Alliance Public Study Result Summary

What this study is about

This study compared different ways to give drug treatments (chemotherapy) to people with breast cancer that is called HER2/neu positive (HER2+).

The full title of this study is: NCCTG N9831 (Alliance) Phase III randomized study of doxorubicin plus cyclophosphamide followed by paclitaxel with or without trastuzumab (Herceptin®) in women with HER-2-overexpressing node-positive or high-risk node-negative breast cancer

Why the study was done

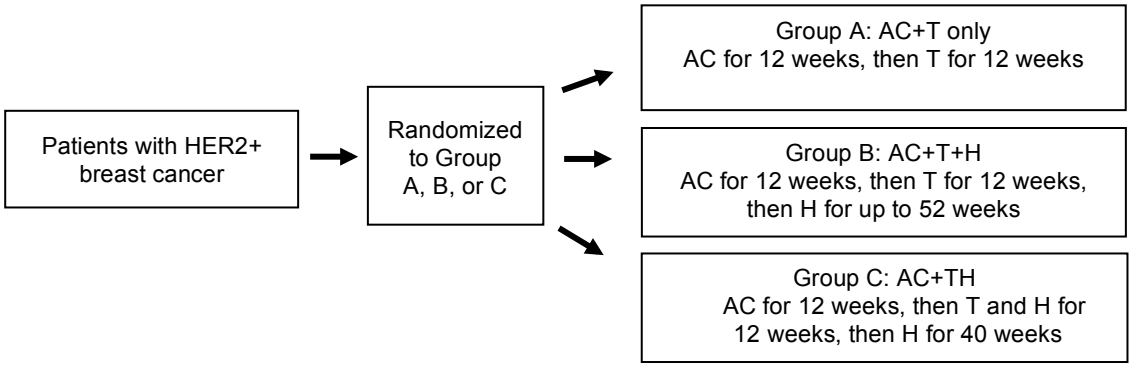
There are many kinds of breast cancer. Some treatments work well in some kinds of breast cancer, while others do not work as well. At least 15 out of every 100 (15-20%) breast cancers are called HER2-positive (HER2+). HER2+ breast cancer cells make too much HER2, which can be linked to faster growing cancers. This study was done to find out if adding a drug called trastuzumab (Herceptin®) to a usual (common) chemotherapy treatment helped people who have HER2+ breast cancer to live longer or live free of disease for longer time periods. Side effects were also measured for each treatment.

Patients were put into three groups by chance (randomized) to reduce differences between the groups. This was done because no one knew if one treatment was better than another. All patients in Group A got the common mix of drugs called doxorubicin (Adriamycin®), cyclophosphamide (Cytoxan®), and paclitaxel (Taxol®), which are known as AC+T. They were given four treatments of AC every 3 weeks for a 12-week period, followed by T every week for 12 more weeks.

Along with the common treatment listed above (AC+T), patients in Groups B and C got trastuzumab (also known as H) in two different ways.

- In Group B, H was given once a week for 52 weeks after all of the common treatment was given.
- In Group C, H was given at the same time as T for 12 weeks and then continued once a week for 40 more weeks.

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



When did the study start and end? The study started in May 2000. All patients were enrolled by April 2005.

How many patients joined? 3505 patients agreed to be in this study.

Alliance Public Study Result Summary

Study results

These results are for people with breast cancer that is called HER2/neu positive (HER2+)

The study found that:

- 84 out of 100 people lived without cancer for 5 years in Group C
- 80 out of 100 people lived without cancer for 5 years in Group B
- 72 out of 100 people lived without cancer for 5 years in Group A

What the results mean

Based on this study, doctors now give patients AC for 12 weeks, then T and H for 12 weeks and then H for another 40 weeks. This treatment is known as AC+TH (Group C).

All side effects that happened to patients were already known - no new side effects were found. Side effects were treated, and most disappeared after the treatment was over. One possible long-term side effect of T is called “neuropathy” which causes tingling or pain in the hands and feet.

The patients in this study will be followed to find out if people in one of the groups live longer, and to learn more about side effects.

Results from related studies

Weight: Most patients in this study also joined a study that looked at how weight affected the length of time a patient lives without any signs or symptoms of cancer. This is called disease-free survival (DFS). Body mass index (BMI), which measured body fat by height and weight, was used to group patients into three groups called normal, overweight and obese. Comparisons between treatment groups A, B and C (described above) were made for 3,017 of the 3,505 patients.

In summary:

- Obese patients were more likely to be older and postmenopausal, have larger tumors, and have cancerous (positive) lymph nodes.
- The 5-year DFS was better for patients with a normal BMI.
- Adding trastuzumab (Herceptin®) to treatment helped patients, no matter what BMI they had.

Heart: Most patients in this study were also placed in a study that looked at how trastuzumab (Herceptin®) affected heart function over time. Comparisons between treatment groups A, B and C (described above) were made for 1,944 of the 3,129 patients.

In summary:

- Heart issues related to trastuzumab were low (although slightly higher than group A which did not receive trastuzumab) and did not appear to increase over time
- Certain risk factors (such as older age, lower heart function prior to start of treatment and high blood pressure) may increase to risks of heart issues related to trastuzumab
- The benefits outweighs the risks and remain in favor of trastuzumab

These results are for people who are diagnosed with HER2+ breast cancer.

You can talk with your doctor for more information.

Scientific publications about this study

Details about the study can be found in these articles:

- Perez EA, Suman VJ, Davidson NE, Gralow JR, Kaufman PA, Visscher DW, Chen B, Ingle JN, Dakhil SR, Zujewski J, Moreno-Aspitia A, Pisansky TM, Jenkins RB. “Sequential versus concurrent trastuzumab in adjuvant chemotherapy for breast cancer.” J Clin Oncol. 2011 Dec 1;29(34):4491-7

Alliance Public Study Result Summary

- Perez EA, Dueck AC, McCullough AE, Reinholz MM, Tenner KS, Davidson NE, Gralow J, Harris LN, Kutteh LA, Hillman DW, Jenkins RB, and Chen B, Predictability of adjuvant trastuzumab benefit in N9831 patients using the ASCO/CAP HER2-positivity criteria. J Natl Cancer Inst 104(2) 159-62, 2012
- Crozier JA, Moreno-Aspitia A, Ballman KA, Dueck AC, Pockaj BA, Perez EA. "Effect of Body Mass Index on Tumor Characteristics and Disease-Free Survival in Patients From the HER2-Positive Adjuvant Trastuzumab Trial N9831" Cancer 2013 Jul 1: 2447-2454

To learn about this trial, visit the ClinicalTrials.gov website at:
https://clinicaltrials.gov/ct2/show/NCT00005970?term=NCCTG+N9831&rank=3
https://clinicaltrials.gov/ct2/show/NCT01562288?term=NCCTG+N9831&rank=2
https://clinicaltrials.gov/ct2/show/NCT00898898?term=NCCTG+N9831&rank=1

This study was sponsored by the North Central Cancer Treatment Group (NCCTG), 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 U.S. 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.

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. *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.