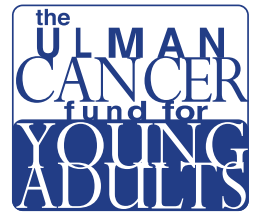


About Young Adult Cancer:

A General Overview



What age group is considered "young adults"?

According to the National Cancer Institute, (NCI), the "young adult" age range encompasses ages 15 through 39.

How many young adults are diagnosed with cancer each year?

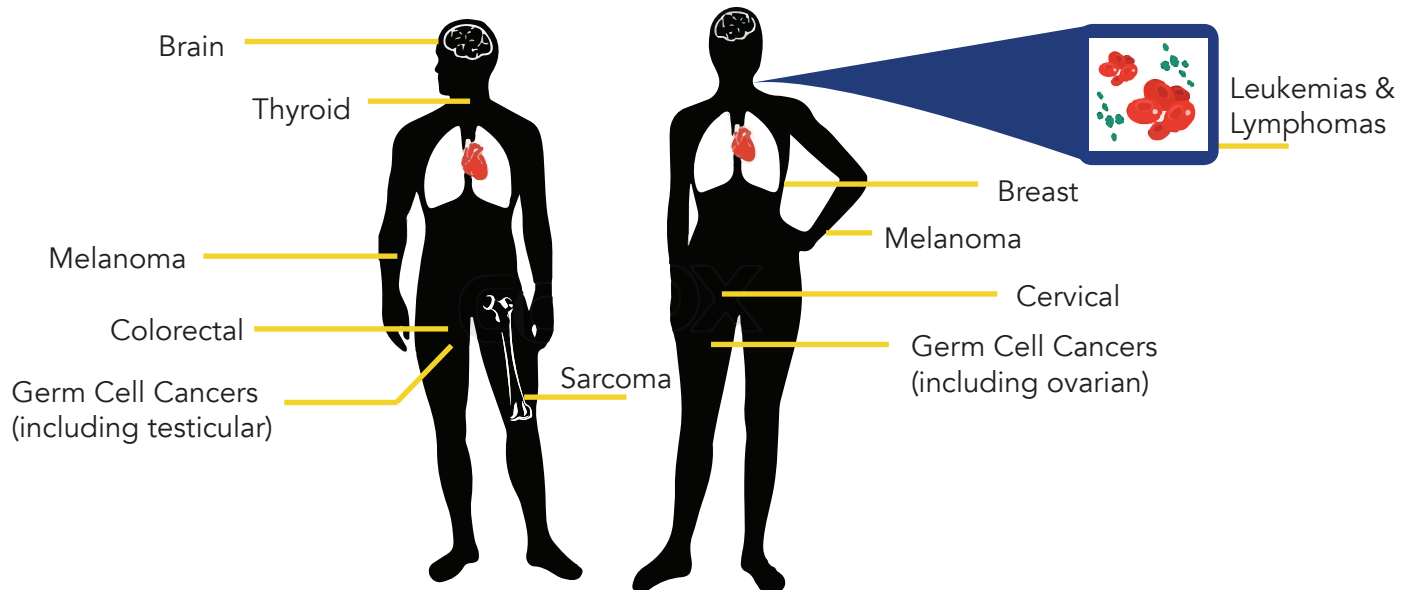
About 70,000 young adults are diagnosed with cancer each year in the United States. For perspective, that's enough to fill every seat in M&T Bank Stadium (Home of the Baltimore Ravens).



Young adults:

- Are **six times** more likely to be diagnosed with cancer than children ages 0-14;
- Account for about **5%** of all cancer diagnoses in the United States; and
- Are more likely to die from cancer than any other disease;

What are the most common cancers in young adults?



Leukemias, lymphomas, testicular cancer, and thyroid cancer are the most common cancers among 15-24-year-olds. Breast cancer and melanoma are the most common among 25-39-year-olds.

UCF Patient Navigators typically see many of these cancers, with leukemias (ALL, AML), lymphomas (Hodgkin and Non-Hodgkin), sarcomas, and germ cell being the most prevalent.

Below are some explanations of these different types of cancer.

Cancer Type

Overview

Acute Lymphoblastic leukemia (ALL)

ALL is a type of cancer in which the bone marrow makes too many lymphocytes (a type of white blood cell). This type of cancer usually gets worse quickly if it is not treated.

Acute Myeloid Leukemia (AML)

AML is a type of cancer in which the bone marrow makes abnormal myeloblasts (a type of white blood cell), red blood cells, or platelets. This type of cancer usually gets worse quickly if it is not treated.

Lymphoma (Hodgkin and Non-Hodgkin)

Lymphomas are blood cancers that develop in the lymphatic system. The two main types are:

1. Hodgkin lymphoma (HL); and
2. Non-Hodgkin lymphoma (NHL).

The two differ in how the disease spreads, where tumors are most commonly found in the body, and variation in symptoms. As lymphoma progresses, it compromises your body's ability to fight infection..

Sarcoma

Sarcomas grow in connective tissue -- cells that connect or support other kinds of tissue in your body. These tumors are most common in the bones, muscles, tendons, cartilage, nerves, fat, and blood vessels of your arms and legs

Osteosarcoma

Osteosarcoma is a type of cancer that starts in the bones. It typically develops in areas where the bone is growing quickly, such as near the ends of the long bones (around the knee, lower part of the thigh bone, upper part of the shinbone or the part of the upper arm bone close to the shoulder).

Ewing Sarcoma

Ewing sarcoma includes several types of bone tumors (osteosarcoma). Ewing sarcoma tumors usually form in the hip bones, the ribs, or in the middle of long bones. The disease occurs most often in teenagers and young adults. Ewing tumors are most common in bone but can also form in soft tissue.

Soft-Tissue Sarcoma

Soft tissue sarcoma is a cancer that starts in soft tissues of the body, including muscle, tendons, fat, lymph vessels, blood vessels, nerves, and tissue around joints. The tumors can be found anywhere in the body but often form in the arms, legs, chest, or abdomen.

Rhabdomyosarcoma

Rhabdomyosarcoma a soft tissue sarcoma that begins in muscles that are attached to bones and help the body move. Rhabdomyosarcomas usually form lumps near the surface of the body.

Germ Cell Cancer

Germ cell tumors are growths that form from reproductive cells. Most germ cell tumors that are cancerous occur as cancer of the testicles in males (testicular cancer) or cancer of the ovaries in females (ovarian cancer).

How are young adult cancers treated?

Treatment modalities for cancer in young adults vary by type of cancer and stage of cancer. Some treatment modalities are listed below.

Treatment Modality	Overview of Treatment Modality	Side-Effects of Treatment Modality <small>(NOTE: For all modalities, side effects depend on the treatment dose, location of treatment, etc.)</small>
Bone Marrow Transplant (BMT)	<p>A bone marrow transplant replaces bone marrow that is either not working properly or has been destroyed by chemotherapy or radiation.</p> <p>Two main types of BMTs – allogenic and autologous:</p> <ul style="list-style-type: none"> • Allogenic: The bone marrow is from a donor is not an identical twin. Most bone marrow transplants today are allogeneic. • Autologous: The replacement bone marrow comes from the patient’s own cells 	<ul style="list-style-type: none"> • Damage to the kidneys, liver, lungs, and heart; • Early menopause; • Graft failure, which means that the new cells do not settle into the body and start producing stem cells; • Graft vs. Host Disease (GVHD) a condition in which the donor cells attack your own body; and • Infections (which can be very serious).
Chemotherapy	<p>Chemotherapy (“chemo,”) refers to more than 100 different medications used to treat cancer. Chemo maybe administered via mouth (oral chemo), injection, intravenously (IV) or topically.</p> <ul style="list-style-type: none"> • IV chemo may be delivered via a catheter or port, which is usually implanted in a blood vessel of the chest for the duration of the therapy. 	<ul style="list-style-type: none"> • Fatigue, nausea, vomiting, decreased blood cell counts, hair loss, mouth sores, and pain; and • Long-term side effects may include damage to your heart, lungs, nerves, kidneys, or reproductive organs, or in some cases, a secondary cancer.
Immunotherapy (or biologic therapy)	<p>Utilizes your own immune system to fight cancer cells. It generally results in fewer short-term side effects than chemotherapy does. Immunotherapy is primarily used as a blood cancer treatment. It can be used:</p> <ul style="list-style-type: none"> • In combination with other types of cancer treatment; • As maintenance therapy after combination chemotherapy; or • As a single agent 	<ul style="list-style-type: none"> • Low blood pressure; • Diarrhea; and • Rash or swelling at the injection
Radiation	<p>High-energy rays (x-rays, gamma rays, high-energy particles) are used to damage cancer cells and stop them from growing and dividing;</p> <p>Radiation therapy is a local treatment - it affects cancer cells only in the treated area. Like chemotherapy, it has the potential to damage both healthy and unhealthy cells;</p> <p>Radiation can come from:</p> <ul style="list-style-type: none"> • a machine (external radiation) • an implant of radioactive material placed directly into or near the tumor (internal radiation, also known as brachytherapy.); or • by mouth or intravenously, where radioactive material travels directly to the cancerous tissue (systemic radiation). 	<ul style="list-style-type: none"> • Fatigue; • Skin reactions (such as a rash or redness) in the treated area; • Loss of appetite; and • Side effects of radiation can usually be treated or controlled, are not typically permanent.

Surgery

Surgery is often performed to remove cancerous tumors. It can be combined with other cancer treatments, such as chemotherapy and/or radiation;

There are a few sub-categories of cancer surgery:

- “Debulking” surgery is performed to remove as much of the tumor as is safely possible cancer cannot be entirely surgically;
 - “Palliative” surgery is performed in the cases of advanced cancer to reduce the effects (for example, pain or discomfort) of a cancerous tumor;
 - “Preventive” (or prophylactic) surgery may be performed to reduce the risk of developing cancer in the future.
- Side effects depend on the location of the tumor, the type of operation, the patient’s general health status;
 - Patients are often uncomfortable during the first few days after surgery, this pain can be controlled with medicine; and
 - It is common for patients to feel tired or weak for a while.

The young adult population has not experienced the same improvements in mortality rate reduction and overall survival seen in both younger and older populations. This may be a result of:

- Biology of underlying cancer
- Less participation in clinical trials (which is a key to success in pediatric age range)
- Insurance issues (tend to be under insured compared to children and older adults)
- Approach to therapy (such as delayed diagnosis and delayed time to treatment)
- Pediatric vs. adult regimens
- Compliance with medical plan

What unique challenges do young adults living with and surviving cancer face?

There are several reasons why young adults face different and unique challenges with a cancer diagnosis compared to older adults and / or pediatric patients. These include:

Balancing Independence Young adults are in the process of becoming independent or are newly independent. A cancer diagnosis often makes them revert to being dependent on others (family members, friends) while in treatment and even post-treatment. Young adults, in most cases, are capable of making medical decisions on their own accord, but may feel pressure from family members or friends.

How We Help...

UCF Young Adult Patient Navigators help young adults understand how their treatment may affect their fertility, guide them through fertility options, and provide financial assistance to offset the costs related to fertility preservation.

How We Help...

UCF Young Adult Patient Navigators help young adults balance their independence by educating them on their treatment options so they can make informed decisions about their care, and provide a neutral voice when discussing these options with family members, the medical team, peers, etc.

Compromised Fertility Treatment for a cancer diagnosis may affect a young adults ability to have children in the future. Young adults need to plan for the future (even if it seems far away!) by making decisions around fertility. This may include fertility preservation, adoption, surrogacy and other options. Since fertility preservation is rarely covered by health insurance – even for cancer patients – it can be very expensive. Furthermore, some young adult cancer treatment protocols require patients to begin immediate treatment, making it difficult for patients to think through all of their options around fertility.

Emotional / Social Challenges A cancer diagnosis any age is overwhelming. Young adults specifically face particular emotional and social challenges given where they are in their life – in school, beginning a career, starting a family. They may face social isolation from family and friends, and miss out (or “FOMO”) on major life milestones – like graduating college, living independently, getting married. Physical issues related to treatment and long-term effects of treatment like hair loss, immunosuppression, or “chemobrain” (cognitive function issues) can make social, family, and professional situations very intimidating. Young adults, given their desire to be social, often benefit from meeting others like themselves who are facing a cancer diagnosis.

How We Help...

UCF young adult Patient Navigators help young adults address their financial concerns by identifying resources for health care funding, insurance, medical debt relief, disability income, and additional patient financial assistance. UCF Patient Navigators empower patients with the tools they need to seek out additional financial support. They also help provide limited financial assistance for practical needs – such as gas gift cards, grocery store gift cards and assistance with fertility preservation.

How We Help...

UCF Young Adult Patient Navigators help young adults with emotional or psychosocial challenges by providing one-on-one support to help them understand, cope with, and normalize their cancer experience.

Financial Concerns It’s no secret that cancer treatment is expensive. Since young adults are the most likely of all age groups to be uninsured, not having medical insurance can delay diagnosis and treatment, affect compliance with treatment, and reduce the likelihood of follow up care. In addition, young adults may not have as much financial independence or stability as older adults and may not have a spouse or partner to provide additional household income. They may be in school or unable to work due to cancer.

Recalibrating Life with (and after!) Cancer

Not many young adults plan for a cancer diagnosis in their late teens, twenties, or thirties. It throws a major wrench into their life plans. Young adults often struggle with how to adapt to their cancer diagnosis and continue living life to the fullest with – and beyond – it. This may include understanding the best methods of coping and navigating “real life” with and after cancer, such as returning to work or school or their peer groups.

How We Help...

UCF Patient Navigators help young adults adapt, familiarize, and adjust to life with and beyond cancer – such as how to cope with the emotional and physical side effects, acknowledging cognitive and social changes, and understanding how their diagnosis affects familial, personal, and professional relationships. UCF Patient Navigators help young adults prepare for a positive return to work, school, and their peer circles after a cancer diagnosis.

Source:

The National Cancer Institute - www.cancer.gov; MedicineNet http://www.medicinenet.com/cancer_101_pictures_slideshow/article.htm