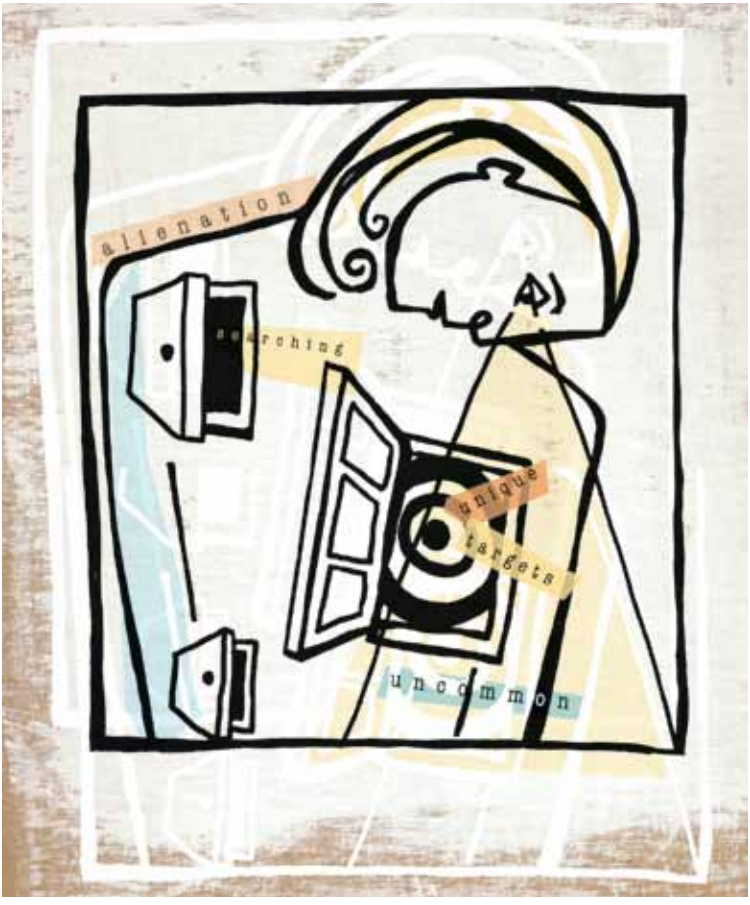
A Patient's Guide to Rare Cancer



What Is a Rare Cancer? ■ Finding Specialty Care ■ **Where to Find Support** ■ How to Treat a Rare Cancer ■ **Insurance Issues** ■ Questions to Ask

cure
CANCER UPDATES, RESEARCH & EDUCATION

Based on science, but filled with humanity, *CURE* makes cancer understandable.

A Patient's Guide to Rare Cancer

RARE CANCERS aren't always unfamiliar ones. Tumors of the brain, the liver, and the ovary are all considered rare cancers. But so are some cancers with much more unusual names, such as gastrointestinal stromal tumor (GIST), adenoid cystic carcinoma, and hairy cell leukemia, which occur far less frequently.

THE NUMERICAL CUTOFF for what constitutes a "rare" cancer can vary. One widely accepted definition, used by the National Cancer Institute, considers a cancer rare if it is diagnosed in less than 15 people per 100,000 annually in the population—translating to under 40,000 cases per year. Ovarian cancer, for instance, occurs in an estimated 21,000 Americans yearly; GIST, in 4,500 to 6,000 Americans a year.

Many adult rare cancers fall into larger categories—for instance, leukemia encompasses multiple types of relatively uncommon cancers that occur in the blood. Another example is soft-tissue sarcoma, which has different names depending on the type of cell from which it originated.

The most common cancers—breast, prostate, lung, and colon—attract far more research funds than less common types. The rationale: More people are affected by the common cancers, and so more can benefit from any clinical developments related to those cancers. Yet the least common of tumors may someday have a wide impact.

That's because many such tumors are more likely to be linked to a simple genetic flaw than are some of the more common cancers, which can be caused by a host of different factors, sometimes working together. The challenge for scientists is similar to a safe with a combination lock—if it takes only one number to open it (or one molecular malfunction to cause cancer), it's a lot easier to crack than if multiple numbers (or biochemical factors) are involved.

Lessons learned from treatment successes with rare cancers could help crack the biochemical combinations that lead to common cancers. That's because scientists studying common tumors, such as those of the breast and colon, have in recent years begun to discern subtypes of those cancers—in a sense, a collection of many rare tumors. Studying such tumors as smaller subsets, where a simpler set of defects can be targeted, appears to be crucial to success in fighting many common types of cancer.

Finding Specialty Care

PEOPLE DIAGNOSED WITH RARE CANCERS share a common quandary—how to get treatment for a cancer that occurs so infrequently that even their physician isn't familiar with it.

It's not a time to be timid. Getting appropriate care might mean pressing your oncologist for answers, enlisting the aid of the smartest and most savvy people in your support network, and even traveling far from home to consult with physicians who have made it their business to specialize in your cancer type.

Don't be surprised by conflicting opinions, however. In a *CURE* Survey Panel study sponsored by Novartis Oncology, 41 percent of rare cancer patients reported receiving conflicting information about their cancer or its treatment, compared with only 35 percent of patients with other cancers.

Many patients fear their doctors will be offended if they ask for a second opinion. On the contrary, most doctors expect patients diagnosed with serious illnesses to seek a second, and sometimes third, opinion—especially with a rare diagnosis. Moreover, insurance companies often require a second opinion (although they might not cover consultations out of their network of care).

To confirm your diagnosis, ask that a second pathologist review your slides. To understand treatment options, seek a referral for the nearest major cancer center to increase your odds of consulting with someone familiar with your cancer. Such centers typically are in big cities, and their services can be researched online. Finding a center that offers multidisciplinary care—where a variety of specialists and other clinicians from different disciplines related to cancer care, confer on difficult cases—could be especially beneficial for patients with rare cancers.

Take copies of your records to the physician. Also, if possible, have someone attend appointments and help take notes.

Physicians and nurses at the cancer center should be able to help you find a national expert. You—or someone you know who is skilled at Internet research—can also find physicians through online searches. Start with www.clinicaltrials.gov, a database listing research studies, and search your condition. Open links to relevant studies and check the name and institutional affiliation of the principal investigator in the research—someone who most likely studies and treats the cancer you have.

Next, go to the National Library of Medicine's PubMed database, a catalog of medical research abstracts (www.pubmed.gov). Search for articles related to treatment of your cancer, and make note of authors whose names appear repeatedly. You can also search for your cancer on websites of organizations that host medical meetings about cancer, such as the National Cancer Institute (www.cancer.gov) or the American Society of Clinical Oncology (www.asco.org); physicians who spoke about your cancer at professional conferences are recognized by their colleagues as experts in that type of cancer. Support groups and rare cancer organizations can also provide information on obtaining second opinions and care (see "Where to Find Support").

Once you have some names to investigate, check out information about the physicians on their institutions' websites.

Where to Find Support

ONE RARE CANCER, gastrointestinal stromal tumor, is diagnosed in just 4,500 to 6,000 people in the United States annually. Another, Waldenström macroglobulinemia, is diagnosed in just 1,000 to 1,500 Americans a year.

Contrast those tumors, and their hard-to-remember names, with breast cancer, and seemingly everyone knows someone who has had that disease.

Many people with cancer, feeling alienated by their condition, benefit in reaching out to others who have the same disease. But for people with rare cancers, that struggle to connect can be a lonely journey. As one participant on the American Cancer Society Cancer Survivors Network (ACS CSN) discussion board put it, "There isn't going to be a 'Mixed-Cell Mediastinal Germ Cell Tumors Walk-A-Thon' any time soon."

Fortunately, that discussion thread (csn.cancer.org/node/165717) and others like it are helping rare cancer patients shed time and geographical constraints to form their own virtual support communities, where they can share frustrations and insights.

April 2009 research sponsored by Novartis Oncology with the *CURE* Survey Panel found that patients with rare cancers are more than twice as likely as those with other cancers to say they very often use online social networking sites or blogs to learn more about their cancer.

At the ACS CSN's discussion board site, csn.cancer.org/forum, the "Rare and Other Cancers" section includes about 400 discussion threads. Those topical threads represent a laundry list of rare tumors, with patients, caregivers, and concerned others posting questions, offering advice, and cheering each other on. Users can also search the site for members with a particular diagnosis and use the site's messaging system to ask questions or seek advice.

The Rare Cancer Alliance Support site (www.rare-cancer.org/forum) also helps patients and caregivers connect, with forum topics covering everything from "Adenoid Cystic Carcinoma" to "Testicular Cancers – Rare." Among the other discussion threads is one titled "Seeking Others – Helping Others," where readers can post calls for information or look for other survivors with the same cancer.

Organizations focused on specific cancers can also help survivors find each other and learn more about their cancers. The National Organization for Rare Disorders website, www.rarediseases.org, includes an "index of organizations" that can help people find rare cancer organizations. Note, however, that the website is devoted to all rare disorders, not just cancers, so readers will find, for instance, the listings for three groups devoted to adenoid cystic carcinoma tucked under the listing for Addison's disease.

Patients and their caregivers might also find support from groups whose mission is broader than just one specific tumor. For instance, head and neck cancers encompass a variety of tumors that, in themselves, are relatively rare. But organizations such as SPOHNC—Support for People with Oral and Head and Neck Cancer (www.spohnc.org)—can provide information and foster personal connections for patients who might be navigating similar, if not the same, cancer-related concerns.

Treatment for Rare Cancers

WHEN IT COMES TO CANCER, the ones that are the most common aren't necessarily the easiest to treat. That's because a common cancer, like breast cancer, can actually be any one of multiple variations of the same disease—requiring different treatment strategies to target different genetic factors or biochemical processes that can cause or promote the tumor.

An April 2007 editorial in the scientific journal *Molecular Cancer Therapeutics* notes that despite far less research attention, a handful of very rare cancers have been impacted most dramatically by the development of new medicines, including targeted therapies—treatments aimed at a specific molecule or process relevant to cancer development. The article's authors assert that the reason a tumor is both rare and possibly more easily treated is that it is likely to arise from a single molecular genetic flaw.

By aiming narrowly at specific cancer vulnerabilities—rather than trying to kill cancer with a more broadly toxic approach, like chemotherapy—targeted therapies are generating excitement among scientists and eliciting more research dollars. The therapies are being studied as single agents, in combination with each other, and in combination with chemotherapy or other cancer treatments.

One success story involves the targeted therapy Gleevec (imatinib), approved to treat gastrointestinal stromal tumor (GIST) and all stages of chronic myeloid leukemia (CML). Most cases of CML, a blood cancer that strikes about 5,000 people in the U.S. each year, involve a chromosomal abnormality that gives rise to a "fusion" gene called bcr-abl. That gene encodes a protein that signals abnormal white blood cells to grow and thrive; Gleevec interferes with this signaling.

A major trial known as IRIS has highlighted Gleevec's dramatic impact on CML. That trial divided more than 1,100 newly diagnosed patients with chronic phase CML into two groups, one receiving Gleevec and the other a combination of the biological therapy interferon and the chemotherapy drug Cytosar-U (cytarabine). Findings published in 2003, with a median follow-up of 19 months, indicated that the chromosomal abnormality was undetected in 76 percent of the Gleevec group, compared with just 14.5 percent of the other group. The researchers reported that almost 97 percent of the Gleevec patients did not see a progression of their disease to later stages by 18 months, compared with less than 92 percent of patients in the other group.

Six years later, that progression-free figure was calculated at 93 percent for the patients given Gleevec from the outset. (Many of those on the other treatment crossed over to receive Gleevec, so comparison figures are unavailable.) Overall survival at five years was 89 percent for the Gleevec group; other research has found five-year survival rates of 68 to 70 percent on the interferon plus Cytosar-U regimen.

For GIST, many patients' tumors have a mutation in a gene called KIT that spurs growth and proliferation of the cancer cells. As with CML, Gleevec blocks the effects of the mutant protein encoded by KIT that cause the cancer to grow. While GIST is notoriously unresponsive to chemotherapy or radiation,

research has noted tumor response rates of up to 85 percent when Gleevec was administered. The drug has also been found to decrease the chance of recurrence when given after surgery to remove the tumor.

Other targeted therapies on the market, or in development, offer new hope to patients with rare cancers. Among those therapies are:

- **Revlimid (lenalidomide)** is helping certain patients with myelodysplastic syndromes (MDS), a variety of blood disorders that are diagnosed in 10,000 to 15,000 people in the United States each year. One study of the treatment in a mild type of MDS where chromosome 5 lacks a portion of DNA—an indication for which Revlimid is approved—found that after about four weeks, 69 percent of patients on one dosing regimen of Revlimid, and 58 percent on another regimen, no longer required blood transfusions. The treatment was also found to improve hemoglobin levels and reduce the numbers of abnormal bone marrow cells.

  Revlimid, in combination with dexamethasone, is also approved as a second-line therapy for multiple myeloma, a cancer of the plasma cells that's diagnosed in about 20,000 Americans annually. Two large clinical trials, involving nearly 700 multiple myeloma patients who relapsed after at least one previous therapy, found that more than half the patients' cancers responded to the treatment.

  Other drugs approved for multiple myeloma include thalidomide and Velcade (bortezomib). For treatment of MDS, Vidaza (azacitidine) and Dacogen (decitabine) have been cleared by the FDA.

- **Sutent (sunitinib),** a drug approved for the treatment of kidney cancer and GIST, has shown promise in a phase III trial against a rare form of pancreatic cancer known as pancreatic endocrine or islet cell tumors, which have limited treatment options and account for about 5 percent of the roughly 42,000 new cases of pancreatic cancer diagnosed in the U.S. each year. Among more than 150 patients, the median time until the cancer progressed was double (11.1 months) in the group receiving Sutent compared with the group receiving a placebo (5.5 months).

- **Pralatrexate,** a chemotherapy agent under review for approval, has offered hope in phase II research for the treatment of peripheral T-cell lymphoma, a rare cancer that is an aggressive form of non-Hodgkin lymphoma. The trial, dubbed PROPEL, found that among 109 patients given six weekly infusions of the drug (plus nutrients to help reduce mucosal side effects), 27 percent showed a response, with an estimated median response duration of 9.4 months.

Often, therapies are tested in clinical trials for a variety of rare cancers depending on the biology of the tumor. For instance, among the cancers for which Gleevec is being tested are medullary thyroid cancer, recurrent malignant glioma, mesothelioma, and ovarian cancer. Revlimid, meanwhile, is being tested in Waldenström macroglobulinemia, B-cell lymphoma, chronic lymphocytic leukemia, and mantle cell lymphoma. And Sutent is being examined in soft-tissue sarcomas, adenoid cystic carcinoma, anaplastic astrocytoma, glioblastoma, among other cancers.

Is a Clinical Trial Right for You?

MANY PATIENTS WITH RARE CANCERS FIND their disease has taken them—and their doctors—into uncharted territory. Because their cancers are so uncommon, little guidance might exist in terms of which treatments work and which don't. But patients can contribute to improving the science behind the treatments by participating in clinical trials.

Only a fraction of treatments make it through clinical trials and end up being deemed safe and effective by the Food and Drug Administration. Testing begins in the preclinical phase—studies done with malignant cells in a lab dish and in animals. Next, in what's called a phase I trial, the treatment is studied in just a handful of people to work out how best to administer the medicine and determine the safest dose. While the chance of deriving benefit from a medicine in this early testing is relatively low, such a trial still may offer an avenue to pursue when other options are unavailable.

Phase II trials further evaluate safety and explore whether it shows promise against a particular disease. If deemed worthy of a phase III trial, the treatment is tested on a larger scale, for instance comparing its use to the standard treatment.

Enrollment in phase III trials is often in the thousands. From a statistical standpoint, the more participants the better, in order to more firmly establish whether a treatment works, and whether it poses a risk of dangerous side effects. Unfortunately, finding large numbers of participants who meet a trial's entry criteria can be particularly daunting with rare cancers.

Besides treatment trials, patients may also wish to consider other types of trials that involve tests rather than treatment—for instance, genetic trials, which look for cancer-causing gene mutations, or supportive care approaches, which are aimed at improving well-being and quality of life.

Researchers are legally required to implement a process known as informed consent, which educates patients about a study before they agree to participate. The consent describes the reason for the trial, the nature of the experimental treatment and study procedures, the possible risks and side effects, the alternative to participating in a trial, and who to call if any questions or concerns arise. People considering entering a trial should review informed consent documents carefully before they sign and ask questions at any point in the process.

Research with the *CURE* Survey Panel, sponsored by Novartis Oncology, notes that seeking out information on clinical trials is a major reason that one in three patients with rare cancers feel in control of their situation.

Patients who want to find a clinical trial should start by consulting their oncologist. Websites such as the National Cancer Institute's www.cancer.gov, the National Institutes of Health's www.clinicaltrials.gov, and TrialCheck (www.curetoday.com/trialcheck) are also good sources.

When considering a trial, check with the researchers about what expenses you'll have to bear (including travel and lodging for out-of-town studies), and ask your health insurer whether it will cover costs of medical care related to the trial. Sometimes assistance is available; for details see "A Patient's Guide to Clinical Trials" at www.curetoday.com/patient_guides.

Handling Insurance Hurdles

CONFRONTED WITH A RARE CANCER for which no approved treatments exist, oncologists might prescribe medicines designated for use for other conditions. This off-label use is not uncommon, but it can cause problems when seeking insurance coverage.

Health insurers are likely to consider such treatments "experimental" or "investigational"—unproven or not the standard care for the disease—and, consequently, will not cover the cost without approval in advance.

Patients with rare cancers should ask their doctors whether a prescribed treatment is one specifically labeled for use for their type of tumor. If not, could the doctor make a case for the medicine with articles from medical journals or other documents that demonstrate its potential to be effective? Once there is enough evidence of effectiveness and safety, an off-label use is included in one of the compendia—reference guides for prescription drugs—meaning the drug can receive off-label coverage by Medicare, and many insurance companies typically follow suit.

Off-label treatments are just one potential insurance snag. Another is receiving care from a provider outside the insurer's network—something that may be necessary if expertise in a particular type of cancer isn't readily available.

With such possible pitfalls, it's essential that patients read their policy to understand coverage limitations and the appeals process. Patients should check with the insurer about coverage before every step of care, especially before treatment, to learn what will be paid and, if a treatment is not approved for coverage, how the patient and the doctor can argue the case for it.

Keep careful records of every interaction with the insurance company, including time, date, representative you spoke with, and the outcome of the conversation. Communicate in writing and request written approvals.

While insurance regulations can vary from state to state, federal law covers many employer-based health insurance policies. Under these federal protections, patients denied coverage must receive the denial in writing, with an explanation included. If the reason for the denial centered on experimental treatment issues or questions of medical necessity, patients can request free copies of documentation the insurer consulted in making its decision—information that could help in preparing an appeal.

Patients who lack insurance can sometimes receive needed drugs for free through patient assistance programs run by pharmaceutical companies and nonprofits. Eligibility requirements vary. A directory of such programs can be found at www.curetoday.com/assistance_programs.

For medicines that aren't yet on the market to treat any disease, "compassionate use" programs might help. One type of program, known as "expanded use," allows limited distribution of medicines proven in clinical trials, but not yet approved by the FDA, for patients who have exhausted treatment options and are unable to take part in a clinical trial. Patients might be able to receive an investigational drug under a "single patient use" program. These cases are decided individually by the FDA, and pursuing this option can be laborious. While the programs may make the medicines available, they might not be free.

Ask Your Doctor

HERE ARE SOME QUESTIONS TO ASK the doctor if you or someone you care for is diagnosed with a rare cancer:

- **Exactly where** is the cancer, and what symptoms does it cause?
- **What type** of cancer is it (type and subtype, if applicable)?
- **How advanced** is the cancer, and how will it affect me?
- **What is** the prognosis for patients with cancer like mine? What do those statistics mean?
- **How and where** can I verify the diagnosis?
- **How commonly** does this cancer occur in the population?
- **How often** have you seen this cancer in your practice?
- **Where can** I find more information explaining my cancer?
- **How can** I find an oncologist and treatment team that specializes in this type of cancer?
- **What is** the recommended initial treatment of this cancer?
- **What should** I do to prepare for treatment?
- **Is the** treatment FDA-approved for this type of cancer? If not, why do you think it might help me?
- **What tests** or follow-up treatments are performed after the initial treatment?
- **What are** the side effects of treatment, and how are those side effects managed?
- **Can we** verify that my insurance plan will pay for the cost of all the recommended tests and treatments? If it won't, am I eligible for any patient assistance programs?
- **Will I** be able to continue my normal daily activities?
- **Am I** eligible for any clinical trials? Where can I find more information about clinical trials on my type of cancer?
- **Is there** a hereditary component to this cancer? Should I consider genetic counseling/testing?
- **How can** I connect with other patients who have been treated for my type of cancer?
- **Will my care** include help from a social worker, or psychological or financial counselor?

Resources

The American Cancer Society offers detailed information on many types of cancer, including rare cancers, at www.cancer.org or by calling 800-227-2345. The ACS also has a Cancer Survivors Network at csn.cancer.org, with discussion boards and chat rooms categorized by cancer type and interest, including one on "rare and other cancers."

The Association of Cancer Online Resources offers a large core of cancer-related Internet mailing lists, accessible by subscribing electronically, including lists focused on rare cancers at www.acor.org/mailing.html?sid=4.

The rare cancers resource page provided by **Cancer*Care*** guides patients and caregivers to assistance, including free professional counseling, educational programs, and more, at www.cancercare.org/get_help/special_progs/rare_cancers.php or by calling 800-813-4673.

Cancer.Net, a website featuring cancer-related information approved by the American Society of Clinical Oncology, lists resources and reference material for learning more about rare cancers at www.cancer.net/patient/Library/Cancer.Net+Features/Finding+Information+and+Support+Resources+for+Rare+Cancers, as well as a searchable database for finding oncologists according to specialty at www.cancer.net/patient/ASCO+Resources/Find+an+Oncologist.

Various pharmaceutical companies and nonprofit organizations provide **financial assistance programs** for cancer patients, including Cancer*Care's* Co-Payment Assistance Foundation (866-552-6729, www.cancercarecopay.org), Patient Advocate Foundation's Co-Pay Relief (866-512-3861, www.copays.org), and Genentech's Access Solutions (888-249-4918, www.genentechaccesssolutions.com). Find a complete list of programs at www.curetoday.com/assistance_programs.

The National Cancer Institute provides easy access to a wealth of information on every cancer type, with details on treatment, prevention, clinical trials, statistics, and a "Questions & Answers" section for each cancer type at www.cancer.gov. In addition to the "A to Z List of Cancers," the NCI also offers educational booklets and fact sheets at www.cancer.gov/cancertopics/cancerlibrary or by calling 800-422-6237.

The National Organization for Rare Disorders, an alliance of health organizations, maintains a database with information about a multitude of rare diseases and related health advocacy and information groups at www.rarediseases.org, or call 800-999-6673.

The National Institutes of Health's **Office of Rare Diseases Research** offers an online gateway to a host of informational links related to rare diseases, including rare cancers, at www.rarediseases.info.nih.gov, or call 888-205-2311.

Find more resources at www.curetoday.com/toolbox.

Glossary of Terms

Chemotherapy › Treatment with drugs that kill cancer cells.

Chromosome › Part of a cell that contains genetic information. Except for sperm and eggs, all human cells contain 46 chromosomes.

Clinical trial › A type of research study that tests how well new medical approaches work in people. These studies test new methods of screening, prevention, diagnosis, or treatment of a disease.

Compassionate use › A way to provide an investigational therapy to a patient who is not eligible to receive that therapy in a clinical trial, but who has a serious or life-threatening illness for which other treatments are not available.

Five-year survival rate › The percentage of people in a study or treatment group who are alive five years after they were diagnosed with or treated for a disease, such as cancer. The disease may or may not have come back.

Genetic profile › Information about specific genes, including variations and gene expression, in an individual or in a certain type of tissue. A genetic profile may be used to help diagnose a disease or learn how the disease may progress or respond to treatment with drugs or radiation.

Informed consent › A process in which a person is given important facts about a medical procedure or treatment, a clinical trial, or genetic testing before deciding whether or not to participate. Informed consent includes information about the possible risks, benefits, and limits of the procedure, treatment, trial, or genetic test.

Mutation › Any change in the DNA of a cell. Mutations may be caused by mistakes during cell division, or they may be caused by exposure to DNA-damaging agents in the environment. Mutations can be harmful, beneficial, or have no effect. If they occur in cells that make eggs or sperm, they can be inherited; if mutations occur in other types of cells, they are not inherited. Certain mutations may lead to cancer or other diseases.

Off-label › Describes the legal use of a prescription drug to treat a disease or condition for which the drug has not been approved by the Food and Drug Administration.

Overall survival rate › The percentage of people in a study or treatment group who are alive for a certain period of time after they were diagnosed with or treated for a disease, such as cancer. The overall survival rate is often stated as a five-year survival rate, which is the percentage of people in a study or treatment group who are alive five years after diagnosis or treatment. Also called survival rate.

Prognosis › The likely outcome or course of a disease; the chance of recovery or recurrence.

Progression-free survival › The length of time during and after treatment in which a patient is living with a disease that does not get worse. Progression-free survival may be used in a clinical study or trial to help find out how well a new treatment works.

Proliferating › Multiplying or increasing in number. In biology, cell proliferation occurs by a process known as cell division.

Radiation therapy › The use of high-energy radiation from X-rays, gamma rays, neutrons, protons, and other sources to kill cancer cells and shrink tumors. Radiation may come from a machine outside the body

(external beam radiation therapy), or it may come from radioactive material placed in the body near cancer cells (internal radiation therapy). Systemic radiation therapy uses a radioactive substance, such as a radiolabeled monoclonal antibody, that travels in the blood to tissues throughout the body. Also called irradiation and radiotherapy.

Rare cancers › Cancers for which the incidence rate is less than 15 cases per 100,000 population, or fewer than 40,000 new cases per year in the United States.

Recurrence › Cancer that has recurred (come back), usually after a period of time during which the cancer could not be detected. The cancer may come back to the same place as the original (primary) tumor or to another place in the body. Also called recurrent cancer.

Remission › A decrease in or disappearance of signs and symptoms of cancer. In partial remission, some, but not all, signs and symptoms of cancer have disappeared. In complete remission, all signs and symptoms of cancer have disappeared, although cancer still may be in the body.

Side effect › A problem that occurs when treatment affects healthy tissues or organs. Some common side effects of cancer treatment are fatigue, pain, nausea, vomiting, decreased blood cell counts, hair loss, and mouth sores.

Specialist › In medicine, a doctor or other health care professional who is trained and licensed in a special area of practice. Examples of medical specialists include oncologists (cancer specialists) and hematologists (blood specialists).

Stem cell transplantation › A method of replacing immature blood-forming cells that were destroyed by cancer treatment. The stem cells are given to the person after treatment to help the bone marrow recover and continue producing healthy blood cells.

Surgery › A procedure to remove or repair a part of the body or to find out whether disease is present.

Targeted therapy › A type of treatment that uses drugs or other substances, such as monoclonal antibodies, to identify and attack specific cancer cells. Targeted therapy may have fewer side effects than other types of cancer treatments.

Source: National Cancer Institute

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