Think you're too young to be screened? Did you know that 20% of all breast cancers occur in women under 40? A unique technology, available to women of all ages, brings added hope to the battle against breast cancer.



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This year, over 192,000 women will be diagnosed with breast cancer in the US and 1.2 million worldwide (Source: American Cancer Society and WHO). As shocking as these numbers are, even worse is the number of cancers that won't be detected until it's too late. The consensus among experts in this field is that early detection holds the key to survival. Although this is true, detection is not occurring early enough. Even though women are advised to begin having mammograms at 40, what they don't know is that most cancers have been growing for 10 years before they are detected, and that 20% of all cancers can't be seen by a mammogram. It is because of these factors, and others, that the number of women who die from this disease has gone relatively unchanged in the past 40 years.

If there were a method of very early detection, a procedure that would act as an early warning system, women would have the fighting chance they need to win this battle. An early warning system would be able to turn these grave statistics around, as tumors would be detected before they were able to invade the rest of the body. Women now have access to a unique technology that can give them this early warning; the procedure is Breast Thermography (Digital Infrared Imaging).

As an imaging technology, breast thermography is based on a cancerous process known as angiogenesis (blood vessel formation). When a cancer is forming, it needs an increased blood supply to feed it. This blood supply causes an abnormal heat pattern in the breast. Thermography can detect this abnormal heat pattern by scanning the breasts with a specialized infrared camera and analyzing the information using sophisticated computer programs under the guidance of a board certified clinical thermographer. These abnormal heat patterns are among the earliest known signs of a forming cancer.

An unprecedented level of early detection can be realized when thermography is added to a woman's regular breast health care. It has been found that an abnormal thermogram is the

single most important sign of high risk for developing breast cancer, 8 times more significant than a first order family history of the disease. Studies show that this technology has the ability to warn a woman that a cancer may be forming up to 10 years before any other test can detect it. This gives breast thermography not only the ability to detect cancer at its earliest and most treatable stage, but to also warn a woman about her own unique level of future risk.



Women who undergo the test find it to be fairly uneventful, since the procedure uses no radiation or contact with the skin. Women with breast implants, reductions, and women who are pregnant or nursing can be imaged without any harm or reduction in the accuracy of the test. Normal images, like the one seen in the upper left, show evenly cool inactive breasts (cold areas are dark colors). Abnormal images, as seen on the lower right, show highly active blood vessels giving off heat in one breast. Since the procedure does not pose any harm to the patient, women who are at higher risk can be monitored closely without adverse effects on their health.



Breast thermography plays more than one part in women's breast health care. The procedure can also play a significant role in prevention. Research indicates that lifetime exposure of the breasts to the hormone estrogen is the single most significant risk factor in the development of breast cancer. In women who have increased estrogen activity in their breasts, thermography has the ability to warn them of this condition. Once this is identified, a woman can take a significant proactive role in prevention. With the help of her doctor she can decrease the effects of estrogen on her breasts, thus greatly reducing her overall breast cancer risk.

With the incidence of breast cancer steadily rising in women under 40, an effort to provide some form accurate screening test is needed in this age group. Breast cancers in younger women are commonly more aggressive resulting in lower survival rates. Current screening procedures have proven to be inaccurate in women in this age group due to breast tissue density and other

factors. These issues, however, do not affect thermography. The technology offers women under 40 an accurate and practical breast screening procedure. Baseline thermographic screening is recommended at age 20.

Breast thermography is a high-tech non-invasive screening procedure designed to be used by women of all ages. Its ability to play a significant role in prevention is an impressive benefit. Unfortunately, at this time there are too few qualified clinical thermography centers worldwide. Due to the increasing demand for breast thermography, recognized educational organizations, such as the International Academy of Clinical Thermology, are actively seeking personnel for training as certified technicians. It is their goal to provide women with greater access to this invaluable technology.

Currently, no single screening procedure can detect 100% of all cancers. As a FDA approved procedure, thermography is designed to be used with mammography and not as a replacement. Studies show that when thermography is added to a woman's regular breast health check ups (physical examination + mammography + thermography), 95% of all early stage cancers will be detected. Breast thermography has the unique ability to warn most women far enough in advance to give then a fighting chance. Combined use of this technology will make the greatest changes in the number of women who die from this disease. Breast thermography gives women of all ages hope and a true early detection edge in the battle against breast cancer.

## About the authors:

William Hobbins, MD, a Fellow of the American Board of Surgeons and a board certified clinical thermographer, has been performing thermographic breast imaging for over 35 years. As an internationally recognized authority in this field, he has sat on multiple thermographic boards, authored many articles, and has contributed a significant amount of research to the medical database using this technology. He currently practices in Madison Wisconsin and can be contacted at 608-273-4274.

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