

## SNAC trial results: Sentinel Node Biopsy versus Axillary Clearance

The SNAC trial has helped researchers answer an important health question. It has provided evidence that will allow breast surgeons to choose the best type of surgery for women with early breast cancer. This means that in future it is less likely that women will suffer from arm swelling after their surgery.

We appreciate the contribution made by volunteer participants in this trial. This may help to improve the treatment of patients in the future. Here is a summary of the trial and results.

### What was the trial about?

Before the SNAC trial, most women with early breast cancer routinely had axillary clearance (removal of armpit lymph nodes) to see if the disease had spread.

When breast surgeons surveyed breast cancer patients, a common complaint was that removal of many lymph nodes blocked the lymph flow and led to arm swelling, pain and difficult arm movement, sometimes for months or years.

In response to the patients, breast surgeons from the Royal Australasian College of Surgeons decided to conduct a trial of a new form of surgery: injecting dye into the tumour, tracking the movement of the dye and removing only the first armpit lymph node where the dye was seen (the sentinel node). The surgeons wanted to assess the new procedure very carefully before introducing it as routine practice.

It was not then known whether this sentinel-node procedure would be better than the full axillary clearance in terms of reducing arm swelling and, importantly, whether it would be as good at finding the full extent of the cancer.

The 1088 Australian and New Zealand women in SNAC were randomly allocated to the new surgery or the conventional procedure. Out of caution, the trial was limited to women with small tumours.

Those allocated to the sentinel-node surgery had the full clearance if any cancer was found in the lymph node. If there was no tumour in that node, the surgeon concluded that the cancer had not spread. This meant that women whose tumour had not spread to the armpit did not have any unnecessary surgery.

Over the months and years after the surgery, women in the trial and their doctors measured and rated their arm symptoms and quality of life.

### Was the new treatment better?

Three years after the operation, women who had an axillary clearance had more arm swelling than the women who had the sentinel-node operation only. This was true for those who were allocated to axillary clearance in the trial and those who had cancer in the sentinel node and went on to have the other lymph nodes removed. So the women having the new treatment had a better result.

Arm movement was similarly worse in the women having the axillary clearance early on, but after 6 months this improved and both groups were the same.

The women's own ratings of their symptoms agreed with the measurements: the women who had axillary clearance reported more swelling, symptoms and disability than those having a sentinel-node operation, but by 3 years the ratings of disability were similar after both kinds of operation.

### What were the side-effects of the treatment?

Three participants had an allergic reaction to the dye. This was only 0.03% of patients, as those with a known allergy were not eligible for the trial

As expected, some women who had the sentinel-node procedure had to have a second operation when cancer was found in the node, and in some cases, this was a few weeks later. Women who had two operations did not have worse symptoms or quality of life afterward.

### How will the results help patients and doctors in future?

The SNAC results will guide surgeons in the best approach for each individual patient with early breast cancer.

SNAC was a trial where the initial idea came from patients themselves. Women with breast cancer said that arm symptoms were a concern and the surgeons followed by setting up the trial. This is an example of an initiative by patients that researchers have noted and will consider in future.

An important part of the trial was organising training in the new procedure for surgeons in Australia and New Zealand.

### What will the researchers do next?

The 5-year analysis of results is now almost finished. Patients are being followed up over a longer period to assess survival.

A new trial, SNAC 2, started in 2006. In SNAC 2, the investigators are continuing the research by recruiting women with larger tumours and multiple tumours. They aim is to find out whether the risk of the cancer returning is the same after sentinel-node biopsy as after full node clearance. If so, the sentinel-node procedure will become standard practice for all women with early breast cancer.

### Where can I find out more about the trial?

Talk with your GP.

#### The results have been published in scientific journals

Wetzig N, and others. Sentinel-lymph-node-based management or routine axillary clearance? Three-year outcomes of the RACS Sentinel Node Biopsy versus Axillary Clearance (SNAC) 1 trial. *Annals of Surgical Oncology* 2015; volume 22, issue 1: pages 17–23.

Gill PG, and others. Sentinel-lymph-node-based management or routine axillary clearance? One-year outcomes of sentinel node biopsy versus axillary clearance (SNAC): a randomized controlled surgical trial. *Annals of Surgical Oncology* 2009; volume 16: pages 266–275.

#### Australian New Zealand Clinical Trials Registry

[www.anzctr.org.au](http://www.anzctr.org.au)

registration no. ACTRN12605000357651

#### Australian Cancer Trials

[www.australiancancertrials.gov.au](http://www.australiancancertrials.gov.au)

The SNAC trial was done by breast surgeons throughout Australia and New Zealand, as a collaboration between the Royal Australasian College of Surgeons and the Clinical Trials Centre, University of Sydney.

It was funded by grants from the National Health and Medical Research Council, the National Breast Cancer Foundation, the Australian Department of Health and Ageing, MBF Australia, and the Scottwood Trust, New Zealand. The investigators have reported no financial or other conflicts of interest.

Results of any clinical trial do not represent complete knowledge about treatment. Patients should not change their therapy on their understanding of these results.