Alliance Public Study Result Summary
NCCTG N107C

What this study is about

A study that compared different types of radiation treatment given to patients after removing a metastatic brain tumor.

The full title of this study is: A phase III trial of post-surgical stereotactic radiosurgery (SRS) compared with whole brain radiotherapy (WBRT) for resected metastatic brain disease

Why the study was done

This study was done to see if doing focal radiation (radiation given to one area of the brain) after removing a patient's metastatic brain tumor would lead to better outcomes. A metastatic brain tumor is a tumor that came from another part of the body.

This study was done to see if patients had better quality of life (felt and functioned better) after having focal radiation instead of radiating the whole brain after taking out the brain tumor.

Study results

These results are for people with cancers that have spread to the brain. Specifically, these are patients with one tumor in another part of their body that spread to the brain (metastatic brain tumor) and the brain tumor was taken out surgically.

The study found that patients who had a single brain tumor that was removed did better in a couple different ways when they received the focal radiation alone after surgery. These patients had better brain function with their language and memory and they also lived longer with less deterioration of their brain function.

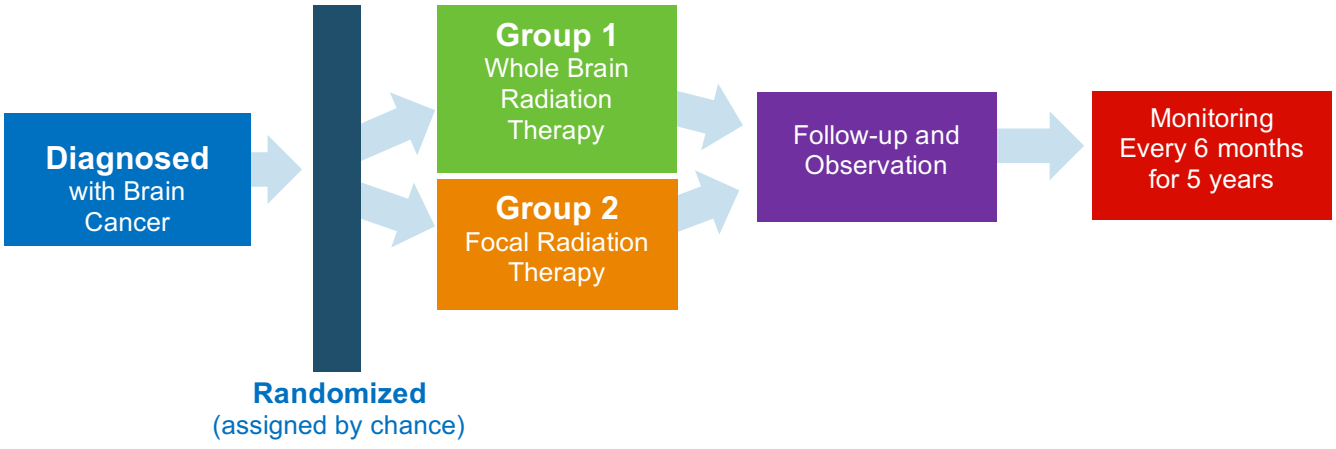
The most common serious side effects were seen in the patients who had their whole brain radiated. These patients experienced more memory loss and worse quality of life.

What the results mean

This study showed that patients who had a single metastatic brain tumor removed by surgery could be treated with focal radiation alone instead of with radiation to the whole brain. After a single metastatic brain tumor is removed and focal radiation is done patients do better with their overall brain function and thinking compared to patients who get their whole brain radiated. Overall, doing focal radiation is less toxic that radiating the whole brain.

How the study worked

Here's a picture that explains how patients were placed into this study.



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When did the study start and end? The study started in November 2011. All patients were enrolled by November 2015.

How many patients joined? 194 patients were enrolled in this study. 98 patients got focal radiation therapy after they had their single brain tumor removed. 96 patients received whole brain radiation therapy.

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

Scientific publications about this study

This summary includes information in the following article:

- **Postoperative Stereotactic Radiosurgery Compared with Whole Brain Radiotherapy for Resected Metastatic Brain Disease (NCCTG N107C/CEC·3): A Multicentre, Randomised, Controlled, Phase 3 Trial.** Brown PD, Ballman KV, Cerhan JH, Anderson SK, Carrero XW, Whitton AC, Greenspoon J, Parney IF, Laack NNI, Ashman JB, Bahary JP, Hadjipanayis CG, Urbanic JJ, Barker FG 2nd, Farace E, Khuntia D, Giannini C, Buckner JC, Galanis E, Roberge D. Lancet Oncol. 2017 Aug;18(8):1049-1060. doi: 10.1016/S1470-2045(17)30441-2. Epub 2017 Jul 4.

To learn about this trial, visit the ClinicalTrials.gov website at
https://clinicaltrials.gov/ct2/show/NCT01372774

This study was sponsored by the Alliance for Clinical Trials in Oncology – a national clinical trial network group 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.

This summary lists what is known about this research study as of August 2017.
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.