

Infrared Screening

with TotalVision[®] anatomy software



by Energetic Health Systems

Unlimited possibilities

with our high-quality infrared screening systems

Energetic Health Systems leads the field in infrared screening and is the only organization that can offer this high-quality infrared equipment with full service.

The possibilities of our high-quality infrared screening system are extensive.

We offer the unique combination of the right camera, patented interpretation and anatomy overlay software specially developed for medical purposes, and an automated camera stand.

Possible applications

Infrared screening not only shows possible abnormalities such as inflammation in the breasts, but also abnormalities in blood vessels, the lymphatic system, muscles, joints and organs. Physiological abnormalities are immediately visible, even if there are no symptoms yet. The software is designed for different applications.

As a result, it is possible to produce a non-linear and focused thermal



view of a variety of body areas. Another important feature of the infrared screening system is that with this method it is possible to work preventively. Our accurate, high-resolution cameras, in combination with anatomy software, represent significant progress for physicians, radiologists and clinicians. Purchasers receive professional training in order to learn how to operate the equipment and to interpret the images correctly. Once they start working with the system expert support and guidance is provided as well.

Our cameras and TotalVision® anatomy overlay software can assist in a more complete assessment supported by highly sensitive infrared images



Optimal Interpretation

using high-quality cameras

There are a variety of medical infrared cameras on the market, ranging in quality and resolution. Our innovative cameras are special in the degree of precision of temperature measurement, the quality of the image (number of pixels) and the choice of materials used. We only supply top-quality systems, which are specifically adapted for the medical market. In addition, our systems meet mandatory medical regulatory requirements for use in the clinical setting with patient safety guaranteed. Our basic range includes three models: medium, high and very high resolution. These are the IS-32, IS-64 and IS-128 HD. The camera with the highest resolution provides the best performance due to the large number of image pixels. This makes an optimal interpretation of the images possible. The IS-64 is a 'smart' camera with up to 307,200 pixels, which continuously calibrates itself. The IS-128 HD camera has 1,310,720 pixels. The infrared images are processed in the cameras themselves. This increases both the accuracy and reliability of the images in our IS-64 (640 x 480) and IS-128 HD (1280 x 1024) models. It is of prime importance that the self-calibration of the cameras is carried out automatically. Also striking is the speed, temperature-sensitivity and accuracy $< 0.05 \text{ }^{\circ}\text{C}$ in the IS-64 camera and $< 0.025 \text{ }^{\circ}\text{C}$ in the IS-128 HD camera, which is unique and increases reliability.

Specific cameras for other applications are available on request.

For more information see our website: www.infraredscreening.com



Training

An important aspect of our Infrared Screening system is the extensive training. We offer the user of our system a 2 day Initial Thermography Training and additional online Pattern Recognition Training. The knowledge that is imparted during our training courses is the result of decades of thermal imaging experience. We invested over 15 years in the development implementation of the TotalVision® Anatomy software.

The Initial Thermography Training is included with the purchase of our system and should preferably be at user's location. Pattern Recognition Training is included in our service contract or can be purchased separately. After following both training courses it is possible to take assessments to test the knowledge and experience gained. For more information see our website.

For novice users, we offer the possibility of having the infrared images evaluated by an expert infrared imaging physician, on a fee basis.

If the user works with an assistant, it is possible for the assistant to take a one day training session, which focuses on the operation of the camera. This allows the user to delegate part of the work and save valuable time.

The less radiation, the better

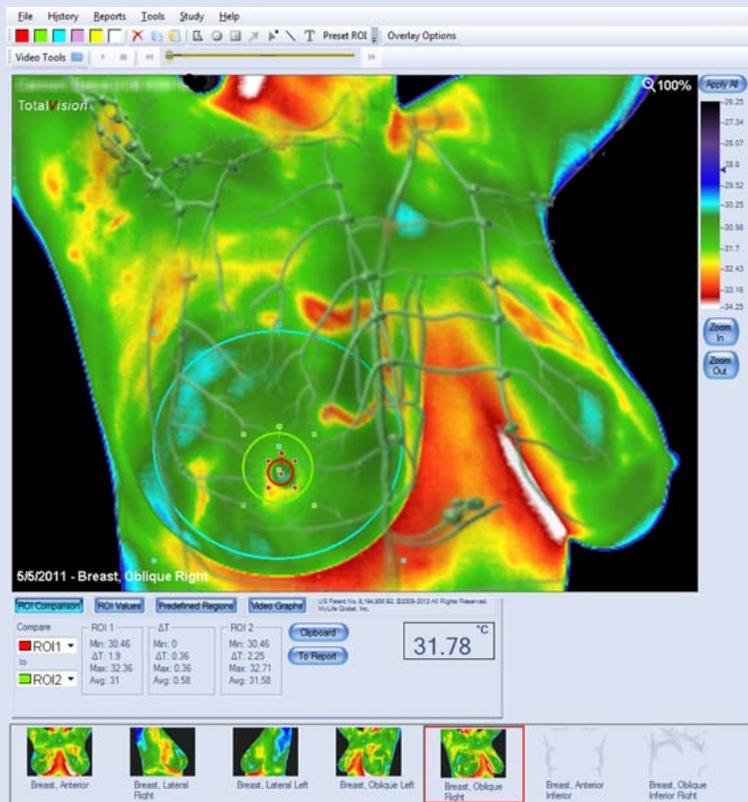
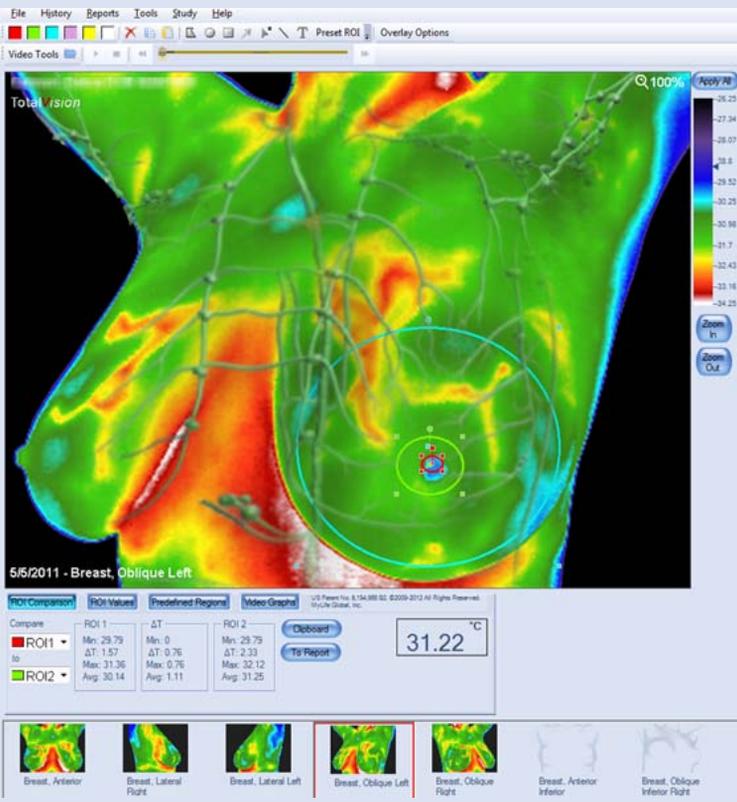
A safe method

Diagnostic techniques, such as CT, PET scans, angiography, and even MRI equipment, all use radiation sources foreign to the body. The general principle is "the less radiation, the better". Infrared Screening shows that the heat patterns of the body can reveal the functionality of physiological systems and it is therefore not an additional burden on the sometimes weakened body. Over 8,000 articles and publications have been written on infrared applications. Most of these deal with applications using low-quality cameras. We use only improved highly accurate, high-resolution or high-definition cameras. Energetic Health Systems is working together with several universities and it is clear that infrared screening will occupy a permanent place in modern medicine.

Warranty and Service

The purchaser receives a full warranty on the software, equipment and camera stand.

Our service contract includes free software updates, unlimited online Pattern Recognition Training, warranty extension, emergency repair and special replacement service, to cover the eventuality of a malfunction arising in our system. A help desk is available.



Breast health screening is the most commonly known form of infrared screening

Background:

defense and law enforcement agencies make extensive use of infrared cameras

In industry, infrared cameras (heat sensing cameras) have been used for decades to detect leaks and/or heat sources. Soldiers and police officers use infrared cameras to seek out objects and/or suspects. The increasing exchange of information on the internet has also given rise to an enormous increase in the popularity of infrared applications. One example is the detection of a temperature increase in travellers as a result of an infection by the H1N1 virus. In Asia almost every airport is equipped with infrared cameras. The camera is used to detect abnormal variations in body temperature. This usually happens when there are epidemics or suspicions of smuggling.

The early use of infrared cameras for medical applications dates back to the late 50's. Today, the quality of the technology is far advanced (in terms of resolution and accuracy), this serves a

better base for a more reliable medical screening method. Energetic Health Systems provides specially developed infrared cameras of very high quality. The benefits of Infrared imaging are well known and appreciated around the world.. Worldwide, more and more hospitals, private clinics and radiologists have added infrared screening to their current screening methods. In Japanese hospitals there are currently more than 1,500 cameras in use and infrared screening has become a standard method in the detection of various diseases. In the USA more than 500 clinics and hospitals use infrared screening. Now, with the combination of technical quality and specific user-friendly features with the specially designed TotalVision® anatomy software, it is possible to reveal a highly sensitive, immediate picture of the patient's physiological changes.



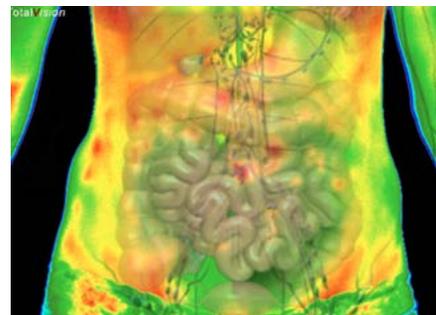
With this highly sensitive method, abnormalities may be visible and precede conventional methods

Function

An infrared camera measures specific local temperatures of the skin. Due to changes in blood flow, under regulation of the autonomic nervous system, every organ and tissue has subtle influences on the skin. Physiological changes in the body that cause a thermal response of the skin can be recorded using an infrared camera. Those changes can be made visible in a non-linear display. The difference as compared to conventional linear diagnostics, such as X-ray, CT scan and MRI, is that by means of the non-linear registration of the skin temperature, physiological changes may be observed and interpreted. Inflammatory processes are, for example, relatively easy to detect. Abnormal skin temperature patterns may be an indication of the existence of internal disorders.

Energetic Health Systems provides a complete system consisting of TotalVision® anatomy overlay software, the highest quality cameras

mounted on an automated stand, and extensive training. In contrast to X-ray equipment and invasive diagnostics, such as a PET scan, the infrared screening system allows pathophysiological abnormalities to be displayed, in a non-invasive way, in the form of temperature changes. This makes it very suitable for use with children.



Automatic camera stand and privacy

We offer you a completely unique and proprietary automated stand, which allows the camera to be remotely controlled and managed. The patient and the thermographer can both be in the same room, but are separated by a partition screen. The camera stand is operated from the

computer and on the monitor the thermographer will only see infrared images. This increases patient privacy. It may be useful to install an additional monitor so that the patient can watch and participate in establishing the correct position for the infrared imaging.

TotalVision® anatomy overlay software

We have succeeded in developing a very unique, sophisticated anatomy software to aid physicians in assessment and diagnosis. The TotalVision software with various image overlays is unique as it allows the location of the temperature patterns on the skin to be linked to various systems of the body, including selected organs, lymphatic, vascular and muscular-skeletal systems etc. The TotalVision® positional overlay software is designed to assist the technician to provide reliable and consistent quality; essential both for imaging and assessment by experts. Follow-up can be carried out by any well trained thermographer in a similar manner. The software makes it possible to choose from different color schemes when interpreting the infrared images: the rainbow scale, the greyscale and the reversed greyscale. These allow for optimum display of every detail. The High Definition (IS-128)

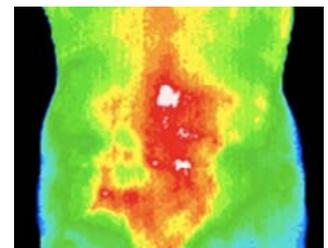
Infrared images are extremely sharp and the images quickly reveal where deviations are located. In addition, the images are made in high resolution format and with the IS-128 system it is possible to record 100 images per second (60 in the IS-64). The TotalVision reporting and interpretation features, along with accurate temperature measurements significantly aids the doctor in image interpretation. This allows the physician to better understand the various thermal patterns and is therefore an excellent diagnostic aid in daily medical practice. These features make our system unique, proving that Energetic Health Systems provides the highest possible quality; the camera, training, clinical integration and Image assessment.

If you have questions or are interested in a demonstration please feel free to contact us.

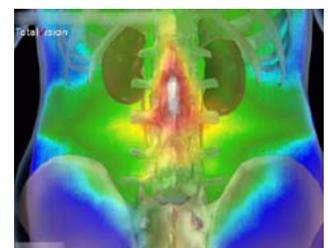
With this method abnormalities are often visible years earlier than they would be with conventional methods

Infrared screening is a useful complement to existing screening methods. Infrared screening cannot replace X-ray imaging or mammography because this technique is a new, different way of screening, providing other types of data. Infrared screening is completely safe and can be used before more invasive testing becomes necessary. An additional advantage is that small abnormalities, which can indicate pathophysiological changes, are revealed at an early stage. Sometimes this can be years earlier than when a condition becomes visible using current conventional equipment.

Infrared screening is not intended as a screening method for tumors or as a substitute for other imaging technologies such as CT scan, mammography, ultrasound or MRI. It is a complementary technique that is not taxing and gives the examining physician additional insights.



Low resolution without TotalVision®



Average resolution with TotalVision®



by Energetic Health Systems

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