

## Winter 2009 Newsletter: Mammograms or Thermal Imaging?

Breast cancer screening has come under intense scrutiny in recent years, because breast cancer is such a common disease, “and the evidence is strong that it is on the increase.”<sup>i</sup> However, what good does screening do, if all it does is confirm for us that breast cancer is on the increase? Is mammography screening the best way—or even the right way—to provide healthcare for the breast? The answer, as you’ll soon read, is “No.”

### Do Mammograms Reduce Mortality Rates?

While some randomized trials indicate that mammography screening reduces fatal instances of breast cancer, other respected trials indicate a non-significant reduction. Those latter trials cannot be ignored, wrote Dr. Maureen Roberts, clinical director of the Edinburgh Breast Screening Project from 1979 to 1988: “We all know that mammography is an unsuitable screening test: it is technologically difficult to perform, the pictures are difficult to interpret, it has a high false positive rate, and we don’t know how often to carry it out. We can no longer ignore the possibility that screening may not reduce mortality in women of any age, however disappointing this may be.”<sup>ii</sup>

### Is Mammography Harmful?

Dr. Roberts then asked if mammography testing could actually be causing more harm than good. She cited the trauma of false positives and the psychological uncertainty related to non-invasive cancers. She mentioned the pressure on women to be compliant with the screening program, and the psychological fallout upon hearing a diagnosis of cancer.

Those in whom cancer is detected will not like her conclusion: “we do not know how to treat breast cancer. There is no successful treatment; different surgeons will carry out different procedures.”<sup>iii</sup> No one knows the best way to treat breast cancer.

Roberts also says, “the currently expressed or strongly implied statement that if women attend for screening, everything will be all right, is not acceptable. Modern ideas concentrate on healthy living, rather than the search for disease.” In compelling honesty, she wrote, “I am sorry that breast screening may not be of benefit...sad to seem to be critical of the many dear and valued colleagues...But they will recognize that I am telling the truth.”<sup>iv</sup>

Dr. Roberts is not alone in her assessment of mammography screening. In a 2000 edition of *The Lancet* medical journal, Peter Gøtzsche and Ole Olsen concluded, “screening for breast cancer with mammography is unjustified,” in that many of the trials they reviewed were of very poor quality, and that “there is no reliable evidence that screening decreases breast-cancer mortality.”<sup>v</sup>

Their declaration ignited a “storm of debate and criticism in national media and medical journals alike” and it resulted in an “overview revisited” in the commentary section of the respected journal. That detailed assessment ended with this statement: “At present, there is no reliable evidence from large randomized trials to support screening mammography programmes.”<sup>vi</sup>

Gøtzsche and Olsen wrote a second article for *The Lancet*. The abstract states this: “a Cochrane review has now confirmed and strengthened our previous findings. The review also shows that breast-cancer mortality is a misleading outcome measure. Finally, we use data supplemental to those in the Cochrane review to show that screening leads to more aggressive treatment.”<sup>vii</sup>

### Mammography Screening is “Not Justifiable”

Dr. Charles Wright and Dr. C. Barber Mueller also wrote an article for *The Lancet*, stating in their research summary that “early trials of screening mammography, reporting 30% relative reduction in mortality...led to strong professional and public demand,” but “There has been little publicity about the subsequent trials showing no significant benefit in any age group, or about the harm and costs associated with screening mammography.”<sup>viii</sup> In fact, to achieve only one less death, there would have to be 7086 screenings according to one study, 63,264 screenings according to another study, and an infinite number of screenings according to a third study of this kind.

About 5% of screening mammograms are positive or suspicious, and of these 80-93% are false positives, causing much unnecessary anxiety and even unnecessary procedures such as surgery. False reassurance by negative mammography occurs in 10-15% of women with breast cancer that will manifest clinically within a year. They calculate the “mean annual cost per life ‘saved’ is around \$1.2 million.” Their conclusion is this: “Since the benefit achieved is marginal, the harm caused is substantial, and the costs incurred are enormous, we suggest that public funding for breast cancer screening in any age group is not justifiable.”<sup>ix</sup>

Not only that, a comparison study of 100 women receiving both mammography screening and showed that infrared screening, or thermal imaging, was more accurate. An “84% sensitivity rate of mammography alone was increased to 95% when infrared imaging was added.” This indicates that thermal imaging detects “vascular and metabolic changes,” rather than simply tumor size. In other words, it detects tumors in earlier stages.<sup>x</sup>

### **Harmful Radiation**

Peter Leando, in his report *The Role of Mammography in Breast Health: an Overdue Paradigm Shift*, notes the increasing evidence “relating to the risks inherent in using mammography for breast screening...The risks from radiation produced by mammography are far greater than the proponents of this test are aware of or have been promoting to women...mammography X-rays use a low energy form of ionising radiation which causes greater biologic damage than the high energy X-ray...The radiation used by mammography is almost 5 times more effective at causing cancer.”<sup>xi</sup>

Leando notes that the “United States is the only country that routinely screens premenopausal women by mammography. The U.S. also extends its screening practice by taking two or more mammograms per breast annually in postmenopausal women. That contrasts with the more restrained European practice of a single view every two or three years.”<sup>xii</sup>

Leando’s article included two very disturbing quotes: “The capacity of ionizing radiation to produce breast cancer has been repeatedly confirmed,”<sup>xiii</sup> and “the strongest evidence for a particular initiating factor in breast cancer is that for irradiation...Evidence that other carcinogens...initiate breast cancer development is extremely limited.”<sup>xiv</sup>

A report titled *State of the Evidence*, published by Breast Cancer Fund and Breast Cancer Action, stated the following: “In 2005, the National Toxicology Program classified X-radiation and gamma radiation as known human carcinogens. Radiation is a mutagen as well as a carcinogen. Radiation may even enhance the ability of hormones or other chemicals to cause cancer...Female breast cancer is the best-quantified radiation-related cancer.”<sup>xv</sup>

“There is no such thing as a safe dose of radiation...radiation damage to genes is cumulative...A typical mammogram of .2 rads would equal the radiation dose received by the breast in 660 hours of flying, not a single trip.”<sup>xvi</sup>

In response to a study reported in *The Lancet* that found no significant reduction in breast-cancer mortality due to mammograms,<sup>xvii</sup> Benjamin Djulbegovic raised this concern: “False-negative screens might lead to inappropriate reassurance and delays in diagnosis, whereas false positives might result in unnecessary biopsies and additional imaging studies. However, the main harms associated with screening mammography relate to potential death from radiation-induced breast cancer. Although the overall reduction in death from breast cancer during the 10-15 years’ follow-up in trials of screening mammography is clear, the anticipated peak for radiation-induced breast cancer occurs women 10-20 years after exposure, and risk might remain increased throughout a woman’s life.”<sup>xviii</sup>

The question must be asked: Can it be that the very procedure used to detect cancer is causing it? Is mammography a self-fulfilling methodology?

### **Thermography: A Safer Alternative**

There are other breast-testing options that are more effective and safe. This article’s focus is on thermography, but other methods will be briefly mentioned, too.

Thermography, also known as thermal imaging or infrared imaging, detects breast abnormalities earlier than mammograms can; is risk-free, pain-free and totally non-invasive; does not involve ionizing radiation or injections; is FDA-approved; costs less than mammograms; and provides rapid results.

Thermography, as used in breast exams, records thermal (heat or cold) patterns in the skin temperature that may be normal or that may indicate pain, injury, disease, inflammation, or other abnormality. It records those findings in a color-coded scan of the body area being imaged. It also notes and records temperature differentials or asymmetries between similar regions on either side of the body. Then, if abnormal heat patterns are detected as related to a specific region of interest or function, clinical correlation and further investigation can lead to diagnosis and treatment.

In industrial use, thermal imaging detects areas on homes or businesses where insulation is sparse. Hunters and military personnel use infrared scopes to detect presence and track motion, simply by tracking the heat given off by humans, animals, or missiles. Fortunately, it has a healthcare-related use, as well.

Some physicians promote it as a “simpler and less expensive complement to mammography.”<sup>xix</sup> They know infrared imaging’s detection and accuracy rate exceeds that of mammograms and would recommend mammography only if the thermography indicated pathology or issues needing further investigation. In that case, mammography would be useful to identify the location and boundaries of the tumor or mass within the breast.

### **How It’s Done**

Thermal imaging is completely harmless, painless, and non-invasive. The client sits or stands before a thermal imaging camera, bares the body area to be scanned, and the results of several viewing angles are seen immediately on a computer screen. Those results are

forwarded to a healthcare professional who compares those findings to earlier scans on record, if any, and also studies and interprets the varying patterns and temperature differentials. The color-coded results, the written interpretation and explanations, and any recommendations are forwarded to the client within a few days.

While many thermal imaging practices urge a yearly scan, as do mammogram screening programs, each woman must determine the frequency with which thermal imaging is done for her, since the cumulative cancer-promoting effect of ionizing-radiation mammograms is a factor. The fewer the mammograms a woman has had, the better. Without radiation, the breast is more likely to remain healthy, assuming the diet and lifestyle is intelligent and the bras fit well, without underwire, tight elastic, or heat-concentrating padding.<sup>xx</sup>

### **The Difference Between Mammography and Thermal Imaging**

On top of the radiation, compression, cost, and psychological issues caused by mammography, there is another thing that differentiates it from thermal imaging. The difference is in what the two detection systems look for: “Mammography and ultrasound depend primarily on structural distinction and anatomical variation of the tumor from the surrounding breast tissue...Infrared imaging detects minute temperature variations related to vascular flow and can demonstrate abnormal vascular patterns associated with the initiation and progression of tumors.”<sup>xxi</sup>

In other words, thermal imaging can detect tumorous activity as it begins to develop a blood supply to sustain its growth. Any increased heat from a localized blood supply would suggest pathology. Yet for mammography, the tumor has to have formed sufficient physical mass and size to be detected.

“Major abnormal findings on infrared range from significant vascular asymmetry to vascular ‘anarchy,’ consisting of unusual vessels that form clusters, loops and abnormal branching. Focal increases in temperature from 1° to 3° may be significant when compared with temperatures at the contralateral site [other side of body].”<sup>xxii</sup>

Thermography is unique in its ability to show “physiological changes and metabolic processes, filling the gap in clinical diagnosis where anatomical tests such as X-ray, CT, ultrasound and MRI leave off...The reports can provide objective results relating to physiology of the body and breast, including developing pathology, angiogenesis, and inflammatory activity that justifies further investigation.”<sup>xxiii</sup>

Dr. John McDougall comments that by the time mammography detects cancers, “they have been growing 8 to 14 years—by this time if the lump detected is truly cancer...then the disease has spread to the rest of the body and is unreachable by surgery or radiation.” He further states, “In many cases mammography detects a condition called ductal carcinoma in situ (DCIS). This is not cancer, but when detected it is still treated aggressively with surgery and radiation. DCIS rarely turns into a life-threatening cancer. Thus, for women for whom a cure is possible (those with DCIS) early detection and treatment are not necessary, while for women for whom cure is necessary (those with invasive cancer), this goal is rarely possible because the disease has already spread beyond the boundaries reached by local treatment (radiation and surgery).”<sup>xxiv</sup> At that point, the only treatment usually recommended is what McDougall calls “toxic chemotherapy,” which impacts not only the cancer site but also the entire body.

### **Still, Mammograms have some Benefit**

Mammograms should not be entirely avoided. If abnormalities appear in a thermography or other tests, mammography and other radiation technologies such as the CAT scan are necessary. Used in conjunction with a thermal scan, mammography’s detection rate increases from 84% to 95%.<sup>xxv</sup>

Mammography identifies the location and boundaries of the tumor or mass within the breast for purposes of biopsy, lumpectomy, mastectomy, or radiation therapy. Mammograms also provide crucial feedback as to cancer growth or reduction during treatment, even when non-invasive methods are used.

### **A Better Way**

McDougall cites a study entitled *Ten-year risk of false positive screening mammograms and clinical breast examinations* by Joann Elmore.<sup>xxvi</sup> It found over a period of ten years of screening, one-third of women had abnormal test results requiring additional evaluation, even though no breast cancer was present. McDougall wrote, “That’s a lot of testing and surgery following an x-ray examination that has questionable benefits, even for women over 50.”<sup>xxvii</sup>

Rejecting the orthodox opinion that mammography is the best therapy available to detect breast cancer, Dr. McDougall instead argues for prevention: “There is something better for preventing breast cancer, which is an enthusiastic recommendation to change their diet.” McDougall is only one of many voices promoting dietary and lifestyle changes to prevent or recover from cancer.

Obviously, the likelihood of recovery is dependent upon several factors, yet many of them are within an individual’s control. For example, one massive and outstanding study into diet’s effect on disease and mortality—the *China Study*—clinically demonstrated that tumor growth can be “turned on and off” by the addition or removal of animal-based foods from the diet, and that the ingestion of them starts the disease process. The results applied not only to cancer but other diseases, as well, such as diabetes, heart disease, autoimmune diseases, and obesity.<sup>xxviii</sup>

While an intelligent diet, exercise, sunshine, water, rest, fresh air, and faith are critical to overall health, including breast health, many

women should not ignore any history of mammograms. Radiation damage in mammograms is unavoidable and cumulative, and it would be wise to check breast health periodically with thermal imaging.

### Where, and How Much?

Although the FDA approves thermography, insurance coverage is quite spotty at best. The cost in the Mid-Atlantic area is usually \$150 for a specific area (like breasts or pelvic area), and more for a full-body scan. Establishing a baseline image is a good idea, too, for future comparative interpretations.

[Find practitioners listed by state \(also international sites\) at thermologyonline.org](#). We can hope scanning locations will increase as thermal imaging becomes better known.

### Other Options for Detecting Cancer

Another method of detecting cancer anywhere in the body is the AMAS test from Oncolab in Boston. Their website reports, "Oncolab provides the FDA-approved AMAS blood test, helping health care professionals to diagnose cancer, and to follow up during treatment. In studies of more than 8,000 patients, the AMAS® Test was found to be 95% accurate and unique for its diverse use as a diagnostic tool regarding all non-terminal cancers. In some cases, the AMAS® test detected cancer 1 to 19 months before clinical detection. These tests indicate with great accuracy (99% specificity and 95% sensitivity) if there is cancer active anywhere within your body."<sup>xxix</sup>

Also, the HCG Urine Immunoassay Test is available from the Navarro Medical Clinic (847.359.3634 or [efnavmed@gmail.com](mailto:efnavmed@gmail.com)).

We hold out a faint hope that thermal imaging will be part of the cost-saving changes that are likely to be made in this nation's healthcare programs. But even if the cost does not change, there are more than enough reasons to include thermal imaging in your personal healthcare protocol. Increasingly, women are finding the cost to be worth it in terms of peace of mind and preventive care. If you enjoyed this article, share it with a friend. Check out our health site, [Amazing Health™](#), for more information.

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i Maureen Roberts, as quoted in Sandra Coney, *The menopause industry: a guide to medicine's 'discovery' of the mid-life woman* (Spinifex Press, 1993): 247.

ii *Ibid.*

iii Maureen Roberts, "Breast Screening: time for a rethink?" *British Medical Journal* 6708 (1989): 1153-1155. Dr. Roberts' peer-reviewed journal article was accepted for publication five weeks after her death from breast cancer.

iv *Ibid.*

v Peter C. Gøtzsche and Ole Olson, "Is screening for breast cancer with mammography justifiable?" *Lancet* 355 (January 8, 2000): 129.

vi Richard Horton, "Screening mammography—an overview revisited," *Lancet* 358 (October 20, 2001): 1284-1285.

vii Ole Olson and Peter C. Gøtzsche, "Cochrane review on screening for breast cancer with mammography," *Lancet* 358 (October 20, 2001): 1340.

viii Charles J. Wright and C. Barber Mueller, "Screening mammography and public health policy: the need for perspective," *Lancet* 346 (July 1, 1995): 29-31.

ix *Ibid.*

x "Infrared Imaging as a Useful Adjunct to Mammography," *Oncology* 9 (1997).  
xi [Peter Leando, \*The Role of Mammography in Breast Health: an Overdue Paradigm Shift\*](#).

xii *Ibid.*

xiii William Donegan and John Spratt, *Cancer of the Breast* (Gulf Professional Publishing, 2002): 136.

xiv *Ibid.*: 203-204.

xv Nancy Evans (ed.), [State of the Evidence 2006 \(San Francisco, Breast Cancer Fund and Breast Cancer Action\)](#): 5, 20.

xvi *Ibid.*

xvii Sue Moss et al, "Effect of mammographic screening from age 40 years on breast cancer mortality at 10 years' follow-up: a randomized controlled trial" *Lancet* 368 (December 9, 2006): 2053-2060.

xviii B. Djulbegovic and G. H. Lyman, "Screening mammography at 40-49 years: regret or no regret?" *Lancet* 368 (December 9,

2006): 2035-2037.

xix [infraredinstitute.com](http://infraredinstitute.com)

xx See Soma Grismaijer and Sydney Ross Singer, *Dressed to Kill: the Link between Breast Cancer and Bras* (Garden City Park, NY: Avery, 1995).

xxi "Infrared Imaging as a Useful Adjunct to Mammography," *Oncology* 9 (1997).

xxii *Ibid.*

xxiii Pamela Howard, owner and certified clinical thermographer, Advanced Thermal Imaging, Carlisle, PA.

xxiv John McDougall, "Mammograms Fail Women from Age 40 Years," *The McDougall Newsletter* 5 (December 2006).

xxv "Infrared Imaging as a Useful Adjunct to Mammography," *Oncology* 9 (1997): 1089-1096.

xxvi Joann Elmore, "Ten-year risk of false positive screening mammograms and clinical breast examinations," *New England Journal of Medicine* 338 (1998).

xxvii John McDougall, "Mammograms Fail Women from Age 40 Years," *The McDougall Newsletter* 5 (December 2006).

xxviii T. Colin Campbell, *The China Study* (Dallas: Benbella, 2005), 43-67.