



What is Thermography?

Digital Infrared Thermal Imaging is a unique technology that takes a picture and creates a map of the infrared patterns of the body. It is different than other screening tools because it helps us to see function (physiology). MRI and X-ray detect anatomical changes, and thus will miss such things as active inflammation or angiogenesis (increased blood supply as found in cancer). Thermography was approved by the FDA for breast cancer screening in 1982. It can detect early danger signs in the body years before other tools. It has been shown to be effective in finding early signs of breast cancer up to 8 years before the mammogram.

What Can Thermography Be Used For?

There are 3 areas that Thermography is useful:

- Inflammatory Phenomena- This could include early detection of cardiovascular disease, arthritis, Fibromyalgia or trauma such as strains, sprains or chronic pain.
- Neovascular Phenomena - Cancer is fed by the bodies own blood supply. This development of early vascularity is detected well before anatomical changes occur that will be detected with other screening tools.
- Neurological Phenomena - Chronic regional pain syndrome, nerve irritation can cause referred pain in other areas. Circulatory deficits are easily seen in thermographic images.

A full body screening covers all regions of the body with no less than 28 images. A region of interest can be used for focalized screening such as breast screening, thyroid, etc.

Is It a Proven Technology?

Thermography has been comprehensively researched for over 30 years. While it is not a replacement for Mammography, it may have many valuable assets including: earlier detection of neovascular (blood supply) patterns, adjunct to inconclusive mammograms, improved detection for women with dense breasts or implants or a reasonable alternative for women who refuse mammogram. Below is a sample of the over 800 studies in the index-medicus. They represent some of the important findings and value of thermography.

Fast facts:

- In 1982, the FDA approved breast thermography as an adjunct diagnostic breast cancer screening procedure
- Of the extensive research conducted since the late 1950's, well over 300,000 women have been included as study participants
- The size of the studies are very large: 10k, 37k, 60k, 85k
- Some studies have followed participants up to 12 years
- Strict standardized interpretation protocols have been established for 15 years to remedy problems with early research.
- Breast thermography has an average sensitivity and specificity of 90%
- An abnormal thermogram is 10 times more significant as a future risk indicator for breast cancer than a first order family history
- A persistent abnormal thermogram carries with it a 22x higher risk of future breast cancer
- Extensive clinical trials have shown that breast thermography significantly augments the long term survival rates of its recipients by as much as 61%. When used as a multimodal approach (clinical