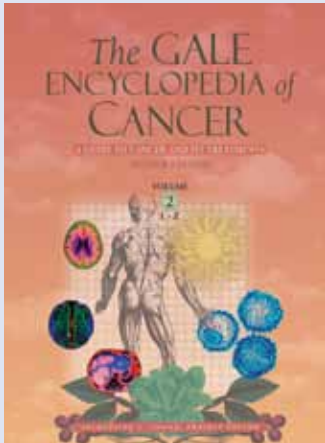


The Gale Encyclopedia of Cancer: A Guide to Cancer and Its Treatments, 3rd Edition

For the student or layperson tackling the complex subject of cancer



The Gale Encyclopedia of Cancer

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<p>"Researchers Describe Guidelines for Barrett Esophagus Screening." <i>Biotech Week</i> April 28, 2004: 666.</p> <p>"Results of Surgical Treatment of Barrett Esophagus 1980—2003 Are Not Optimal." <i>Biotech Week</i> May 19, 2004: 582.</p> <p>ORGANIZATIONS American Cancer Society. (800) ACS-2345. <http://www.cancer.org>.</p> <p>OTHER <i>CancerLinkUSA</i>. <http://cancerlinkusa.com>.</p> <p><i>OncoLink University of Pennsylvania Cancer Center</i>. <http://cancer.med.upenn.edu/diseases/esophageal/>.</p> <p>Tish Davidson, A.M. Teresa G. Odle</p> <p>Basal cell carcinoma Definition</p> <p>A basal cell carcinoma is a skin cancer that originates from basal keratinocytes in the top layer of the skin, the epidermis. Sometimes these tumors are called "rodent ulcers."</p> <p>Description</p> <p>Basal keratinocytes are unpigmented skin cells found deep in the epidermis, hair follicles, and sweat glands. When they become cancerous, these cells invade the dermis (the layer of skin just below the epidermis) and spread out into the normal skin. They become visible as a small growth or area of change in the skin's appearance. These tumors can appear anywhere on the body, but most become evident on the face and neck.</p> <p>Most basal cell carcinomas are small tumors that can be cured with simple surgeries. They usually grow quite slowly. However, neglected or aggressive tumors can invade vast amounts of skin. These cancers can also spread along bones, cartilage, muscles, and, more rarely, nerves. Some tumors may eventually reach the eye or brain or become large enough to significantly disfigure the face. These serious consequences are more likely if the tumor lies close to bone and cartilage—for instance, at the corner of the eye. Very few basal cell carcinomas spread to more distant organs; no more than five out of every 10,000 of these tumors metastasize. Most that do are very large, deep cancers that have been visible for years.</p> <p>GALE ENCYCLOPEDIA OF CANCER 117</p>	<p>Demographics</p> <p>Basal cell carcinomas are most common from middle age until old age. They are more frequent in men than women. These cancers seem to be associated with exposure to ultraviolet light; they tend to develop on sun-exposed areas and are more common in people living near the equator. Those who have lighter skin are more susceptible; fair-haired blonds are more likely to develop tumors than people with darker complexions. In the United States, Caucasians have a 28% to 33% chance of developing a basal cell carcinoma over a lifetime.</p> <p>Weakened immunity may also play a role. Those who have had an organ transplanted or who have contracted acquired immune deficiency syndrome (AIDS) are more likely to develop one of these cancers.</p> <p>Basal cell carcinomas are particularly common among individuals with a rare genetic disease called nevoid basal cell carcinoma syndrome (Gorlin's syndrome). Individuals with this disease can be born with basal cell carcinomas or begin to develop them in childhood. Some have few or no cancers; others have more than 250. These tumors seldom grow much before puberty, but during and after adolescence they can spread rapidly. Other symptoms include small pits in the palms and soles, cysts in the jaw, and other abnormalities in the bones.</p> <p>Causes and symptoms</p> <p>Basal cell carcinomas are caused by genetic damage to a skin cell. Exposure to ultraviolet light and x rays, suppression of the immune system, and genetic factors seem to increase the risk that this will happen. The exact cause, however, is rarely known.</p> <p>Several types of basal cell carcinoma exist. Nodular basal cell carcinomas are the most common form. These tumors begin as a tiny red or clear bump on the skin. Over time, they develop into a growth with clear or white "pearly" raised edges and, often, a depressed area in the middle. A network of tiny blood vessels usually encircles the surface, and the tumor may bleed repeatedly or crust over. Morpheiform (sclerosing, morpheic) basal cell carcinomas are more difficult to detect. These tumors are usually pale, firm, flat growths that can blend into the normal skin around them. Many look just like a scar. Superficial basal cell carcinomas are flat, red, scaly plaques that can look like psoriasis or eczema. Unlike other basal cell carcinomas, they are usually found on the arms, legs, and torso. Pigmented basal cell carcinomas are brown, black, or blue; they are usually of the nodular type and can look like a melanoma.</p> <p>Basal cell carcinoma</p> <p>Some general characteristics of skin cancers include:</p> <ul style="list-style-type: none"> • irregular or ragged borders • non-symmetrical shape • a change in color • a size greater than 0.2 inches (6 mm) <p>Diagnosis</p> <p>Basal cell carcinomas are usually diagnosed with a skin biopsy taken in the doctor's office. This is generally a brief and simple procedure. After numbing the skin with an injection of local anesthetic, the doctor snips out a tiny piece of the tumor. The skin sample must be sent to a trained pathologist to be analyzed. It may take up to a week for the biopsy results to come back. Sometimes the tumor is removed immediately after the biopsy, before the results are known.</p> <p>Treatment team</p> <p>Primary care physicians remove some basal cell carcinomas; other cancers, including larger or more complicated tumors, may be referred to a dermatologist. The services of a plastic surgeon are occasionally necessary. In the rare event that a tumor metastasizes, an oncologist and full cancer treatment team become involved.</p> <p>Clinical staging, treatments, and prognosis</p> <p>Basal cell carcinomas rarely spread into the lymph nodes and internal organs. For this reason, doctors tend not to stage them. If staging is needed, the TNM (tumor, lymph node, and metastases) system is usually used. For basal cell carcinoma, this can be simplified into the following five categories:</p> <ul style="list-style-type: none"> • Stage 0: The cancer is very small and has not yet spread from the epidermis to the dermis. • Stage 1: The cancer is less than 2 cm (0.8 inches) in diameter. No cancer cells can be found in lymph nodes or other internal organs. • Stage 2: The cancer is more than 2 cm (0.8 inches) in diameter. No cancer cells can be found in lymph nodes or other internal organs. • Stage 3: Cancer cells have been found either in nearby lymph nodes or in the bone, muscle, or cartilage beneath the skin (or in both locations). • Stage 4: Cancer cells have been discovered in internal organs, most often the lungs or lymph nodes, that are distant from the skin. A stage four cancer can be any size. <p>Treatment options for non-metastatic, non-staged tumors</p> <p>For most non-metastatic, non-staged cancers, there may be several treatment options. The recommended treatment depends on the size and type of tumor, its location, and cosmetic considerations. The cure rates for most of the following techniques are approximately 85% to 95%, but vary with tumor size and other factors. Moh's micrographic surgery has a five-year cure rate of 96%. Success rates for recurrent tumors are approximately 50% with most techniques and 90% with Moh's surgery.</p> <p>In conventional surgery, the doctor numbs the area with an injection of local anesthetic, then cuts out the tumor and a small margin of normal skin around it. The wound is closed with a few stitches. One advantage to conventional surgery is that the wound usually heals quickly. Another benefit is that the complete cancer can be sent to a pathologist for evaluation. If the skin around the tumor is not completely free of cancer cells, the tumor can be treated again immediately.</p> <p>Moh's micrographic surgery is a variation of conventional surgery. In this procedure, the surgeon examines each piece of skin under the microscope as it is removed. If any cancer cells remain, another slice is taken from that area and checked. These steps are repeated until the edges of the wound are clear of tumor cells, then the wound is closed. The advantage to this technique is that all of the visible cancer cells are removed but as much normal skin as possible is spared. Moh's surgery is often used for larger or higher risk tumors and when cosmetic considerations are important. The main disadvantage is that it takes much longer than conventional surgery and requires a specially trained surgeon.</p> <p>A laser is sometimes used as a cutting instrument instead of a scalpel. Laser light can also destroy some cancer cells directly. A disadvantage to laser surgery is that the wounds from some lasers heal more slowly than cuts from a scalpel. The advantage is that bleeding is minimal.</p> <p>In electrodissection and curettage, the physician scoops out the cancer cells with a spoon-shaped instrument called a curette. After most of the tumor is gone, the remaining cancerous tissue is destroyed with heat from an electrical current. The wound is left open to heal like an abrasion. It leaks fluid, crusts over, and heals during the next two to six weeks. This is a safe and easy method for removing many basal cell carcinomas. One disadvantage is that there is no skin sample to confirm that the tumor is completely gone. The electrical current used during this method can interfere with some pacemaker.</p> <p>GALE ENCYCLOPEDIA OF CANCER 118</p>
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One-stop resource for comprehensive cancer and cancer treatment information

STANDARD RUBRICS MAKE INFORMATION ACCESSIBLE

Entries on cancer types typically include the following elements:

- Definition
- Description
- Demographics
- Causes and Symptoms
- Diagnosis
- Treatment team
- Clinical staging
- Treatments and prognosis with alternative and complementary therapies
- Coping with cancer treatment
- Clinical trials;
- Prevention
- Special concerns
- Resources, including books, periodicals, and organizations
- Key terms (in colored inset boxes).




“Key Terms” keeps readers in the know

ENTRIES ON CANCER DRUGS INCLUDE:

- Definition
- Purpose
- Description
- Recommended dosage
- Precautions
- Side effects
- Interactions

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