# Breast Thermography – A radiation-free breast health assessment suitable for young women

By Janet van Dam – Medical Thermographer/ Member ACCT


## I often get the question: at what age should I start worrying about having my breasts checked?

My sister found her own tumours when she was only 28 years old. She was lucky that she suspected what it was, since our mother had died at the age of 51 of an oestrogen sensitive breast cancer, which was not picked up by a mammography due to her dense breast tissue and the structure of the tumour.

## Fiction: young women don't get breast cancer

True enough, breast cancer is more common in post-menopausal women, however this doesn't mean that younger women are not susceptible to breast disease. This is a problem, because many young women ignore the warning signs simply because they think they are too young to get breast cancer, and assume that a lump is a harmless cyst. In doing so, they deny themselves the opportunity to detect the cancer early, and don't promptly treat it for increased chances of survival.

## Medical Thermal Imaging or DITI

All women can benefit from a breast thermography health check and it is especially appropriate for younger women (25 – 40) whose denser breast tissue makes it more difficult for mammography to be effective. It is also appropriate for women of all ages who, for many reasons, are unable or choose not to undergo **routine** mammography (as opposed to a **diagnostic** mammogram).

**Thermography can provide a 'clinical marker' to the doctor or mammographer that a specific area of the breast needs particularly close examination.**

It takes years for a tumour to grow thus the earliest possible indication of abnormality is needed to allow for the earliest possible treatment and intervention. Thermography's role in monitoring breast health is to help in **early detection** and **monitoring of abnormal physiology**.

## Breast cancers tend to grow significantly faster in younger women under 50

| Age | Average Tumour Doubling Time |
|---|---|
| Under 50 | 80 days |
| 50 – 70 | 157 days |
| Over 70 | 188 Days |

Source: Cancer 71:3547-3551, 1993

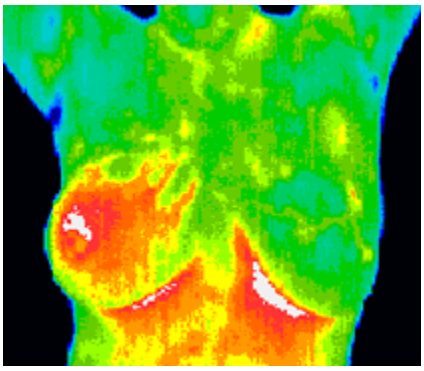
**The faster a malignant tumour grows, the more Infra-red radiation it generates. For younger women in particular, results from thermography screening can lead to earlier detection and, ultimately, longer life.**

Doctors do not yet know how to prevent breast cancer. However, you can increase your chances of detecting breast cancer in its earliest stages by understanding the need for, and participating in an early detection program.

Only about 20 percent of biopsied breast lumps are cancerous. And, if cancer is found early, there are choices for treatment. With prompt treatment, the outlook is good. In fact, most women treated for early breast cancer will be free from breast cancer for the rest of their lives.

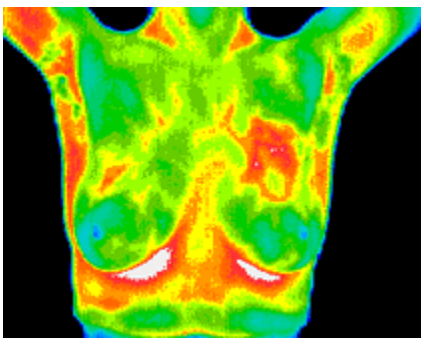
## Screening examples of effective breast health assessment in young women

**Inflammatory Breast Cancer**



The results of this routine study led to the diagnosis of inflammatory carcinoma in the right breast. There were no clinical indications at this stage. (Thermography can show significant indicators several months before any of the clinical signs of inflammatory breast disease, skin discoloration, swelling and pain). Inflammatory breast disease cannot be detected by mammography and is most commonly seen in younger women, the prognosis is always poor. Early detection provides the best hope of survival.

**Ductal Carcinoma in Situ**



This 37 year old patient presented for routine thermographic breast screening, she was not in a high risk category and had no family history. No breast exams had been performed previously. The vascular asymmetry in the upper left breast and the local hypothermia at 11 O'clock was particularly suspicious and subsequent clinical investigation indicated a palpable mass at the position indicated. A biopsy was performed and a DCIS (Ductal Carcinoma in Situ) of 2 cm was diagnosed. Unfortunately this patient only survived for 12 months after diagnosis.

## Fiction: I am at risk of getting breast cancer only if it runs in my family

Heredity is only one of the risk factors of breast cancer. But this doesn't mean that you can rest assured that you are safe from breast cancer just because you don't have a history of the disease in your family. In fact, only 5 to 10% of people who have been diagnosed with breast cancer attribute it to genetics, the remaining cases are caused by **later onset mutations** that are a result of **ageing** and **exposure to other environmental and lifestyle factors**. So, if your family does have a history of breast cancer, it doesn't mean you'll get it too. Evaluating risk factors has to come as a whole package, including looking at your lifestyle and dietary choices.

## Fiction: going for mammograms are a sure-fire way to make sure I don't get breast cancer!

Mammograms are just a screening method to detect breast cancer that **already exists**; it can only look at the **end result of the disease** process of cancer, which is the tumour. They cannot prevent or reduce your risk of getting breast cancer. It is still an imperfect technique, and up to 20% of all tumours are missed by mammograms. In addition to this, it may be more difficult for a mammogram to detect tumours in younger women, due to their **naturally denser breast tissue**. And unless there is a history of breast cancer within their families, it is generally not recommended that younger women go for mammograms due to the radiation they will be exposed to in doing so.

## Is my breast tissue dense?

If you are before the menopause (but not exclusively), the likelihood is that you have dense breast tissue. This is a problem for routine mammography screening, because it finds it hard to discover the tumour (which is a tiny calcification and shows up white on the X-ray) in a heap of white cotton wool (your dense breast tissue).

The advantage of thermal screening is that it is equally accurate in all age groups: dense breast tissue is not relevant to thermography compared to mammography, since we do not need to look deep inside the breasts to make an assessment of breast health, but mammography is significantly less accurate in this younger age group. http://acct-blog.com/2010/05/04/screening-mammograms-in-younger-women-have-low-accuracy-and-detect-few-cancers/

**Mammography in women > 50 = 84 %**

**Mammography in women < 50 = 17 -35 %**

**Thermography all ages = 85 %**

**Thermography + Mammography or Ultrasound = 95%**

**http://meditherm.com/breast_thermography_studies.htm**

## How Medical Thermography can help monitor your breast health


Medical Thermography looks for any irregular or abnormal blood flow (angiogenesis, or another word is neo-vascularity) and any thermal changes between each screening could indicate disease.

Tumour formation is a process of many years (6-8 years), which means that if you are aware of any changes over time in the breasts, you can take action at the earliest time with further investigations, monitoring and a lifestyle change.

Abnormal blood flow in one particular area could indicate the development of malignancy, because a tumour needs a blood supply to feed it. This process is usually visible earlier with infrared screening than when a mammogram can "see" a tumour.

Besides looking for this unusual blood supply, we can visualise general changes, which could be an indication of fibrocystic activity, hormone activity or inflammatory processes, which could be a precursor for breast disease.

Thermal imaging is **absolutely radiation and pain free** and is totally safe for younger women who would like to breastfeed in the future. Dense breast tissue, especially in women under the age of 35, is more sensitive to the radiation of the mammogram, but since thermography does not use any radiation at all, it is perfectly safe to keep repeating the procedure and monitor breast health over time. http://www.ncbi.nlm.nih.gov/books/NBK22311/ http://www.rense.com/general76/exoe.htm

There is **no pain** involved in thermal imaging procedure, it is totally non-contact, so there is no compression of the breasts, which many women find extremely unpleasant to say the least and no worry of injuring the breasts or spreading possible disease.

Thermography visualises a larger area of the torso including the armpits, neck, sternum, chest and back, whilst mammography is limited to the main part of the actual breasts. We can assess the function of the thyroid and be warned of an under- or over-activity. The thyroid is essential to breast health and to be able to monitor its health in conjunction with the breasts is a big bonus. http://www.canceractive.com/cancer-active-page-link.aspx?n=1671

Thermography, as with any other screening method, is only valuable when tests are done at regular intervals to compare the screenings; therefore yearly thermal checks are advisable to build an accurate history of how your breasts are functioning.

## Can Thermography Screening replace a mammogram?

The answer to this question is No. Thermography is not a replacement for mammography or ultrasound, but an adjunctive test covering another angle of observation. Thermography is also not in competition with the other 2 screening options, they are all very different in what they can "see" and it is all of value.

Mammography and Ultrasound are tests of structure and anatomy. Mammography and ultrasound have an important role to play in the end stage of the disease, i.e. the tumour: finding the exact location, measuring size and helping with the diagnosis.

Thermography in contrast focusses on how the body is functioning and the physiology of it, tracking changes over time which can warn us of evolving pathology. Thermography focusses on prevention and keeps an eye on the circulation, inflammation and hormone activity in the breasts, which cannot be seen by mammography and ultrasound and are indicators of possible disease processes.

Medical thermography offers a great non-invasive and highly accurate breast health assessment, especially tailored to those younger women before the age of 50, where the routine mammography screening is highly inaccurate and health-wise unadvisable.

Reference: http://acct-blog.com/2009/07/07/who-should-have-breast-thermography/