Treating Cancers in Young Adults

Older people are much more likely than younger people to get cancer, so most doctors who treat cancer (**oncologists**) see mainly older adults. Some doctors (**pediatric oncologists**) specialize in treating childhood cancers. Each type of doctor tends to work in an office or cancer center geared toward treating either older adults or children.

There are very few doctors who focus specifically on young adults with cancer, so it's not always clear which type of doctor (or treatment center) might be best. It often depends on the patient's age and the type of cancer.

- Young adults with cancers that are more common in children, such as acute lymphocytic leukemia (ALL)[1], bone sarcomas[2], and rhabdomyosarcoma[3], are often best treated by (or at least with input from) pediatric oncologists, who have more experience with these types of cancers.
- On the other hand, young adults with "adult" cancers such as breast cancer[4], colorectal cancer[5], or melanoma[6] are more likely to benefit from doctors who treat older adults and see these types of cancers more often.

Doctors tend to use more intense treatments when treating children with cancer than when treating adults. Children's bodies are often better able to recover from more intense treatments (such as higher doses of chemo) than are adults' bodies. And in general, childhood cancers often respond better to chemo because they tend to be cancers that grow quickly (and chemo works better against fast-growing cancers.)

For some cancers (especially "childhood" cancers like ALL and bone sarcomas), the more aggressive treatments used for children have been found to improve outcomes for young adults as well, but for other cancers the results are not as clear. Again, this can depend on the patient's age and the type of cancer.

Types of cancer treatments

The main types of treatment for cancers in young adults are the same as those used in other age groups. The choice of treatment depends mainly on the type[7] and stage[8] (extent) of the cancer. Sometimes more than one type of treatment is used.

It's important to discuss all of your treatment options as well as their possible side effects, with your doctors to help make the decision that best fits your needs.

Surgery

Surgery is a common treatment, especially for early stage cancers. The type of surgery depends on the type and location of the cancer.

Young adults have some advantages when it comes to surgery in that they usually have fewer health problems than older adults, and there are fewer concerns about anesthesia than there are with children. (Anesthesia is the use of drugs or gases to put you into a deep sleep and not feel pain.)

For more information, see Cancer Surgery[9].

Radiation therapy

Radiation therapy is the use of high-energy rays (such as x-rays) or particles to kill cancer cells.

Young adults are less likely to have major side effects from radiation than children because their bodies are no longer growing as quickly. But many parts of the body can still be affected by radiation. Radiation can cause some late or long-term side effects years later. These are discussed in Late and Long-term Effects of Cancer Treatment in Young Adults[10].

For more information, see Radiation Therapy[11].

Chemotherapy and other drugs

Chemotherapy (chemo) is the use of drugs to treat cancer. Some drugs can be swallowed in pill form, while others are injected into a vein or muscle. Chemo is often used to treat cancers that have spread, but it can also be used for some earlier stage cancers (usually along with other treatments).

Chemo drugs can cause side effects because they affect cells that are dividing quickly. Young adults can usually withstand higher doses of chemo than older adults, but these higher doses can also cause more short- and long-term side effects[12].

For more information, see Chemotherapy[13].

Targeted therapy

For some types of cancer, newer targeted therapy drugs can be used instead of or along with standard chemo drugs. These drugs work by attacking certain parts of cancer cells (or nearby cells) that help them grow. Targeted drugs sometimes work when standard chemo drugs don't, and they have different (and often less severe) side effects.

For more information, see Targeted Cancer Therapy[14].

Hormone therapy

Some types of cancer, such as some breast cancers, grow in response to certain hormones in the body. These cancers can sometimes be treated with hormone therapy, which stop the cancer cells from responding to these hormones.

Immunotherapy

Some medicines work by helping the body's own immune system attack the cancer cells. Immunotherapy drugs can be very helpful against some types of cancer, and they also tend to have different side effects than standard chemo drugs.

For more information, see Cancer Immunotherapy[15].

Stem cell transplant

A stem cell transplant, also known as a *bone marrow transplant*, is a way for doctors to give very high doses of chemo (sometimes along with radiation therapy). It's an option for treating some cancers, usually if other treatments are not working.

Without a stem cell transplant, the doses of chemo drugs are limited because they could severely damage the bone marrow, which is where new blood cells are made. This could lead to life-threatening infections, bleeding, and other problems because of low blood cell counts.

When a stem cell transplant is done, blood-forming stem cells are first collected from the blood of either the patient or from a matched stem cell donor using a special machine. The stem cells are kept frozen while then the patient gets very high doses of chemo (and sometimes radiation) to kill the cancer cells. Afterwards, the stem cells are given into a vein much like a blood transfusion. They settle in the bone marrow and start making new blood cells over the next few weeks.

A stem cell transplant is a complex treatment that can cause serious, sometimes even life-threatening side effects. It often requires a lengthy hospital stay and can cost a lot. It's important to understand the possible benefits, risks, and costs of this procedure if it's an option.

For more information, see Stem Cell Transplant for Cancer[16].

The cancer treatment team

You may have different types of doctors on your treatment team, depending on the type and stage of your cancer and your treatment options. These doctors might include:

- **Cancer surgeons (sometimes called surgical oncologists):** doctors who use surgery to treat cancer. Surgeons often specialize in treating a certain part of the body or a body system (such as the head and neck area or the digestive tract).
- **Medical oncologists:** doctors who use chemotherapy and other medicines to treat adults with cancer
- **Pediatric oncologists:** doctors who use medicines to treat cancers usually seen in children and teens
- **Radiation oncologists:** doctors who use radiation to treat cancer

Nurse practitioners (NPs) and **physician assistants (PAs)** are often an important part of the treatment team as well. These are nurses and other health professionals who are specially trained and licensed to practice medicine alongside doctors.

Many other health professionals might be involved in your care as well, including:

- Nurses
- Rehabilitation and physical therapists
- Nutritionists
- Social workers
- Other health professionals

These professionals can provide help and guidance with many issues facing young adults and their families, such as treatment effects on fertility, education or employment needs, health insurance concerns, family planning, and financial issues.

Clinical trials

Clinical trials are carefully controlled research studies that are done with patients who volunteer for them. They are used to learn more about promising new treatments or procedures.

Clinical trials are one way to get state-of-the art cancer treatment. Sometimes they may be the only way to get access to some newer treatments. They are also the best way for doctors to learn better ways to treat cancer. Still, they might not be right for everyone.

Children's cancer centers[17] often conduct many clinical trials at any one time, and most children treated at these centers take part in a clinical trial as part of their treatment. This is one of the reasons why there has been great progress in treating many childhood cancers in recent decades.

Overall, adults are less likely to take part in clinical trials, and young adults tend to have the lowest enrollment rates of any age group. There are many reasons for this, including the many different cancer types and treatment settings, lack of knowledge about clinical trials (from both doctors and patients), patient/family reluctance to enter clinical trials, and financial issues. Unfortunately, many experts believe this low enrollment in clinical trials is one of the main reasons for the lack of progress in treating cancers in young adults.

If you would like to learn more about clinical trials that might be right for you, start by asking your doctor if your clinic or hospital conducts clinical trials. See Clinical Trials[18] to learn more.

Hyperlinks

1. www.cancer.org/cancer/acute-lymphocytic-leukemia.html
2. www.cancer.org/cancer/bone-cancer.html
3. www.cancer.org/cancer/rhabdomyosarcoma.html
4. www.cancer.org/cancer/breast-cancer.html
5. www.cancer.org/cancer/colon-rectal-cancer.html
6. www.cancer.org/cancer/melanoma-skin-cancer.html

7. www.cancer.org/cancer/cancer-in-young-adults/cancers-in-young-adults.html
8. www.cancer.org/treatment/understanding-your-diagnosis/staging.html
9. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/surgery.html
10. www.cancer.org/cancer/cancer-in-young-adults/late-effects.html
11. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation.html
12. www.cancer.org/cancer/cancer-in-young-adults/late-effects.html
13. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/chemotherapy.html
14. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/targeted-therapy.html
15. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/immunotherapy.html
16. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/stem-cell-transplant.html
17. www.cancer.org/treatment/children-and-cancer/when-your-child-has-cancer/finding-treatment/pediatric-cancer-centers.html
18. www.cancer.org/treatment/treatments-and-side-effects/clinical-trials.html

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Written by

The American Cancer Society medical and editorial content team (www.cancer.org/cancer/acs-medical-content-and-news-staff.html)

Our team is made up of doctors and oncology certified nurses with deep knowledge of

cancer care as well as journalists, editors, and translators with extensive experience in medical writing.