Alliance Public Study Result Summary

What this study is about

This cancer study compared one drug to a combined treatment for women with advanced breast cancer that depends on a hormone called estrogen (ER positive or ER+).

The full title of this study is: Alliance 40302 - Endocrine therapy with or without inhibition of EGF and HER2 growth factor receptors: A randomized, double-blind, placebo-controlled phase III trial of fulvestrant with or without lapatinib (GW572016) for postmenopausal women with hormone receptor positive advanced breast cancer

Why the study was done

Advanced breast cancer includes stage III and stage IV breast cancer. Stage III often includes larger breast tumors and has cancer cells in lymph nodes, the first place where cancer spreads. Stage IV means that cancer cells have spread to other parts of the body (metastatic). Women in this study no longer had menstrual periods each month. This means they were postmenopausal.

A drug called fulvestrant (Faslodex®) is used to treat women with estrogen receptor positive (ER+) breast cancers. Some breast cancers start to resist drugs like fulvestrant. Researchers think this may happen when cancer cells turn on a gene called HER2.

Drugs that treat HER2 positive (HER2+) breast cancer include a drug called lapatinib (Tykerb®). Prior studies showed that fulvestrant might work longer if it was combined with lapatinib. They thought that breast cancer cells that resisted fulvestrant might be killed by lapatinib.

This study asked if adding lapatinib to fulvestrant would help women with ER+ breast cancer live longer than women who got fulvestrant alone. The study also looked at how fast cancer grew in both groups.

Study results

These results are for postmenopausal breast cancer patients who have stage III or stage IV breast cancer.

This study involved patients who had ER+ breast cancer. Patients could have any kind of HER2 result, including HER2 positive, HER2 negative, or HER2 normal breast cancers. Results for patients were separated by HER2 status to see if there was a difference for any of these conditions.

The study found that:

- The time it took for cancer to grow in Group A (lapatinib + fulvestrant) was 4.7 months, compared to 3.8 months for patients in Group B (fulvestrant).
- Patients in Group A lived about 4.1 months with HER2 negative or normal breast cancer, compared to about 3.8 months for other patients in Group A.
- Women with HER2 positive breast cancer lived about 5.9 months in Group A, compared to about 3.3 months in Group B.

None of these differences were different enough to make one treatment better than the other.

The most common side effects included:

- Loose bowel movements (diarrhea), tiredness (fatigue) and rash on the body
- Patients in Group A had more side effects.

What the results mean

This means that adding lapatinib to fulvestrant did not help women with advanced, ER positive breast cancer keep their cancer from growing. It also did not help them live longer.

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These were unexpected results since prior research suggested that lapatinib might help fulvestrant work better. The study also found that adding lapatinib to fulvestrant was more toxic than fulvestrant alone.

Lapatinib should not be given with fulvestrant to women with ER positive breast cancer.

How the study worked

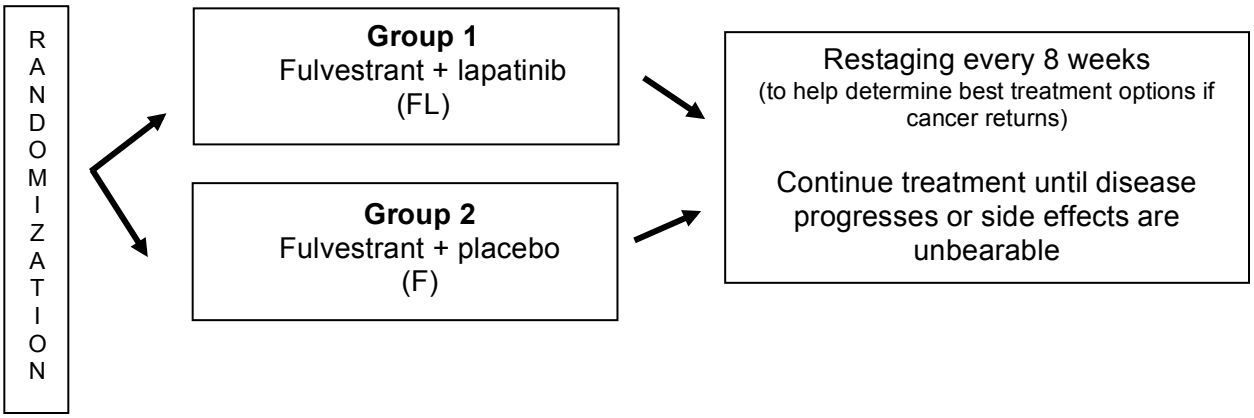
Patients were put into 2 groups by chance (randomized) to reduce differences between the groups. This was done because no one knew if one treatment was better than another. Half the patients were put into each group.

- Group A got lapatinib and fulvestrant (LF).
- Group B got fulvestrant by itself (F).

Patients were checked to see what side effect (also called safety events) they had. Researchers also measured how long it took for cancer to come back (a recurrence) and how long patients lived (survival).

Here is a picture that explains how patients were placed into one of 2 groups.

When did the study start and end? The study started in 2006. All patients were enrolled by 2010.



How many patients joined? 295 patients agreed to be in this study.

Talk to your doctor if you want more information about this study.

Scientific publications about this study

Details about the study can be found in these articles:

- Endocrine therapy with or without inhibition of epidermal growth factor receptor and human epidermal growth factor receptor 2: A randomized, double-blind, placebo-controlled phase III trial of fulvestrant with or without lapatinib for postmenopausal women with hormone receptor–positive advanced breast cancer—CALGB 40302 (Alliance). Burstein HJ, Cirrincione CT, Barry WT, et al. *Journal of Clinical Oncology 32(35):3959-66, 2014. doi: 10.1200/JCO.2014.56.7941. Epub 2014 Oct 27.*

To learn about this trial, visit the ClinicalTrials.gov website at – https://clinicaltrials.gov/ct2/show/NCT00390455?term=CALGB+40302&rank=1

This study was sponsored by the Cancer and Leukemia Group B, which is part of the Alliance for Clinical Trials in Oncology – a national cooperative network that runs large cancer clinical trials. The Alliance is supported by the National Cancer Institute (NCI) and brings researchers together to develop better treatments for cancers. More information about the Alliance is at http://www.allianceforclinicaltrialsinoncology.org.

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This summary lists what is known about this research study as of February 2015. New Information may be available.

We thank the people who joined this study and made it possible. *This study could have been completed faster if more people who had the opportunity to participate would have done so. If you know people who are offered the chance to join a cancer clinical trial, please encourage them to enroll. We do research to try to learn the best ways to help patients. The people who joined this study helped us to do that.*

Thank you for your interest in learning more about cancer research advances. We appreciate your advocating for federally-funded research to your elected representatives.