Safe Breast Scan
Rebecca Reverie
484 225 8760

Understanding Your Breast Thermogram Report

Complicated health care procedures and reports are often difficult to understand. We hope that the following answers to frequently asked questions will help make things clearer.

One of the most commonly asked questions is how a breast thermogram is analyzed and what the data means. Under the quality assurance guidelines established by the International Academy of Clinical Thermology, strict pre-imaging preparation and imaging laboratory protocols are followed first before each patient is imaged. Using specialized infrared sensing cameras coupled to sophisticated computerized image processing systems, the heat emanating from the surface of your body is generated as an image. The image displays both the intensity of the heat and the course of the superficial blood vessels. Each breast is compared to itself and the opposite breast against a research established normative database. Areas that show abnormal blood vessel patterns are assigned a value. Temperature data is also taken and compared as a difference between the same areas on the opposite breast. This is known as a temperature differential or delta temperature (Delta-T). These temperature readings are also assigned a value. When the blood vessel pattern and temperature values are combined a TH (thermobiological) grading is produced. Each breast is given a TH grading.

So what does this all mean? Breast thermograms are graded on a scale from TH1 to TH5. As TH values rise from the TH3 range and above there is increasing risk that an abnormal process might be present, or that you may be at a higher risk for cancer in the future.

My images are graded a TH1 or TH2. What does this mean?

This is very good news. Thermograms at this level are considered normal. There are no suspicious hot areas or blood vessel signs. The only difference between a TH1 and a TH2 is that a TH1 breast has either very few blood vessels or none at all. If you are thinking that your goal should be to strive for a TH1 you would be wrong. TH1 and TH2 thermograms are both variations of normal. A little more than 95% of all TH3 thermograms are also normal.

My images are graded a TH3. What does this mean?

This is also good news! Thermograms at this level are considered questionable, but not abnormal. The majority of TH3 thermograms (95%) normalize in time or remain stable due to your own unique physiology. The remaining 5% are a combination of current risk, future risk, and false-positives. This is why it is important for you to return for a follow up thermogram. We need to know if you fall into the 5% category or the majority that are normal. Following established guidelines, if after one year of closer observation (thermograms taken at 6 months and 1 year after the initial exam) things remain stable or improve thermograms will be recommended at the normal annual intervals.

Keeping in mind that some of the remaining 5% are at current risk, there is a chance that your thermogram may be an indication that something is going on. In order to investigate this, and to protect your health, follow-up structural imaging is recommended (e.g. MRI, ultrasound, mammography). Please discuss with your doctor what type of structural imaging would be best for you.

My images are graded as a TH4 or TH5. What does this mean?

Thermograms at this level are considered abnormal and carry a higher risk. An abnormal thermogram may be indicating that something is going on. In order to investigate this, and to protect your health, further testing is

recommended. Depending on any recent imaging you may have had, a follow-up mammogram, ultrasound, or MRI would be recommended. Please see your doctor for the follow-up testing recommended in your report.

Another possibility is that your thermogram may be acting as a warning sign or it may be a false-positive. If your follow-up tests show no suspicious findings, and your thermogram remains abnormal over time, the thermogram may be a future warning of higher risk. This warning may give you a chance to make changes. It lets you know that you need to work closely with your doctor to carefully monitor your breasts and make positive changes that will decrease your risk factors and improve your breast health. It is also very important to return for follow-up thermograms. Following established guidelines, the initial follow-up is recommended at 3 months with a second 6 months later. If no thermal changes are seen, follow-up thermograms are recommended every 6 months until improvements are noted.

My report says that I need to have follow-up structural imaging (e.g. MRI, ultrasound, mammography).

Remember that a certain percentage of TH3 thermograms may warn of a current risk. TH4 and TH5 thermograms are indicators of increasing risk. As such, follow-up structural imaging is recommended to investigate this. Keep in mind that Dr. Amalu will not ask for follow-up structural imaging every time you have a thermogram. He will only ask for follow-up tests if there is a reason for one. A logical sequence of testing needs to be followed in order to protect your health - your breasts and your health are far too important. This is the same action that would be taken if you had a suspicious mammogram. Neither mammograms, ultrasounds, MRI nor thermograms can tell you if you have cancer, further tests are always necessary to investigate this possibility.

If structural imaging is recommended (e.g. mammograms, ultrasounds, and/or MRIs) why would I want to continue having thermograms?

This is a very logical question. The answer is based on the current health care approach to breast cancer screening. Depending on a woman's age she will be advised by her doctor to come in at certain intervals for a physical examination of her breasts along with a mammogram. Why do you need to have a physical examination of your breasts; isn't the mammogram enough? The reason for this is that a certain number of breast cancers will not be detected by a mammogram, but will be found on a physical exam. As such, both the mammogram and the physical examination of the breast are adjunctive procedures – they are not to be done with the exclusion of the other. This is the same for thermography. Since no one imaging procedure or test will warn of 100% of all cancers, a multimodal (multiple tests) approach to screening provides the best in early detection. Interestingly, and of good advice, the American Cancer Society is currently recommending that women who are at high risk add breast MRI to their yearly mammograms.

You, or someone you know, may have also experienced this situation – a mammogram was done only to need a follow-up ultrasound. Here again another adjunctive procedure (ultrasound) had to be added to provide for adequate screening. This is a very common occurrence. With thermography you are receiving a physiological look at the breast that no other technology provides. When adding thermography to your regular breast health care you are benefiting from four things that no other technology can provide: 1.) The earliest known risk marker for the current or future development of breast cancer – this alone could save your life, 2.) An individualized future risk assessment based on your own unique physiology and not just your family history, 3.) An objective risk assessment technology for women under 40 where most breast cancers are more aggressive, 4.) And possibly one of the most important tools for use in breast cancer prevention.

Thermography offers every woman so much more. Should you continue to have thermograms? Absolutely!

I have a lump, pain, imaging (mammogram, ultrasound, MRI, etc.) or other finding in the normal thermogram breast. Does this mean that I don't have cancer?

No, a normal thermogram does not mean an absence of cancer. In the same situation, a normal mammogram, ultrasound, or MRI are also in the same boat. No imaging procedure provides for 100% security. Only a biopsy can tell you if you have cancer or not. Approximately 10% of all breast cancers have no abnormal

thermal features. Studies show that many of these “cold” cancers have a much better prognosis. However, if you have a normal thermogram with a lump, pain, imaging or other finding you should see your doctor immediately to determine what it is.

My report mentioned a blood vessel pattern that may be caused by hormones or dietary phytoestrogens. What does this mean?

Certain thermographic signs may suggest the effects of hormones in the breasts. Since an important risk factor for the development of breast cancer may be an imbalance of hormones in the breast, reducing your overall lifetime exposure may play a significant role in breast cancer prevention. Thermography may be the first signal that alerts your doctor to this possibility. This is why it is necessary for you to see your doctor for further testing to first verify if there is a hormone imbalance and then to determine the cause. Proper treatment cannot be prescribed if the cause is not found first.

Phytoestrogens such as soy and flaxseed have also been shown to produce this same blood vessel patterning. Considering that the identical thermal signs produced by a hormone imbalance may be caused by phytoestrogens, a certain level of concern is reasonable. In most patients, it is observed that when soy or flaxseed use is stopped the blood vessel patterning reduces significantly or disappears altogether. Many women also report that their breast pains, tenderness, and swelling resolve when they stop using phytoestrogens. If you are currently using soy, flaxseed, or other phytoestrogens, it is recommended that you see your doctor to evaluate whether or not their use is compatible with your physiology.

What does all the information in the findings section mean?

This area of the report contains the results from the visual and computerized analysis of your images. Most of this data was used to determine your TH grading. We understand that some of the terminology is hard to understand, but this is necessary for your doctor and other imaging personnel’s use. Please do not let this area concern you. If you are wondering what all of this information means, look at your TH grading. The level of risk is what this is all about.

My report says that I should return for another thermogram at a certain date. Is this important?

Yes, this is extremely important. Thermography is very different from other imaging procedures. It has the ability to detect subtle signs of blood vessel changes (angiogenesis) in the breast – blood vessels that may be involved with the growth of a cancerous tumor. These changes may occur far in advance of the formation of a large tumor mass. This makes the procedure one of the earliest risk indicators of a growing cancer. The images produced are also as unique as your fingerprint. Studies show that by carefully monitoring a woman’s “thermal fingerprint” early detection may be enhanced. This is especially important in patients with a persistent TH4 or TH5 thermogram.

There are 4 very important reasons for you to return for regular thermograms –

1.) EARLY SIGNS THAT A BREAST CANCER MAY BE DEVELOPING

Angiogenesis, or new blood vessel formation, is necessary to sustain the growth of a tumor. Breast thermography may be the first signal that such a possibility is developing.

2.) INDIVIDUALIZED BREAST CANCER RISK ASSESSMENT

Women with a family history are definitely at greater risk for breast cancer, but 75% of women who get breast cancer have no family history of the disease. Regardless of your family history, if a 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. If discovered, certain thermographic risk markers may warn a woman that she needs to work closely with her doctor with regular checkups to monitor her breast health.

3.) A POSSIBLE ROLE IN BREAST CANCER PREVENTION

Since an important risk factor for the development of breast cancer may be an imbalance of hormones in the breast, normalizing the balance of the hormones may be a significant step in prevention. Certain thermographic signs may suggest the effects of hormones in the breasts. This may be the first marker that alerts your doctor to this possibility. Your doctor will first need to run further tests to confirm this. If these tests are positive, your doctor may use these tests to monitor your care.

4.) IMAGING FOR YOUNGER WOMEN

Current studies indicate that 15% of all breast cancers occur in women under 49. This is the most common cancer in women in this age group. Breast cancers in younger women are usually more aggressive and have poorer survival rates. Breast thermography offers younger women a valuable imaging tool that they can add to their regular breast health check-ups beginning with baseline imaging at age 20.