

Early Detection for Breast Cancer

by
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There are many reasons that breast cancers and diseases go undetected before they are advanced or it's too late. We have an exaggerated faith in mammograms; we don't do regular self examination palpation; we under estimate our risk factors; we have small breasts or cosmetic surgeries that keep us from getting mammograms; we think we are too young to get breast cancer; we are unaware of other screening methods. The list goes on.

Digital infrared thermal imaging (DITI) also known as breast thermography is an ideal way to begin screening for breast cancer and other breast diseases. Since this technology has been approved by the FDA and offers no radiation, no compression, and no pain and is totally non-invasive, it can be used safely at any age for both women and men. A digitized thermal image is taken of the breast tissue, then read by a board certified doctor and stored for future image comparisons. These images are unique to the person and should remain stable over time. Any changes in future images (since tumors or other breast diseases measures warmer than surrounding tissue) can signal an early indication of possible cancers or other abnormalities.

The other current technologies (palpation, mammograms, ultrasound, MRI) for breast cancer screening examine the structure; in other words, something is already formed and large enough to be seen or felt. However, it is well-documented that a mass that is detected by mammography has been growing for 8-10 years before it was detected. Worse yet, inflammatory breast cancer, a more aggressive form of breast cancer can't be picked up by mammograms but is easily identified using DITI.

DITI technology can detect an issue YEARS before a tumor is visible on mammogram or palpated during an exam and truly offers early detection. With early detection, areas of concern can be identified and addressed by dietary and lifestyle changes, lymph drainage exercises, evidence-based vitamins and nutraceuticals. This also alerts your doctor to "suspect" areas which can thereby be monitored more closely.

Women with a family history are definitely at greater risk, but 75 of women who get breast cancer have no family history of the disease. Regardless of your family history, if a DITI thermogram is abnormal you run a future risk of breast cancer that is 10 times higher than a first order family history of the disease. In fact, studies have shown that an abnormal infrared image is the single most important indicator of high risk for developing breast cancer.

23% of breast cancers occur in women under 49 years of age. The density of the breast tissue prior to menopause makes mammograms less effective but does not pose any problem for DITI. Thermal breast screenings can begin as early as age 20. For women who are searching for early breast cancer detection, digital thermal infrared imaging should be part of their proactive approach for themselves and their daughters.

Overview of Digital Infrared Thermal Imaging

By Meditherm®

Medical DITI is a noninvasive diagnostic technique that allows the examiner to visualize and quantify changes in skin surface temperature. An infrared scanning device is used to convert infrared radiation emitted from the skin surface into electrical impulses that are visualized in color on a monitor. This visual image graphically maps the body temperature and is referred to as a thermogram. The spectrum of colors indicates an increase or decrease in the amount of infrared radiation being emitted from the body surface. Since there is a high degree of thermal symmetry in the normal body, subtle abnormal temperature asymmetry's can be easily identified.

Medical DITI's major clinical value is in its high sensitivity to pathology in the vascular, muscular, neural and skeletal systems and as such can contribute to the pathogenesis and diagnosis made by the clinician.

Medical DITI has been used extensively in human medicine in the U.S.A., Europe and Asia for the past 20 years. Until now, cumbersome equipment has hampered its diagnostic and economic viability. Current state of the art PC based IR technology designed specifically for clinical application has changed all this.

Clinical uses for DITI include;

- To define the extent of a lesion of which a diagnosis has previously been made;
- To localise an abnormal area not previously identified, so further diagnostic tests can be performed;
- To detect early lesions before they are clinically evident;
- To monitor the healing process before the patient is returned to work or training.

Skin blood flow is under the control of the sympathetic nervous system. In normal people there is a symmetrical dermal pattern which is consistent and reproducible for any individual. This is recorded in precise detail with a temperature sensitivity of 0.01 °C by DITI.

The neuro-thermography application of DITI measures the somatic component of the sympathetic nervous system by assessing dermal blood flow. The sympathetic nervous system is stimulated at the same anatomical location as its sensory counterpart and produces a 'somato sympathetic response'. The somato sympathetic response appears on DITI as a localized area of altered temperature with specific features for each anatomical lesion.

The mean temperature differential in peripheral nerve injury is 1.5°C. In sympathetic

dysfunction's (RSD / SMP / CRPS) temperature differentials ranging from 1 ° C to 10° C depending on severity are not uncommon. Rheumatological processes generally appear as 'hot areas' with increased temperature patterns. The pathology is generally an inflammatory process, i.e. synovitis of joints and tendon sheaths, epicondylitis, capsular and muscle injuries, etc.

Both hot and cold responses may coexist if the pain associated with an inflammatory focus excites an increase in sympathetic activity. Also, vascular conditions are readily demonstrated by **DITI** including Raynauds, Vasculitis, Limb Ischemia, DVT, etc.

Medical DITI is filling the gap in clinical diagnosis ...

- X ray, C.T. Ultrasound and M.R.I. etc., are tests of anatomy.
- E.M.G. is a test of motor physiology.
- DITI is unique in its capability to show physiological change and metabolic processes.

It has also proven to be a very useful complementary procedure to other diagnostic modalities.

Unlike most diagnostic modalities **DITI** is non-invasive. It is a very sensitive and reliable means of graphically mapping and displaying skin surface temperature. With **DITI** you can diagnosis, evaluate, monitor and document a large number of injuries and conditions, including soft tissue injuries and sensory/autonomic nerve fibre dysfunction.

Medical **DITI** can offer considerable financial savings by avoiding the need for more expensive investigations.

Medical **DITI** can graphically display the very subjective feeling of pain by objectively displaying the changes in skin surface temperature that accompany pain states.

Medical **DITI** can show a combined effect of the autonomic nervous system and the vascular system, down to capillary dysfunctions. The effects of these changes show as asymmetry's in temperature distribution on the surface of the body.

Medical **DITI** is a monitor of thermal abnormalities present in a number of diseases and physical injuries. It is used as an aid for diagnosis and prognosis, as well as therapy follow up and rehabilitation monitoring, within clinical fields that include Rheumatology, neurology, physiotherapy, sports medicine, oncology, pediatrics, orthopedics and many others.

Results obtained with medical **DITI** systems are totally objective and show excellent correlation with other diagnostic tests.

Mammograph is a diagnostic tool used to screen breast cancer in hopes that breast cancer can be detected at its earliest stage and patients can be treated early enough to increase their odds of survival.

For a long time, mammography is recommended for women aged 40 to 49 who are believed at high risk of breast cancer. However, the potential benefits and particularly the risks of the modern technology are seldom discussed with patients.

In today's issue of the Annals of Internal Medicine, the American College of Physicians (ACP) issued new clinical guidelines for screening mammography for women age 40 to 49, emphasizing that patients should be told of both benefits and risks of mammograms as the risk of the procedure has become evident.

But the guidelines are ambiguous, critics said, which only recommend that clinicians should help patients decide whether or not to take mammograms. The guidelines do not reveal much of real benefits and risks associated with use of mammograms in detail.

Mammograms are touted by many doctors as the best screening tool for detecting breast cancer while some urge caution. Is mammography effective enough in diagnosing breast cancer? The problems with this screening method include false positives and false negatives and the risk of radiation.

According to a Swedish study of 60,000 women, cited by newstarget.com, 70 percent of the mammographically detected tumors weren't tumors at all. 70 to 80 percent of all positive mammograms do not show any presence of breast cancer. These false positives may be responsible for the increased survival rate if any associated with mammogram screening, critics suggested.

The false positives are likely to result in unnecessary medical intervention and emotional stress. For instance, a positive resulting from mammograms is likely to lead to invasive biopsy, which could do more harm than good. In some cases, the false diagnosis could lead to loss of a healthy breast or even life.

On the other hand, mammograms have a high rate of missed diagnosis of breast cancer, resulting in false negatives, which can delay treatment and eventually lead to loss of a woman's life. Dr. Samuel S. Epstein, professor of Environmental Health Department in University of Illinois at Chicago, was cited as claiming in his book "The Politics of Cancer" that 25 percent of breast cancer cases are missed in women aged 40 to 49 when mammography is used for screening.

According to a report by newstarget.com, the rate of false negatives estimated by the National Cancer Institute (NCI) is even higher, 40 percent among women ages 40-49. Mammograms result in high rates of false negatives in younger women, whose breasts are denser, making it harder to detect breast cancer. In pre-menopausal women, the false negatives are twice as likely to occur.

In addition to the uncertainties of screening results, one thing is certain: Radiation damages breast tissue, which is very sensitive to ionizing radiations such as x-ray used in mammography. Ionizing radiations are the best studied cancer causing agent in the world and the human history and were recognized by the U.S. government as a carcinogen in 2005 although the risk has been known for decades to say the least.

The dose used in the current mammography is relatively smaller than that used in the early days such as in 1970s, about 1 rad versus 5 to 10 rads. But one exposure to the reduced dose would still increase the risk for breast cancer by one percent in women aged 35 to 50, according to Dr. Frank Rauscher, former director of the National Cancer Institute, cited by newstarget.com. Some such as Russell L. Blaylock, MD, estimated that annual radiological breast exams increase the risk of breast cancer by two percent.

In the 1960s and 70s, women received 10 screenings a year without being informed of the potential cancer risk resulting from mammograms. Dr. John Gofman, a prominent nuclear scientist and physician who retired now from the University of California at Los Angeles estimated that 75 percent of breast cancer cases are related to exposure to x-ray exposure including that used in mammography and chest x-ray although he acknowledged that other factors such as diet and environment also have an effect of the overall risk.

The medical industry downplays repeatedly the risk of medical x-ray saying that compared to other cancer risks, the risk from x-ray is small, or the benefits outweigh risks. Some studies show that exposure to x-ray may be responsible only for a few percent of the total cancer risk, but sponsorship for such studies are not always clear and whether or not there is conflict of interest remains unknown.

The risk of mammograms may be greater for about 30 percent of women who carry faulty genes such as BRCA 1 and 2, according to an early study. The study of 1,600 women with BRCA 1 and 2 mutations published in the June 27 2006 issue of Journal of Clinical Oncology shows that these women were 54 percent more likely to develop breast cancer if they had ever had a chest x-ray. Exposure to radiation before age 20 doubled the risk of breast cancer before their 40th birthday.

Dawn Prate reported at newstarget.com that "Women Cancer research has also found a gene, called oncogene AC, that is extremely sensitive to even small doses of radiation. A significant percentage of women in the United States have this gene, which could increase their risk of mammography-induced cancer. They estimate that 10,000 A-T carriers will die of breast cancer this year due to mammography."

The incidence of ductal carcinoma in situ (DCIS), a form of breast cancer has increased by 328 percent since introduction of mammogram screening and 200 percent of the increase is allegedly caused by mammography, which raises breast cancer risk by the radiation used and pressure placed on the women's breast during the screening procedure, according to Dawn Prate. It's believed that pressure on breasts may cause existing breast cancer cells to spread to other locations.

The risk of radiation is more significant in younger women. Evidence released by the National Cancer Institute cited by newstarget.com shows that mammography would cause 75 cases of breast cancer for every 15 identified. The mortality of breast cancer in young women who received annual mammograms increased by 52 percent, according to a Canadian study, cited by Prate.

"A 1992 Canadian National Breast Cancer Study showed that mammography had no positive effect on mortality for women between the ages of 40 and 50. In fact, the study seemed to suggest that women in that age group are more likely to die of breast cancer when screened regularly." Dawn Prate reported at newstarget.com.

While there is still an ongoing debate on the medical value of mammography, evidence suggests that the screening method does not help save lives of women aged 40 to 49. For instance, a 1997 consensus panel appointed by the National Institute of Health concluded that no evidence suggests mammograms for this age group save lives and they may even do more harm than good. The panel advises that women weigh the risks when considering a mammogram.

Those who rely on screening to reduce their risk of death from breast cancer may consider alternative screening methods such as thermography and M.R.I. scan as these screening procedures are generally recognized as effective and safer tools when it comes to detection of breast cancer.

The bottom line is, a health observer with foodconsumer.org suggests, that no matter how accurate or harmless a diagnostic tool such as mammography is, these procedures are not

meant to prevent breast cancer from occurring or being developed. These tools are used to find breast cancer in its earliest stage and treat the patients early, which some doctors believe help increase the odds of survival.

Those who really want to prevent breast cancer should know the real risk factors for breast cancer and eliminate the risks in their life to reduce their odds of developing breast cancer, the health observer said. He said when one was diagnosed with breast cancer, she is already in a defensive position.

Those who want to be free of breast cancer should think more about prevention than mammogram screening, he suggested.

MAMMOGRAPHY

THE HARD TRUTHS BEHIND THE SCREEN

'Extract from WDDTY July 2004'

As breast cancer rates continue to spiral upwards, to 185,000 women in the USA and 28,000 women in the UK every year, the pressure is on for women, particularly those over 40, to have regular mammograms.

- *Do mammograms help to save lives?* No. A Swedish study, involving nearly 250,000 women found no survival advantage in women under 50 with regular mammograms (*Lancet* 2002;359:90919). Mammography also hasn't helped save those under 60, according to the Canadian National Breast Screening study (*Lancet* 2002; 356: 1087). In 2002 US Cancer experts in the Physician Data Query board (PDG) concluded that there is insufficient evidence to show that mammograms prevent deaths (*BMJ*; 324:432). Also, by the time a mammogram spots a problem, the cancer is already around eight years old, according to Dr Samuel Epstein, a world authority on cancer.
- *Is it accurate?* The latest research shows that more than one third of mammograms give false readings, with 64 rate of false positives (finding cancer present when it isn't) after 10 mammograms (*N Engl J Med*, 1998; 338:1089-96). The test is accurate less than half the time in the second half of a woman's menstrual cycle (*Cancer*, 1997; 80:720-4). Mammography is crude, picking up many benign tumours that would do no harm if left alone. This can falsely raise the incidence of breast cancer by as much as one half (*Lancet*, 1992; 339:810). Routine screening could be behind the huge increase in aggressive treatment of ductal carcinoma *in situ* (40,000 cases in the USA alone). This 'cancer' spreads, at most, in 20 of cases (*Breast J*, 2000; 6:331-4) and some pathologists report that it simply burns itself out.
- *Is it safe?* No. Screening raises your risk of .. .cancer. Just four breast films (the usual for one session) expose you to 1 rad (radiation absorbed dose) about 1000 times more than a chest X-ray. Each rad increases a pre-menopausal woman's cancer risk by 1 , so screening for a decade will have raised cancer risk by 10. In addition, if cancer is present, the extreme compression during a mammogram can help cancerous cells to spread (*Lancet*, 1992; 3440:122).
- *What can you do instead?* Examine your own breasts monthly and have a health professional do it annually. According to The American Cancer Society, 90 of all cancers are found by self-examination. Mammograms offer no benefit to women trained to examine themselves and who are also given yearly examinations by a trained health professional (*Lancet*, 2000; 356: 1 087). Self-examinations are also more accurate (*N Engl J Med*, 1998; 338: 1 089-96). If you have to have a lump checked out, a safer alternative without the dangers of radiation is ultra sound screening or carried out by an experienced operator.