NHMRC Statement: Is there a role for Thermography in the early detection of breast cancer?

Position

The National Health and Medical Research Council (NHMRC) found there is no evidence of sufficient quality to demonstrate thermography is effective for early detection or screening for breast cancer.

The purpose of this statement is to advise the Australian public of NHMRC’s view on the available evidence concerning the use of thermography as an early detection test for breast cancer, and to provide information about the detection of early breast cancer for women without symptoms. This may assist the Australian community to make informed decisions about their health care.

This statement is consistent with the Cancer Australia¹ and the Royal Australian and New Zealand College of Radiologists position statements on the use of thermography for breast cancer detection.

This statement is designed to provide information based on the best evidence available at the time of publication to assist in decision-making. The Statement is valid for five years, unless the NHMRC deems that sufficient changes to the body of evidence require the statement to be updated or revoked before this time.

1. In July 2011, the National Breast and Ovarian Cancer Centre amalgamated with Cancer Australia to form a single national agency, Cancer Australia
Background

Breast thermography, also known as thermal imaging and digital infrared thermal imaging (DITI), is a technique that produces ‘heat pictures’ of the breast. It provides information about the thermal and vascular conditions of the tissue. The rationale for thermography in breast imaging is that the skin overlying a malignant breast lesion [cancer] can be warmer than that of surrounding areas [1,2].

Thermography is sometimes marketed as an alternative to screening mammography and to women aged less than 40 years, women with small breasts, and women with breast implants. However, few studies investigating thermography for breast cancer screening or diagnosis have been conducted. Furthermore, there is no evidence of sufficient quality to demonstrate thermography is effective in breast cancer screening or as an adjunct to mammography, histology or other tests for breast cancer diagnosis [3–5].

A number of studies have found that thermography is associated with high false positive and high false negative rates [3–5]. A recent systematic review [3] concluded there is not sufficient evidence to support the use of thermography in breast cancer screening or as an adjunct to mammography, histology or other diagnostic tests in diagnosing breast cancer.

Although imperfect, screening mammography remains the most effective screening test for reducing mortality from breast cancer. Screening mammography is supported by a large body of high quality evidence. An evaluation of the BreastScreen Australia Program concluded that the Program has been successful in reducing breast cancer mortality at the population level by 21–28% in Australian women aged 50–69 [6,7].

BreastScreen Australia provides free mammograms every two years for women aged over 40 years. Women aged 50-69 years are targeted by the program as this is the age group in which the evidence of benefit is greatest. For more information or to make an appointment for a screening mammogram, call BreastScreen Australia on 13 20 50, or visit www.cancerscreening.gov.au.

Screening mammography is for women who do not have any symptoms of breast cancer. Women of any age, who notice a change in the look or feel of their breast, should report to their general practitioner without delay for assessment of the symptoms. The triple test approach to investigation of symptoms ensures the highest accuracy for detection of breast cancer; this includes clinical examination, imaging tests such as a mammogram and ultrasound, and biopsy. For more advice on breast awareness and early detection of breast cancer visit the Cancer Australia website: http://www.canceraustralia.gov.au

References


