FACTS FOR LIFE

Current Research On Drugs & Treatments

Breast cancer research

The fight to find a cure for breast cancer is on-going. Researchers continually develop and test drugs and other treatments that may prove beneficial. This research begins in the laboratory. Laboratory research helps find therapies which could benefit breast cancer patients. However, treatments that work well in the laboratory do not always work as well on people. Many times the research stops here if no positive effect is found. However, if the results are promising, researchers move on to the next step in the process — clinical trials.

Clinical trials are carefully controlled research studies conducted with people who volunteer to participate. These studies test the safety and potential benefits of new drugs and treatments as well as ways to prevent, detect, diagnose or treat disease. They also identify risks of a specific drug or treatment that may not yet be known.

Remember, just because these treatments are new does not mean that they will prove to be better than the standard treatment currently being used. This is one of the questions that a clinical trial is designed to answer.

Drug treatments currently being tested in clinical trials

Anti–angiogenesis agents — Blood vessels supply cancer cells with the nutrients they need to grow, so without them, cancer cells cannot grow as quickly. These drugs work by preventing cancer cells from developing new blood vessels. There are over a dozen anti-angiogenesis agents currently in clinical trial testing in people with advanced breast cancer. For example, the anti-vascular endothelial growth factor antibody, is now being tested in women with advanced breast cancer in combination with chemotherapy.

Monoclonal antibodies — Normally, the body's immune system recognizes a foreign invader such as an infection and will produce antibodies to help fight it off. Since the body does not recognize cancer cells as a type of foreign invader, antibodies are often not produced. Monoclonal antibodies, which are produced in a laboratory, are being developed to work alone or together with chemotherapy and radiation to seek out and specifically attack cancer cells.

Bisphosphonates — A bone-strengthening drug has been an effective treatment for women with metastases in the bone. The drug is now being tested in women with early breast cancer to lower the risk of bone disease and prevention of bone metastases. Because these findings are preliminary, much more research is needed.

Therapies currently being tested in clinical trials

Immunotherapy (Biological Therapy) — Activates the body's immune system to recognize and attack cancer cells. One type of immunotherapy being evaluated in clinical trials is cancer vaccines. Cancer vaccines seek to stimulate the immune system so that it can more effectively kill cancer cells.

Bone marrow or stem cell transplantation — Bone marrow containing stem cells is collected from your body, stored and then returned to your body following high-dose chemotherapy. Bone marrow and stem cells are important in making blood. By removing them prior to chemotherapy, they are not damaged by the treatment and can then help your body recover after the chemotherapy is given.

Brachytherapy — A procedure that uses targeted radiation therapy from inside the tumor bed. Implantable radiation "seeds" or a single small balloon device can be used to deliver the radiation. Brachytherapy is also being studied as an alternative to standard radiation therapy. This may eliminate the need to give radiation to the entire breast.

Gene expression profiling — This treatment tool uses the genetic profiles of cancer tumors to predict which cancers may be more aggressive and, therefore, more likely to benefit from chemotherapy. One large study found that certain genes in a tumor may indicate which women have a high risk of distant recurrence.

Such findings suggest that gene expression profiling may one day help people living with cancer and their health care providers make better informed decisions about therapy.

A point to consider

Drugs and treatments that show promise in clinical trials are often reported on in newspapers, television and on-line news blasts. Just because you may hear about these treatments in the media does not mean that they are available now. Talk to your doctor if you have questions about how a new drug or treatment might benefit you.

Resources

Organizations

Susan G. Komen for the Cure®
1-877 GO KOMEN (1-877-465-6636)
www.komen.org

American Cancer Society
1-800-ACS-2345
www.cancer.org

CenterWatch Clinical Trials Listing Service™
www.centerwatch.com

National Cancer Institute's Cancer Information Service
1-800-4-CANCER
www.cancer.gov/clinicaltrials

Internet

www.breastcancertrials.org

Related fact sheets in this series:

- Chemotherapy and Side Effects
- Clinical Trials
- Making Treatment Decisions
- Radiation Therapy and Side Effects
- Treatment Choices — An Overview

Developed in collaboration with the Health Communication Research Laboratory at Saint Louis University. ©2009 Susan G. Komen for the Cure. Item No. KOMEED028000 10/09