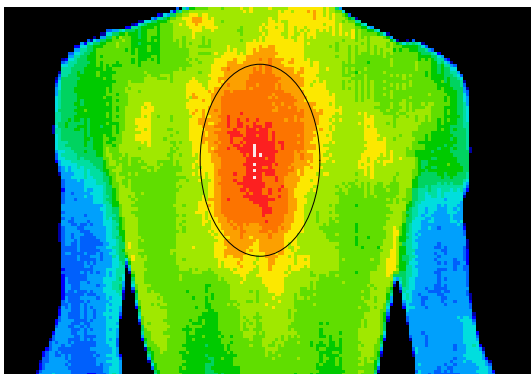


All about

AUSTRALIAN THERMAL IMAGING

“The Thermal Imaging specialists”



Thermal Imaging is a painless, non-contact clinical imaging method useful in assessing: pain, musculo-skeletal complaints, peripheral neurological problems, some vascular (phlebitis, angiogenesis) disorders, pre and post operative assessment and treatment efficacy assessment.

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Three Statements:

1. A living human body produces heat.
2. In a healthy person, comparable body parts should be similar temperatures (between left and right sides).
3. There must be a reason if a significant lack of thermal symmetry exists.

Thermal Imaging Basics

A Thermal Imaging Scanner (or camera) measures infrared energy (heat) radiated from a body, accurately converting it to thousands of equivalent temperature readings. White, red and yellow are warmer and black, blue and green are cooler.

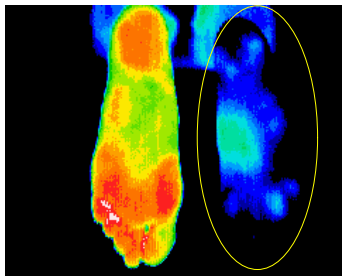
A computer displays these temperature measurements as a colour image. A Thermologist then examines the images and writes a report based on the thermal signatures (patterns) seen in the images, often recommending a 'next step' for style of treatment.

Cold Patterns (hypothermia)

(Hypo -deficient, thermo -heat)

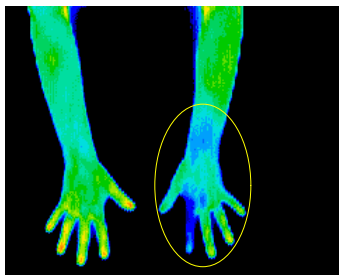
Cold patterns typically represent a decrease in blood supply. Nerve irritation or dysfunction and restricted circulation can produce thermographic cold patterns.

Cold asymmetries (lack of symmetry) mostly result from (sympathetic) nerve irritation. Nerve irritation can trigger muscles around the blood vessels to contract, even virtually stopping the supply of blood to an effected area.



Left - this person had pain in the right leg. The nerves being 'pinched' in the lower back slowed the circulation supplying the foot. In this way, we can effectively "see" this person's pain.

Right - this person's left hand would stop working and cramp after a few minutes of typing, becoming useless and painful due to an upper back & neck problem..



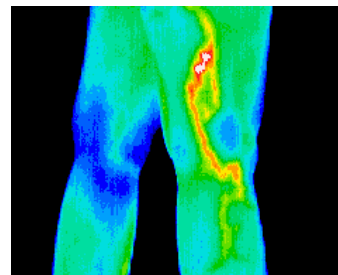
Both of these people had full recovery after their therapist followed the information in the thermal report.

Hot Patterns (hyperthermia)

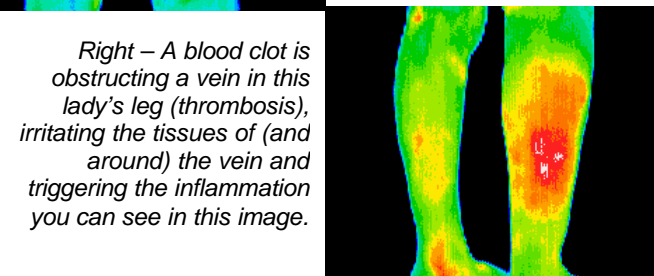
(Hyper -excessive, thermo -heat)

Heat patterns typically represent an increase in blood supply and local tissue temperature, which is the definition of inflammation.

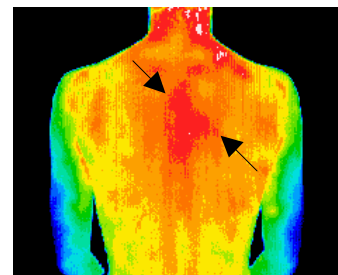
Wounds, blood pooling, complete nerve malfunction or abnormal blood vessel formations/alterations typically produce thermographic heat patterns.



Left - This lady had pain and numbness in her thigh for years, with no test showing her why. The inflamed vein you can see clearly in this image was not at all visible to the naked eye.

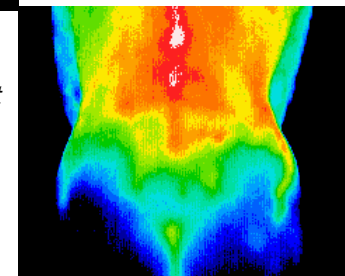


Right - A blood clot is obstructing a vein in this lady's leg (thrombosis), irritating the tissues of (and around) the vein and triggering the inflammation you can see in this image.



Left- This thermal image shows a hot pattern following the line of a rib. It represents a rotation in the middle of the chest triggering pain and discomfort.

Right-This lady couldn't walk more than a few steps, and stairs were right out of the question. These patterns indicate a major misalignment in her pelvis which was triggering most of her problems.



When a therapist can see why & where a person is experiencing pain, and how the associated tissues are reacting to the problem, they stand a greater chance of being able to help the person resolve their pain.

Thermal Imaging and X-rays

Thermal imaging looks at function while X-rays etc. look at structure. To draw a simple analogy, an X-ray can tell you that a bone is broken, but can not see the resulting inflammation and nerve irritation; a Thermal Image can see inflammation and nerve irritation, but can't see the broken bone causing the problem.



Thermal imaging is not a diagnostic test. It works best when combined with other structural tests, allowing a practitioner to see both the structure around a problem and how the body's tissues are reacting to that problem.

To illustrate... a person might have a number of potential problems evident in their X-ray, but a Thermal Image can highlight which of those problems is actually causing their symptoms, allowing more specific treatment.

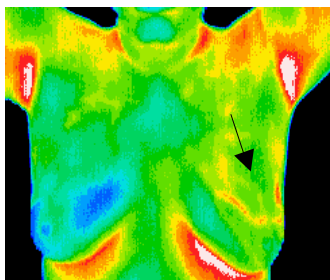
Breast Imaging and Angiogenesis

Thermal Imaging is a useful adjunctive breast imaging method. This is justified by the fact that most abnormal cellular growth in a breast will trigger abnormal and chaotic new blood vessel development (angiogenesis). This increase in blood flow and volume raises the local temperature, which may be detectable by thermography.

Thermal Imaging does not replace mammographic screening, but rather complements it, as each is looking for a different characteristic of potential breast problems.



Left - Conventional imaging techniques (ultrasound, mammogram etc.) examine a breast's anatomy, essentially seeking to find an actual physical mass like the tumour in this image.

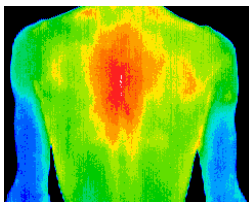


Right - Thermal Imaging looks for a thermal pattern suggesting an abnormal blood supply to an area. In this image the left breast has a small (approx 2mm) tumour (DCIS). If a pattern like this one is found, further medical investigation is warranted and recommended.

Treatment Efficacy Assessment

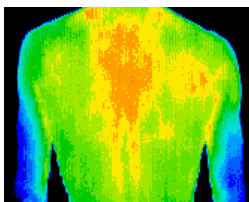
Because thermal imaging looks at the way the body's tissues are functioning, the therapeutic effect of a treatment protocol can often be assessed (with Thermography) earlier than with other structural assessment and imaging methods.

In its role of treatment efficacy assessment, Thermal Imaging can be useful in both establishing pre-treatment baselines and post treatment evaluations for modalities as diverse as Oncology, Musculo-skeletal therapies, Joint and Cosmetic surgery, Vascular (peripheral) surgery and Neurology.



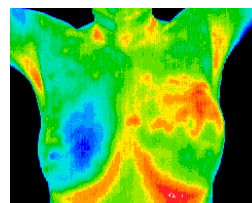
Left - This young man had a fairly obvious problem in the centre of his back which had been there since an impact in the back.

His therapist wanted to assess how well the treatment protocol was working after two treatments.

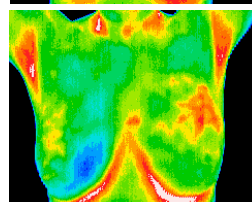


As you can see, the intensity of the inflamed area had reduced markedly. The treatment being applied was determined to be the right course of action as could be seen and felt by both patient and practitioner.

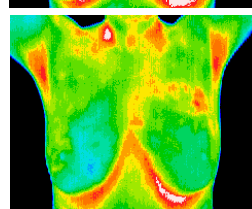
Top - A large malignant tumour in the left breast shows a distinctive thermal signature. The ultrasound image in the left hand panel shows this particular tumour.



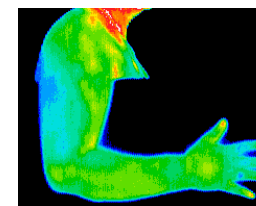
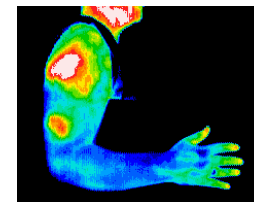
Middle - After one month of chemotherapy the heat pattern from the tumour's circulation has reduced markedly. Her specialist can see the breast's positive response to treatment.



Bottom - After a further six weeks of chemotherapy, the tumour had reduced sufficiently (for surgery the day after this last image was taken). At time of press, she had recovered fully and is doing wonderfully.



Right - Shoulder and arm pain. You can see the heat of inflammation in the shoulder and the cold of strong nerve irritation in the arm. This image shows clearly Thermal Imaging's ability to "see pain".



Left - Following a course of Myotherapy treatments, the shoulder inflammation has resolved, as has the nerve irritation in the arm, corresponding to the complete resolution of all symptoms.

Summary

- Thermal Imaging is a non-contact and non-invasive (painless) imaging method that uses no radiation.
- Thermal Imaging's purpose is to objectively observe and record the body's function, rather than its structure.
- A body in pain will often have a 'tell tale' thermal signature highlighting the nature of the problem, and often, its origin in the body.
- Thermal Imaging is not a diagnostic or stand alone test, but can help by guiding a person towards more appropriate further testing or more specific treatment.
- Thermal Imaging is a developing science which is becoming more valued by the medical and paramedical communities as practitioners become more aware and familiar with its capabilities.

More information is available on our website:

www.thermalimaging.com.au

At Australian Thermal Imaging we pride ourselves on a policy of simple, open honesty, and will give you our best advice as to whether or not Thermal Imaging may be of value to you for your problem.

Please call us to make an appointment, to answer any more questions you might have or to find out how Thermal Imaging could provide you with some answers.

Australian Thermal Imaging

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