evaluated
   * N0 - No regional lymph node involvement
   * N1, N2, N3 - Involvement of regional lymph nodes (number of lymph nodes and/or extent of spread)
3. Distant metastasis (M)
   * MX - Distant metastasis cannot be evaluated (some clinicians do not ever use this designation)
   * M0 - No distant metastasis
   * M1 - Distant metastasis is present

Consequently, a person's cancer could be listed as T1N2M0, meaning it is a small tumor (T1), but has spread to some regional lymph nodes (N2), and has no distant metastasis (M0).

The Roman numeral or stage grouping method is described by the NCI as follows:

| Stage | Definition |
| --- | --- |
| Stage 0 | [Carcinoma](https://www.medicinenet.com/cancer_101_pictures_slideshow/article.htm) in situ. |
| Stage I | Higher numbers indicate more extensive disease: Larger tumor size and/or spread of the cancer beyond the organ in which it first developed to nearby lymph nodes and/or organs adjacent to the location of the primary tumor |
| Stage II |
| Stage III |
| Stage IV | The cancer has spread to another organ(s). |

As mentioned above, variations of these staging methods exist. For example, some cancer registries use surveillance, epidemiology, and end results program (SEER) termed summary staging. SEER groups cancer cases into five main categories:

* In situ: Abnormal cells are present only in the layer of cells in which they developed.
* Localized: Cancer is limited to the organ in which it began, without evidence of spread.
* Regional: Cancer has spread beyond the primary site to nearby lymph nodes or organs and tissues.
* Distant: Cancer has spread from the primary site to distant organs or distant lymph nodes.
* Unknown: There is not enough information to determine the stage.

Staging of cancer is important; it helps the physician to decide on the most effective therapeutic protocols, provides a basis for estimating the prognosis (outcome) for the patient, and provides a system to communicate the patient's condition to other health professionals that become involved with the patients' care.

What are cancer treatment options?

* [Readers Comments 2](https://comments.medicinenet.com/cancer/patient-comments-4175.htm" \o "What was the treatment for your cancer?" \t "_blank)
* [Share Your Story](https://comments.medicinenet.com/script/main/submit-patient-comments.asp?questionid=4175)

The cancer treatment is based on the type of cancer and the stage of the cancer. In some people, diagnosis and treatment may occur at the same time if the cancer is entirely surgically removed when the surgeon removes the tissue for biopsy.

Although patients may receive a unique sequenced treatment, or protocol, for their cancer, most treatments have one or more of the following components: surgery, chemotherapy, radiation therapy, or combination treatments (a combination of two or all three treatments).

Individuals obtain variations of these treatments for cancer. Patients with cancers that cannot be cured (completely removed) by surgery usually will get combination therapy, the composition determined by the cancer type and stage.

Palliative therapy (medical care or treatment used to reduce disease symptoms but unable to cure the patient) utilizes the same treatments described above. It is done with the intent to extend and improve the quality of life of the terminally ill cancer patient. There are many other palliative treatments to reduce symptoms such as pain medications and antinausea medications.

Are there home remedies or alternative treatments for cancer?

There are many claims on the Internet and in publications about substances that treat cancer (for example, broccoli, grapes, [ginseng](https://www.medicinenet.com/ginseng_eleutherococcus_and_panax_sp-oral/article.htm), soybeans, [green tea](https://www.medicinenet.com/green_tea_camellia_sinensis-oral/article.htm), aloe vera, and [lycopene](https://www.medicinenet.com/vitamins_and_supplements_quiz/quiz.htm) and treatments like [acupuncture](https://www.medicinenet.com/acupuncture/article.htm), [vitamins](https://www.medicinenet.com/vitamins_and_calcium_supplements/article.htm), and [dietary supplements](https://www.medicinenet.com/vitamins_and_calcium_supplements/article.htm)). Almost every physician suggests that a balanced [diet](https://www.medicinenet.com/diet_and_nutrition_quiz/quiz.htm) and good [nutrition](https://www.medicinenet.com/nutrition/article.htm) will help an individual combat cancer. Although some of these treatments may help reduce symptoms, there is no good evidence they can cure any cancers. Patients are strongly recommended to discuss any home remedies or alternative treatments with their cancer doctors before beginning any of these.

What is the prognosis for cancer?

The prognosis (outcome) for cancer patients may range from excellent to poor. The prognosis is directly related to both the type and stage of the cancer. For example, many skin cancers can be completely cured by removing the [skin cancer](https://www.medicinenet.com/skin_cancer_overview/article.htm) tissue; similarly, even a patient with a large tumor may be cured after surgery and other treatments like chemotherapy (note that a cure is often defined by many clinicians as a five-year period with no reoccurrence of the cancer). However, as the cancer type either is or becomes aggressive, with spread to lymph nodes or is metastatic to other organs, the prognosis decreases. For example, cancers that have higher numbers in their staging (for example, stage III or T3N2M1; see staging section above) have a worse prognosis than those with low (or 0) numbers. As the staging numbers increase, the prognosis worsens and the survival rate decreases.

This article offers a general introduction to cancers, consequently the details -- such as life expectancy for each cancer -- cannot be covered. However, cancers in general have a decreasing life expectancy as the stage of the cancer increases. Depending on the type of the cancer, as the prognosis decreases, so does life expectancy. On the positive side, cancers that are treated and do not recur (no remissions) within a five-year period in general suggest that the patient will have a normal life expectancy. Some patients will be cured, and a few others may get recurrent cancer. Unfortunately, there are no guarantees.

There are many complications that may occur with cancer; many are specific to the cancer type and stage and are too numerous to list here. However, some general complications that may occur with both cancer and its treatment protocols are listed below:

* Fatigue (both due to cancer and its treatments)
* [Anemia](https://www.medicinenet.com/anemia/article.htm) (both)
* Loss of appetite (both)
* [Insomnia](https://www.medicinenet.com/insomnia/article.htm) (both)
* [Hair loss](https://www.medicinenet.com/hair_loss/article.htm) (treatments mainly)
* [Nausea](https://www.medicinenet.com/nausea/symptoms.htm) (both)
* [Lymphedema](https://www.medicinenet.com/lymphedema/article.htm) (both)
* Pain (both)
* Immune system [depression](https://www.medicinenet.com/depression/article.htm) (both)

Is it possible to prevent cancer?

* [Share Your Story](https://comments.medicinenet.com/script/main/submit-patient-comments.asp?questionid=2301)

Most experts are convinced that many cancers can either be prevented or the risk of developing cancers can be markedly reduced. Some of the cancer prevention methods are simple; others are relatively extreme, depending on an individual's view.

Cancer prevention, by avoiding its potential causes, is the simplest method. First on most clinicians and researchers list is to stop (or better, never start) [smoking](https://www.medicinenet.com/smoking_and_quitting_smoking/article.htm) tobacco. Avoiding excess sunlight (by decreasing exposure or applying [sunscreen](https://www.medicinenet.com/sun_protection_and_sunscreens/article.htm)) and many of the chemicals and toxins are excellent ways to avoid cancers. Avoiding contact with certain viruses and other pathogens also are likely to prevent some cancers. People who have to work close to cancer-causing agents (chemical workers, X-ray technicians, ionizing radiation researchers, asbestos workers) should follow all safety precautions and minimize any exposure to such compounds. Although the FDA and the CDC suggests that there is no scientific evidence that definitively says cell phones cause cancer, other agencies call for more research or indicate the risk is very low. Individuals who are concerned can limit exposure to cell phones by using an earpiece and simply make as few cell phone calls as possible.

There are two [vaccines](https://www.medicinenet.com/immunizations/article.htm) currently approved by the U.S. Food and Drug Administration (FDA) to prevent specific types of cancer. [Vaccines](https://www.medicinenet.com/vaccination_faqs/article.htm) against the [hepatitis B](https://www.medicinenet.com/hepatitis_b/article.htm) virus, which is considered a cause of some liver cancers, and [vaccines](https://www.medicinenet.com/childhood_vaccination_schedule/article.htm) against human papillomavirus ([HPV](https://www.medicinenet.com/image-collection/genital_warts_hpv_picture/picture.htm)) types 16 and 18 are available. According to the NCI, these viruses are responsible for about 70% of cervical cancers. These virus also plays a role in cancers arising in the head and neck, as well as cancers in the anal region, and probably in others. Today, vaccination against HPV is recommended in teenagers and young adults of both sexes. The HPV virus is so common that by the age of 50, half or more people have evidence of being exposed to it. Sipuleucel-T is a new [vaccine](https://www.medicinenet.com/vaccination_faqs/article.htm) approved by the FDA to help treat advanced prostate cancer. Although vaccine does not cure prostate cancer, it has been shown to help extend the lifespan of individuals with advanced prostate cancer.

People with a genetic predisposition to develop certain cancers and others with a history of cancers in their genetically linked relatives currently cannot change their genetic makeup. However, some individuals who have a high possibility of developing genetically linked cancer have taken actions to prevent cancer development. For example, some young women who have had many family members develop breast cancer have elected to have their breast tissue removed even if they have no symptoms or signs of cancer development to reduce or eliminate the possibility they will develop breast cancer. Some doctors consider this as an extreme measure to prevent cancer while others do not.

Screening tests and studies for cancer are meant to help detect a cancer at an early stage when the cancer is more likely to be potentially cured with treatment. Such screening studies are breast exams, testicular exams, colon-rectal exams ([colonoscopy](https://www.medicinenet.com/colonoscopy/article.htm)), [mammography](https://www.medicinenet.com/mammogram/article.htm), certain blood tests, prostate exams, urine tests and others. People who have any suspicion that they may have cancer should discuss their concerns with their doctor as soon as possible. Screening recommendations have been the subject of numerous conflicting reports in recent years. Screening may not be cost effective for many groups of patients or lead to unnecessary further invasive tests, but individual patients' unique circumstances should always be considered by doctors in making recommendations about ordering or not ordering screening tests.

Where can people find more information about cancer?

There are many ways a person can find more information about cancer, but if they have any immediate concerns about having cancer, their first source of information should be their doctor. In addition to the references listed at the end of this article, the following is a list of information sources that are well recognized as authorities for cancer information by most clinicians:

* American Cancer Society (<http://www.cancer.org/Cancer/index>)
* National Cancer Institute (<http://www.cancer.gov/>)

Health Solutions From Our Sponsors

* [Easy Glucose Monitoring](https://www.webmd.com/dna/removing-the-obstacles)
* [CAR T Cell Therapy](https://www.webmd.com/immunotherapy-against-cancer)
* [Got BPH Symptoms?](https://www.webmd.com/prostate-enlargement/symptom-score)
* [Myths About Epilepsy](https://www.webmd.com/truth-about-epilepsy)
* [Treatments for Psoriasis](https://www.webmd.com/skin-problems-and-treatments/psoriasis/severe-psoriasis-19/psoriasis-treatment-options)
* [Life With MS](https://www.webmd.com/multiple-sclerosis/ms-mind-19/ms-grey-matter)
* [CANCER CENTER](https://www.medicinenet.com/cancer/index.htm)

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*References*