

# **Breast Thermography 101: What Every Imaging Center, Doctor and Patient Should Know First**

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## **Abstract**

Breast Thermography has been around for several decades with varying degrees of positive and negative promotion, research, and support. In the conventional medical industry, breast thermography is still the black sheep of breast screening modalities. There are several reasons for this but one of the most predominant factors is that most doctors are not aware of, nor understand, the role that breast thermography can play in the entire women's health and wellness avenue. Another factor that plays a big part in the mixed popularity and acceptance of breast thermography is the way it has, and still is, being portrayed by some individuals and organizations. This misinformation of the technology's abilities has compounded the mistrust of the effectiveness and usefulness of breast thermography by the conventional medical establishments. With all this going on, it is no wonder that patients are stuck in the middle with no support from any side of the breast thermography controversy. Have we gotten so enthralled in the battle that we have forgotten the core mission of saving lives and families? In this paper, I will attempt to explain what is required from everyone if we are to truly use this technology as a tool to help women. This information is meant for all: young and old, doctor and patient, grandmother, mother, wife, sister, and everyone we love.

## **Introduction**

Rather than explain the entire history of Breast Thermography and how it has been extensively researched and proven by peer studies to be very effective in identifying breast health related issues, I will only briefly explain how Breast Thermography works.

Breast Thermography is a Non-Contact, Non-Invasive, Non-Radioactive Imaging technology that works under the laws of physics of thermodynamics and electromagnetic energy. Wow, these are some fancy words! Basically all this means is that the concept of thermography is actual, proven science and physics that is being used in almost every aspect of our everyday lives whether we know it or not.

Professional scientists, engineers and everyday people use thermography daily. There can be no dispute that the science of thermography is true and solid. Thermography has proven to be invaluable in almost every application that the analysis of temperature function is important. Why should medicine be any different? The use of thermography in breast imaging is basically to view the thermal patterns and temperatures of the breast and surrounding relevant areas of a woman's body. That is it. **It is NOT used to find cancer!**

These thermal patterns and temperature differences are very subtle and most of the time cannot be felt by touch. The crucial part of any Breast Thermography examination is the interpretation of the images and data. This can only be performed by a highly trained, skilled and experienced Breast Thermography Interpreter. The interpreter must analyze each thermographic image and determine relevant thermal patterns and temperatures from non-relevant ones. The interpreter must then report on these relevant thermal patterns and temperatures and when necessary give an interpretation of what is seen and measured. This interpretation is NOT a diagnosis, it is simply an interpreter's opinion as to what the relevant thermal patterns and temperatures are indicative of. This interpretation is based on training, experience and years of studies on thousands of women. The interpretation **MUST ALWAYS** be confirmed by other means of testing.

## **Discussion**

Breast Thermography is a test of function and not structure. This means that it only detects how the body is reacting to certain conditions. It does not see or detect actual structural problems such as tumors, lumps, cysts, fibroadenomas, etc... Rather, it sees how the body is reacting to these structural problems. It is in essence similar to the common practice of taking a patient's temperature as one of their vital signs. Taking your temperature does not tell what disease is present; it only tells you that there is a functional problem that needs to be investigated more deeply. However, an increase in core temperature is often an early warning sign that some sort of internal condition exists. Breast Thermography works in the same manner and with the same philosophy.

Now that we have a better understanding of what Breast Thermography is, let us investigate the industry accepted guidelines and standards of conducting an effective Breast Thermography Examination:

### **Breast Thermography Starts with the Imaging Center**

Yes, it does. This might seem strange or funny, but it is true. Without the imaging center, there will be nowhere to get a Breast Thermogram done. The responsibility of the success of Breast Thermography falls upon the imaging center and it is here where Breast Thermography also fails. It is the imaging center that must clearly advertise, promote and educate in order to ensure continuity of business in order to keep helping women. The imaging center must be treated as a business in order to keep it

sustained. Keeping it sustained ensures that more women can be helped. Since it is a business, you must ensure its longevity by protecting your investment. This is best accomplished by quality, integrity, and ethics. When it comes to quality, integrity and ethics with Breast Thermography, the following guidelines should be considered:

### **Select the best Breast Thermography support organization you can find**

You cannot do this alone in order to survive. You need support and guidance and furthermore, you will need skilled interpretation services for your patients. To accomplish this you must associate yourself with an established and reputable organization that provides guidance, support and interpretation services. There are several reputable Breast Thermography associations and organizations out there. There are also many other associations and organizations that are not as reputable. In selecting your organization, it is highly recommended that you follow the following guidelines:

- Look for an organization that does not sell or market any camera system
- Look for an organization that will interpret images from any brand camera system that meets the industry standard for image quality, resolution and sensitivity
- Look for an organization that has skilled and reputable interpreters that follow industry accepted guidelines and standards
- Look for an organization that is accepted by their peers and other similar reputable organizations
- Look for an organization that has and strictly adheres to bylaws that are supported by industry accepted guidelines and standards
- Look for an organization that will continuously guide you as to the proper protocols and changes going on in the industry
- Look for an organization that follows all regulatory requirements for the marketing and use of Breast Thermography

Now that you have selected the best Breast Thermography support organization for you, the next step is to get the training required from that organization.

### **After your training, the next step would be to select the proper camera system**

Over recent years, much has changed with camera systems used for Breast Thermography. They have gotten more sensitive, smaller, faster, and better. However, one important factor in selecting your camera system is knowing how you will use it and market it. In the United States the FDA is the watchdog on how organizations and individuals market and use their thermal camera systems. Over the past two years, the FDA has been cracking down on offenders who have been marketing and using camera systems that do not conform to the documented use within the FDA registration

documentation. Although one particular camera system may be able to achieve the exact same results as another system, they may be listed with the FDA differently, making only one out of the two systems approved to market and use as a Breast Thermography system. It is therefore important that you first research all camera systems you wish to purchase for proper FDA classification and description of use. Look for a camera system that meets the specifications required for proper Breast Thermography imaging as specified in industry accepted standards and guidelines and then make sure that the camera system is listed with the FDA for Breast Cancer Screening or Breast Thermography within the description of use.

### **The next step for the imaging center is to properly promote and market your services**

This is an area where most imaging centers fail and ultimately go out of business. From my experience I have learned that the medical industry or business is a “cut throat” industry. One missed step can lead to your business’s demise. What you must understand is that all you have in this industry is your name and reputation. Your compass to stay on course is your quality, integrity and ethics. Once you stray from these core values, you are opening yourself to attack. The following is a list of guidelines that each imaging center should strongly adhere to:

- Always promote Breast Thermography as an adjunct testing procedure. It is Never to be promoted or marketed as any type of standalone procedure.
- Always inform all of your patients exactly what Breast Thermography does and does not do.
- Always inform all of your patients that the results on the report do not mean a diagnosis and must always be discussed with their doctor.
- Always strictly adhere to industry accepted standards and guidelines protocol for imaging center and patient.
- Never promote Breast Thermography as a breast cancer screening test. Breast Thermography does not look for breast cancer, it looks for signs of abnormal breast function.
- Never promote Breast Thermography as a test that can find problems or cancer before mammography. Remember, Breast Thermography does not look for breast cancer and it cannot see lumps or tumors like mammography.
- Never compare Breast Thermography to mammography, ultrasound or MRI. It cannot be compared to these technologies as it looks for completely different things.
- Never give your patients any type of medical advice or recommendations. Leave this to their treating medical professional. All you can do is explain exactly what the Breast Thermography report is saying and nothing more. Do not assume anything or give advice.

So, from this first section we can see that the success of Breast Thermography strongly depends on each imaging center's role and service. Once the imaging center is on a solid foundation and provides industry standard imaging services, the second section deals with the patient.

## **Buyer Beware! Being the Patient Does Not Make you the Victim!**

For all women thinking about Breast Thermography or looking for an imaging clinic, please be aware that not all imaging centers offering Breast Thermography are the same or are of any value. Be as cautious of the Breast Thermography imaging centers as you are with choosing a car mechanic or a gynecologist. You must do your research before you select a Breast Thermography imaging center that is right for you. Most of the time a Breast Thermography scan is an out-of-pocket expense and can range from \$150 US to \$300 US, so being smart and cautious on what you spend your money on is advisable as you want to get the best quality and highest sensitivity possible.

As a patient who is most likely spending your own hard earned cash, you should be aware of what to expect to get out of a Breast Thermography scan. You must also be willing to follow all of the pre-imaging instructions in order to get the most benefit from this type of imaging. The following are some guidelines and information that all women looking at Breast Thermography should be aware of:

- Note that Breast Thermography is not a test that can tell you if you have breast cancer and it will not tell you that everything is normal or good with your breasts. Breast Thermography will look for signs that there might be an abnormal function or reaction of your breasts. Identifying these signs and knowing about them will give you a better understanding of what is happening with your breast health. Think of Breast Thermography like part of a yearly checkup test that keeps track and monitors the function of your breasts. By understanding this concept, you can now use Breast Thermography as a monitoring, early detection, and prevention tool.
- Note that Breast Thermography is not a stand alone test and you will most likely have to use other tests such as mammography, ultrasound or MRI to investigate further or confirm what is being seen with thermography. Using thermography enables you to work smart in the fight against breast cancer. Thermography sees things that mammography and other structural technologies cannot and vice versa. Breast Thermography adds to or complements other technologies.
- Look for a Breast Imaging Center that follows industry accepted standards and guidelines. This means you may have to read these industry accepted standards and guidelines.

### **Some key areas to look at are:**

- The adherence to strict imaging room and patient protocol
- The imaging process is non-contact and done with an infrared camera system with digital imagery
- There are no direct air drafts blowing onto the chest or breast area such as a modified air conditioner, fan, or blower
- There is a sufficient acclimatization period (usually 10 to 15 minutes) for your breasts and body. This is done with you standing or sitting quietly in the temperature controlled room with no contact to the breasts or chest area and no direct draft of air blowing onto the breasts or chest area.
- Direct images of different angles and views are taken of each breast without the use of mirrors
- Images of the breasts are stored in electronic format on the camera or on a computer
- Images are being interpreted by a trained, qualified and certified interpreter who uses computer software only as an aid or tool. You want a real person reading your images and not leaving it to a computer or software to analyze and interpret the images.
- Another important factor to look at when choosing an imaging center is that the center's staff and environment are pleasant and truly care about your health and well-being. They should also be willing to talk with you and answer any questions you have concerning Breast Thermography in a manner that is helpful and respectful, factual, and unbiased.

Although you are the patient, you must still be knowledgeable enough to select the best Breast Thermography imaging center that meets your needs.

### **What's Up Doc?**

Finally, Breast Thermography ends with the treating doctor or physician. Having the best camera system and best thermography organization and best quality and interpretation means nothing if the treating doctor is not even willing to take the Breast Thermography report into consideration.

I get disappointed and somewhat aggravated when a patient of mine informs me that their doctor totally dismissed their Breast Thermography report and did not even take the time to read and understand the information provided.

I have the utmost respect and admiration for all doctors. However, what must be understood is that doctors are also just human. Breast Thermography is not a subject

that is commonly taught in medical school or during residence training. So, many doctors are not fully aware of what Breast Thermography is and what role Breast Thermography can play in a woman's breast health monitoring and treatment program. Sometimes all they have to go on is poorly done research that did not conform to accepted standards or guidelines.

It is, in my opinion, irresponsible for any doctor to reject or disregard any type of information that can help or play a part in helping the patient. A doctor should not disregard any type of information solely because they are not aware of the technology or the modality. They should at least consider the information that the Breast Thermography findings have to offer. Any doctor who tells their patient that they wasted their time with thermography and that they will not even consider the information clearly does not have the well-being of the patient in mind.

For doctors who are not aware of what Breast Thermography has to offer, let me list some of the information that can be gathered from a Breast Thermography scan and ask yourselves if this type of information is important or useful to the health of your patient:

- The identification of overall or localized abnormal vascular patterns and heating
- The identification of angiogenesis that is not normal
- The identification of the abnormal effects of hormones on the breasts
- The identification of a thyroid dysfunction
- The identification of localized heating or vascular activity at the site of pain or a mass

Why would any of these findings be disregarded by any doctor? Common sense should prevail and the doctor should at the very least investigate the results of the findings that is based upon the proven science and physics of thermodynamics and electromagnetic energy.

Doctors must realize that Breast Thermography is only a tool to help guide them to proper patient care and diagnostics. It is also a tool to help identify potential future problems or complications. It must be realized that Breast Thermography is a test of function and should be used with other tests to get the most information possible to help the patient.

For example, as a doctor, would you disregard a high core temperature reading which is a test of function? Obviously not. As a doctor you are taught that a high temperature is not normal and you would insist that further tests be done. Now say you ordered an X-ray, which is a structural test, and the results came back normal. Would you now disregard the high core temperature since the structures on the X-ray are not affected? Again no. That is because the high temperature may be an indicator of some other

problem not related to the X-rays. You will further investigate to find the source or cause of the high temperature, come up with a diagnosis, and then treat the patient accordingly.

Now take the following example: A patient is having breast pains and discomfort; the clinical exam is normal and the mammogram is normal with no masses or calcification. The patient decides to do Breast Thermography and comes to you with a result of signs of excessive hormone effects on the breasts and a localized abnormally hot vascular signal at the area of pain. Do you disregard these findings?

All I am advocating is that doctors take the time to understand Breast Thermography and how it can help them with their job of helping their patients. Thermography does not always get it right, neither does mammography, ultrasound, and MRI. Do not disregard it without first being knowledgeable enough to dismiss it. Play devil's advocate and learn the good and the bad of thermography.

One final opinion and observation I have had with some medical doctors is that they discredit or dismiss the Breast Thermography report if the images were interpreted by a chiropractor. What they fail to understand is that the Breast Thermography interpretation is based on proper training and experience. It is no different than a nurse or non-MD ultrasound technician reading and interpreting an ultrasound image. You do not have to be a medical doctor to interpret the imagery. All the interpreter is doing is interpreting the information on the images; the interpreter is not diagnosing or recommending any treatment. This is reserved for the treating doctor only. So, the doctor should have no problems with a chiropractor who is properly trained and qualified reading Breast Thermography images. In fact, when it comes to Breast Thermography Interpreter training and certification, there are more rigid standards and prerequisites than ultrasound. The interpreter must be a diagnostician (MD, Chiropractor, etc.), whereas an ultrasound technician and interpreter need only hold a postgraduate degree in a subject where anatomy is studied. A chiropractor understands anatomy and physiology very well and that, coupled with years of Breast Thermography training, makes them ideal as an interpreter to relay the information on the images so that the treating MD can use it to help the patient.

## **Conclusion**

From this paper my opinions and views have been relayed along with the support of industry accepted standards and guidelines. Breast Thermography can be a viable business and can help women with their breast health monitoring. Breast Thermography can be a more widely accepted modality today as sufficient studies have been done to support the current industry accepted standards and guidelines. All that is needed is proper promotion of the technology and the willingness for more conventional medicine doctors to at least learn about the technology and be open to the information that Breast Thermography has to offer.

Breast Thermography is not going away, in fact, it is getting stronger thanks to the internet and social media. Women and patients are more informed and aware and are making their own decisions as to the effectiveness and benefits of Breast Thermography. It is the medical community who are now lagging behind and are reluctant to be informed.