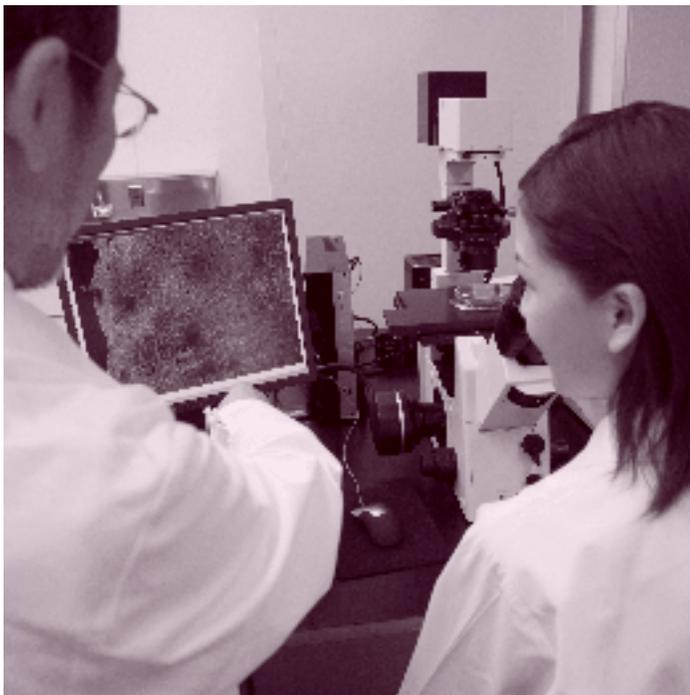


Breast cancer research

The efforts to find a cure for breast cancer are ongoing. Researchers develop and test new drugs and other treatments all the time. This research begins in the lab. Lab research helps find treatments which might benefit breast cancer patients. But, treatments that work well in the lab do not always work well for people. The research may stop in the lab if no benefit is found. If results show promise, researchers move to the next step — clinical trials.

Clinical trials are research studies done with people. People volunteer to join. These trials test the safety and possible benefits of new treatments. Other trials look for ways to prevent, find or diagnose disease. Treatment trials aim to find treatment that is better than current standard treatment. Just because treatments are new, does not mean they will be better than current treatment. This is one of the questions a clinical trial is meant to answer.



Drug treatments now being tested in clinical trials

Monoclonal antibodies are made in the lab. They are being developed to work alone or with chemotherapy and radiation therapy to find and attack cancer cells. Normally, the body's immune system looks for a foreign invader, such as infection. It will then produce antibodies to help fight it off. The body does not recognize cancer cells as a type of foreign invader. So, antibodies are then not produced. Trastuzumab (Herceptin) is an example of an FDA-approved monoclonal antibody.

Anti-angiogenesis drugs block angiogenesis (the growth of new blood vessels). If cancer cells do not have a blood supply, the cancer cells cannot grow. Many of these drugs are under study for the treatment of metastatic breast cancer (MBC). In early breast cancer, they are being tested in the neoadjuvant (before surgery) setting.

Immunotherapy tries to use the body's immune system to fight cancer cells. An example is cancer vaccines. Vaccines may be made up of cancer cells or parts of cancer cells. These cells stimulate the body's natural defense to help attack and kill cancer cells. They are currently under study for MBC.

Other treatments and tools currently being tested in clinical trials

Brachytherapy is a type of radiation therapy. It may be called accelerated partial breast irradiation (APBI). APBI delivers radiation only to the area around the area where the tumor was. This may remove the need to give radiation to the entire breast. It also lowers the number of treatment sessions. The long-term effects are not yet known. Also, which women will benefit most is still being studied.

Tumor profiling uses the gene profiles of cancer tumors to predict risk of recurrence in some patients. Tumors with a high recurrence score may require more aggressive treatment. They may require chemotherapy along with hormone therapy. Tumors with low scores may not require chemotherapy. This helps patients and providers make better informed choices about treatment.

Methods to help predict response to treatment are under study to help guide treatment choices. For example, circulating tumor cells are being studied to see how they can predict which breast cancers will respond (or will not respond) to certain chemotherapy drugs or other treatments. Some imaging tests are under study to see how well they show response (or lack of response) to certain treatments.

A point to consider

Drugs and other treatments that show promise in clinical trials are often reported in the media. You might hear about a treatment which may not yet be available (unless you are in a clinical trial). Talk to your doctor if you have questions about how a new drug or treatment might benefit you.

Resources

Organizations

Susan G. Komen®
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

The above list of resources is only a suggested resource and is not a complete listing of breast cancer materials or information. The information contained herein is not meant to be used for self-diagnosis or to replace the services of a medical professional. Komen does not endorse, recommend or make any warranties or representations regarding the accuracy, completeness, timeliness, quality or non-infringement of any of the materials, products or information provided by the organizations referenced herein.