



Cancer Classification

Cancers are classified in two ways: by the type of [tissue](#) in which the [cancer](#) originates (histological type) and by [primary site](#), or the location in the body where the cancer first developed. This section introduces you to the first method: cancer classification based on histological type. The international [standard](#) for the classification and [nomenclature](#) of histologies is the [International Classification of Diseases for Oncology](#), Third Edition (ICD-O-3).

From a histological standpoint there are hundreds of different cancers, which are grouped into six major categories:

- [Carcinoma](#)
- [Sarcoma](#)
- [Myeloma](#)
- [Leukemia](#)
- [Lymphoma](#)
- [Mixed Types](#)

Carcinoma

[Carcinoma](#) refers to a [malignant neoplasm](#) of epithelial [origin](#) or cancer of the [internal](#) or [external](#) lining of the body. Carcinomas, malignancies of [epithelial tissue](#), account for 80 to 90 percent of all cancer cases.

Epithelial tissue is found throughout the body. It is present in the skin, as well as the covering and lining of organs and internal passageways, such as the [gastrointestinal tract](#).

Carcinomas are divided into two major subtypes: [adenocarcinoma](#), which develops in an [organ](#) or [gland](#), and [squamous cell carcinoma](#), which originates in the squamous [epithelium](#).

Adenocarcinomas generally occur in [mucus](#) membranes and are first seen as a thickened [plaque](#)-like white [mucosa](#). They often spread easily through the [soft tissue](#) where they occur. [Squamous cell](#) carcinomas occur in many areas of the body.

Most carcinomas affect organs or glands capable of secretion, such as the breasts, which produce milk, or the lungs, which secrete mucus, or [colon](#) or [prostate](#) or [bladder](#).

Sarcoma

[Sarcoma](#) refers to cancer that originates in supportive and connective tissues such as bones, tendons, [cartilage](#), [muscle](#), and fat. Generally occurring in young adults, the most common sarcoma often develops as a painful [mass](#) on the [bone](#). Sarcoma tumors usually resemble the tissue in which they grow.

Examples of sarcomas are:

- Osteosarcoma or osteogenic sarcoma (bone)
- Chondrosarcoma (cartilage)
- Leiomyosarcoma (smooth muscle)
- Rhabdomyosarcoma (skeletal muscle)
- Mesothelial sarcoma or mesothelioma (membranous lining of body cavities)
- Fibrosarcoma (fibrous tissue)
- Angiosarcoma or hemangioendothelioma (blood vessels)
- Liposarcoma (adipose tissue)
- Glioma or astrocytoma (neurogenic connective tissue found in the brain)
- Myxosarcoma (primitive embryonic connective tissue)
- Mesenchymous or mixed mesodermal tumor (mixed connective tissue types)

Myeloma

[Myeloma](#) is cancer that originates in the [plasma](#) cells of [bone marrow](#). The plasma cells produce some of the proteins found in [blood](#).

Leukemia

Leukemias ("liquid cancers" or "blood cancers") are cancers of the bone marrow (the [site](#) of blood [cell](#) production). The word [leukemia](#) means "white blood" in Greek. The disease is often associated with the overproduction of immature white blood cells. These immature white blood cells do not perform as well as they should, therefore the patient is often [prone](#) to [infection](#). Leukemia also affects red blood cells and can cause poor blood clotting and [fatigue](#) due to [anemia](#). Examples of leukemia include:

- Myelogenous or granulocytic leukemia (malignancy of the myeloid and granulocytic white blood cell series)
- Lymphatic, lymphocytic, or lymphoblastic leukemia (malignancy of the lymphoid and lymphocytic blood cell series)
- Polycythemia vera or erythremia (malignancy of various blood cell products, but with red cells predominating)

Lymphoma

Lymphomas develop in the glands or nodes of the [lymphatic system](#), a network of vessels, nodes, and organs (specifically the [spleen](#), tonsils, and [thymus](#)) that purify bodily fluids and produce infection-fighting white blood cells, or lymphocytes. Unlike the leukemias which are sometimes called "liquid cancers," lymphomas are "solid cancers." Lymphomas may also occur in specific organs such as the [stomach](#), [breast](#) or [brain](#). These lymphomas are referred to as [extranodal](#) lymphomas. The lymphomas are subclassified into two categories: [Hodgkin lymphoma](#) and [Non-Hodgkin lymphoma](#). The presence of [Reed-Sternberg cells](#) in Hodgkin [lymphoma](#) diagnostically distinguishes Hodgkin lymphoma from Non-Hodgkin lymphoma.

Mixed Types

The type components may be within one category or from different categories. Some examples are:

- adenosquamous carcinoma
- mixed mesodermal tumor
- carcinosarcoma
- teratocarcinoma

In the next section, you will be provided with a comprehensive list of tissue types and the tumors that arise from them.

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