Thermography Report

Patient's Name	[redacted]	**Report Date**	10/21/2011
Patient ID	[redacted]	**Study Date**	10/18/2011
Date of Birth	08/18/1958	**Thermographer**	Tiffany Barsotti
Referring Practitioner	S/R	**Reporting Physician**	Joseph Madia, MD

PHYSICIANS INSIGHT
WOMEN'S HEALTH SCREENING WITH ABDOMEN

REPORTED HISTORY:
Patient is a 53 year old female presenting for Women's Health Screening plus abdominal imaging.

Head and Neck: Significant for a partial face lift in April 2011, which may explain the temperature difference in her cheeks. She does not have complete feeling back on the left side yet. Pt. often feels like sand is in her eyes, she has "dry eyes" and uses drops frequently for lubrication.

Abdomen/Menstrual: Pt.'s main complaint is severe PMS, way more intense than when she first began her cycle. A lot of mood swings, anger. Symptoms used to be short and now they last for 2-3 weeks. At the Pt.'s waistline, Right lateral side, there appears to be an golf ball size (epidural?) cyst. The dermatologist is letting her decide to remove it or not. Before the current, it was May that she last had her cycle and prior to that it was very regular. History is significant for endometriosis diagnosed about 6 years ago and fibroid cysts around 8 years ago. Pt. did not do anything special to treat. They went away on their own, but she is curious if there is anything thermal imaging can tell her about these past issues.

Breasts: Patient reports pain, tenderness and a size change in both breasts. Family history is significant for breast cancer in her maternal grandmother.

INTERPRETATION:

HEAD AND NECK:
There is perioral hyperthermia, R>L, which is consistent with dental/periodontal pathology. Additionally, this finding correlates with the bilateral submandibular-cervical lymphatic drainage patterns. Osteo-myelytic-necrosis possibly related to previous root canal surgeries is a consideration.

The thermal patterns over the ethmoid sinuses, left slightly greater than right, suggest an inflammatory process. There is hyperthermia across the frontalis muscles, R>L, which may be consistent with headaches, although this was not listed as a concern

There is a significant asymmetrical pattern of focal hyperthermia at the temporomandibular joints, L>R, with corresponding hyperthermia in the temporalis muscle. These patterns are considered suspicious for TMJ and can correspond with headaches and neck pain, although these were not reported as concerns.
There are irregular areas of hyperthermia over the posterior-lateral neck regions, L>R, which appear myofascial.

THYROID:
The thermal pattern over the anatomical area of the thyroid is normal and does not suggest gland dysfunction. Clinical correlation should be done only if patient symptoms are indicative of thyroid disease (heat or cold intolerance, weight gain, digestive problems, skin changes).

CAROTID ARTERIES:
There are areas of hyperthermia noted at the base of the carotid arteries. These patterns raise the question of early formation of inflammation in the carotid arteries and may justify further clinical evaluation. Inflammation in the carotid artery is an early stage indication of developing vascular disease. Recommend guided proactive lifestyle recommendations and follow-up in three months for a comparison study.

BREAST:
There are slight thermal asymmetries seen in the breasts. The thermal patterns in both breasts, L>R, are consistent with the diagnosis of fibrocystic changes. Additionally, there is a significant vascular pattern in the left breast, best observed in the left oblique view, which may indicate early formation of neovascularity. This region should be closely monitored for change, particularly with a positive family history for breast cancer. Recommend follow-up in three months for comparative study.

Right Breast:
The right breast is smaller than the left, although this can be a normal variant. Suggest confirming with patient that size difference is consistent and not a new occurrence. There are vascular signs of fibrocystic change around the

perimeter of all four quadrants, as well as a small spot of diffuse change directly superior to the nipple, and an apparent small vascular pattern surrounding the superior edge of the nipple (right oblique view). These patterns do not appear suspicious but should be monitored for change.

Left Breast:
The left breast is larger than the right, although this can be a normal variant. Suggest confirming with patient that size difference is consistent and not a new occurrence. Similar to the right breast, there is fibrocystic change in the upper quadrants of the left breast. There appears to be several curvilinear vascular patterns that branch out from the upper-inner quadrant at 11 o'clock, best seen on left oblique view, extending inferiorly on both lateral and medial sides of the nipple, as well as medially and supero-laterally to the breast. These patterns are not suspicious but should be monitored for change, as well as confirmed if these patterns are visible surface vessels on the patient's body.

CHEST:
There are no thermal findings suggestive of cardiovascular disease. Note: Lack of thermal findings does not rule out evolving cardiac pathology. An abnormal lipid profile and/or a strong family history may warrant additional studies.

ABDOMEN:
There is a pattern of hyperthermia in the upper-outer aspect of the right abdomen, over the cutaneous referral area of the liver. However, there are no reported digestive problems and this may not be clinically significantly. Thermography is not diagnostic; however these patterns justify further clinical correlation.
There is also small, mottled patterns of hyperthermia in the upper-outer aspect of the left abdomen, over the cutaneous referral area of the stomach and pancreas. However, there are no reported digestive problems and this may not be clinically significantly. The areas of hypothermia just above the panty-line near the hips correspond with the cutaneous referral areas of the uterus which corresponds with the patient's history of endometriosis and fibroid cysts.

BACK:
There is an isolated focal area in the upper right back that may be a surface blemish but does not appear thermographically suspicious. The area depicting the location of the cyst in the lower back shows no difference in temperature compared with the opposite side of the back. This suggests lack of a current inflammatory process in the area of the cyst.

RECOMMENDED FOLLOW-UP:
1. Suggest clinical correlation of thermal findings with patient's history and symptoms and standard follow-up breast imaging in three months before continuing with annual comparative studies.
2. In addition to thermal imaging, continue with routine follow-up breast examinations with her physician as indicated or at least annually.
3. Recommend ongoing consultation with her physician or qualified health professional regarding dietary, nutritional and lifestyle practices that support breast health.

DESCRIPTION OF THE CLINICAL THERMAL IMAGING STUDY

The patient above was examined by digital infrared thermal imaging using a high-resolution thermographic camera specific for clinical applications. Standardized thermography protocols were observed which are designed to optimize clinical correlation of thermal patterns.

Medical Thermography is a system using a highly technical and non-contact infrared camera to capture and record temperature variations on the skin, the largest organ of the body. As such, the surface of the skin provides vital information that is directly influenced by complex metabolic and vascular activity, including micro-circulation, below the surface via the sympathetic nervous system.
These patterns of activity vary in intensity and distribution over each body region, represented by images with variation in colors. Detection of variations in skin temperature allows for recognition of asymmetric, abnormal or suspicious thermal patterns over a specific area or region of interest. Changes of these patterns may be recognized by the interpreter as abnormal physiology or function.

Thermal Analysis
This report is based on study guidelines that are based on, but not limited to, side-to-side temperature intensity measurement and comparison, established thermological signs including pattern recognition and comparison of changes over time. This method of analysis allows objective clinical correlation by the patient's physician and contributes to the decision-making process regarding therapy, additional testing and eventual diagnosis.

Breast Thermography
Thermography is defined by the Food and Drug Administration (FDA Code of Federal Regulations Sec. 884.2980). Thermography is an adjunctive test and does not replace mammography or any other anatomical imaging test. A negative thermogram, mammogram and/or ultrasound does not preclude biopsy based on clinical condition. The value of thermography as a screening tool is the non-invasive nature of the test and the unique ability to accurately measure skin temperature changes. Such monitoring affords detection of even subtle thermal changes that, although not independently diagnostic, may precede anatomical findings by years and prompt early investigation and prevention. As there is no single known test capable of monitoring all complex anatomical and biological influences of disease; monitoring with additional testing such as ultrasound, MRI, mammography or other testing as recommended by the patient's personal physician is always advised.

Study Outcome
This study provides adjunctive clinical information and recommendations based solely upon the images and patient information provided, to support the patient's physician in medical or health evaluation. All findings in this report are considered by the interpreter to be related to the general health of the reported region. A "Thermographically Suspicious" finding in this report does not indicate that it is suspicious for any specific disease. However, any suspicious finding will be accompanied with a strong and intentional recommendation for further clinical evaluation. This report should be presented to the imaged patient's personal physician to determine the nature of the appropriate follow-up course of action /evaluation. Additional follow-up thermal exams for comparison are strongly recommended. Physicians Insight and the reporting interpreter are not responsible for the failure of the imaged patient or the patient's physician, to follow recommendations set forth in the report.

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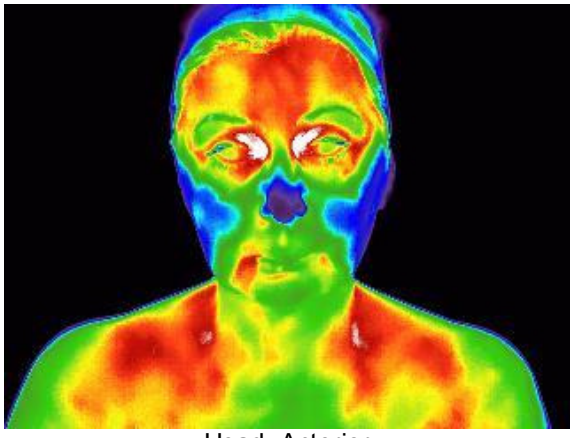
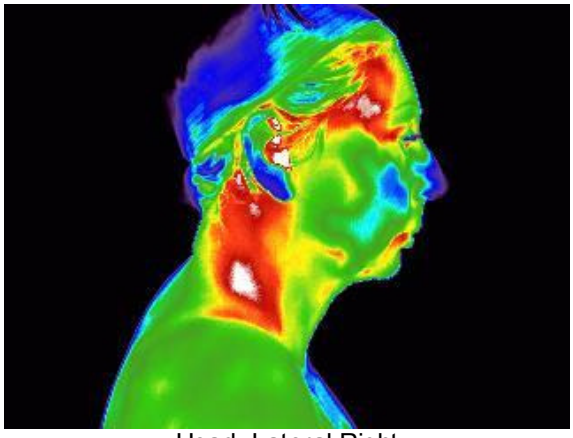
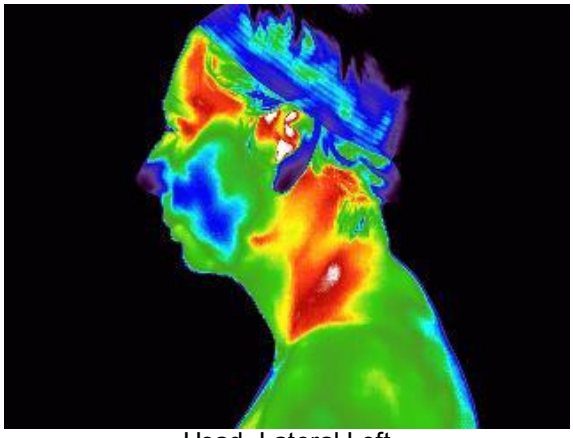
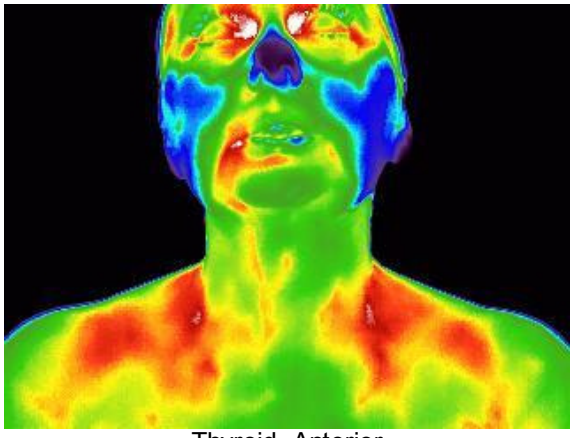
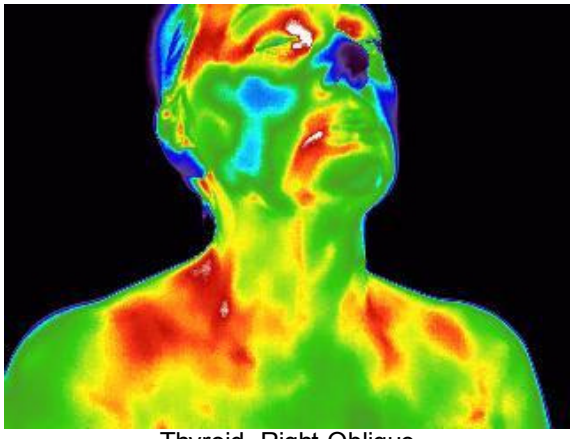
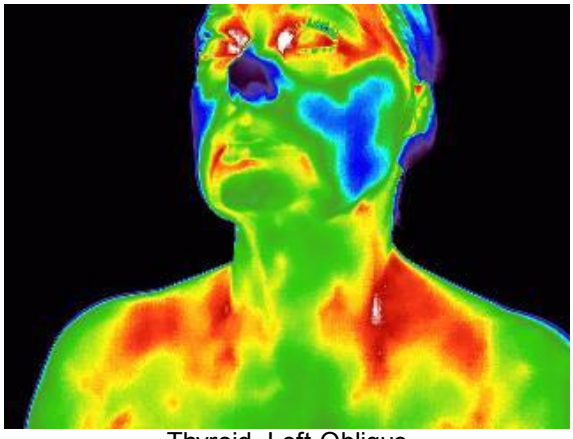

Head, Anterior


Head, Lateral Right


Head, Lateral Left


Thyroid, Anterior


Thyroid, Right Oblique


Thyroid, Left Oblique

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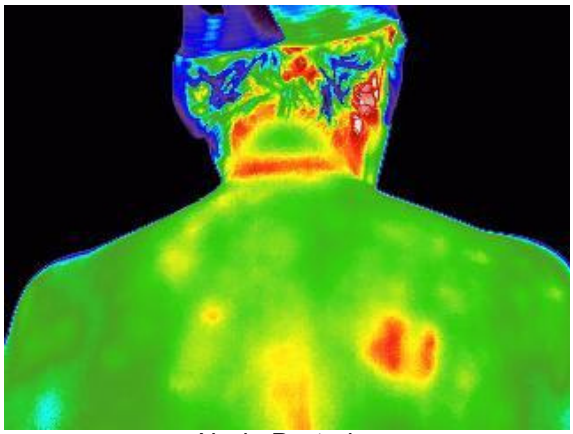
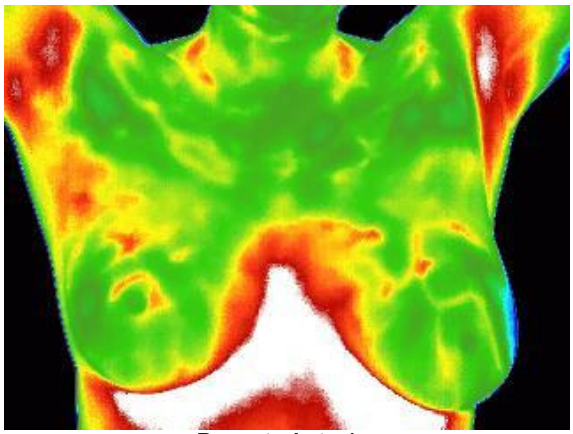
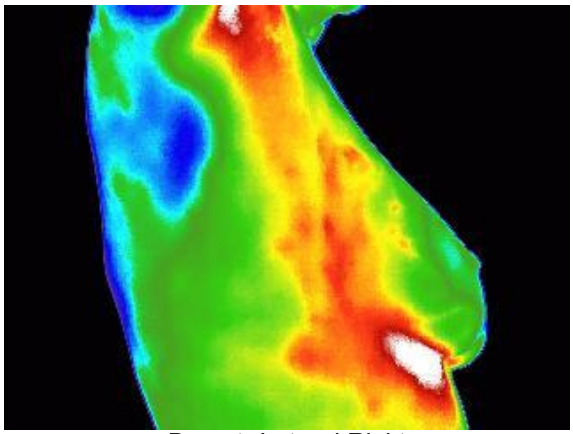
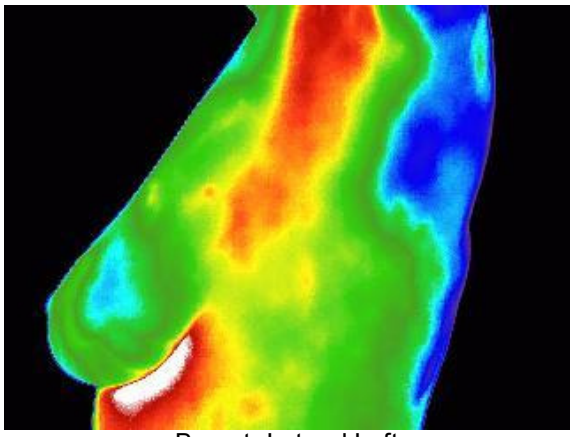
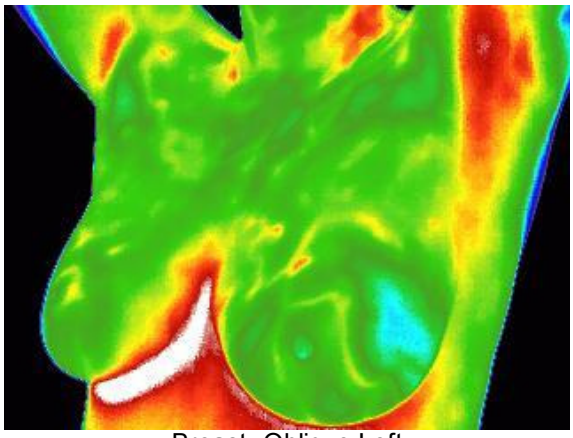
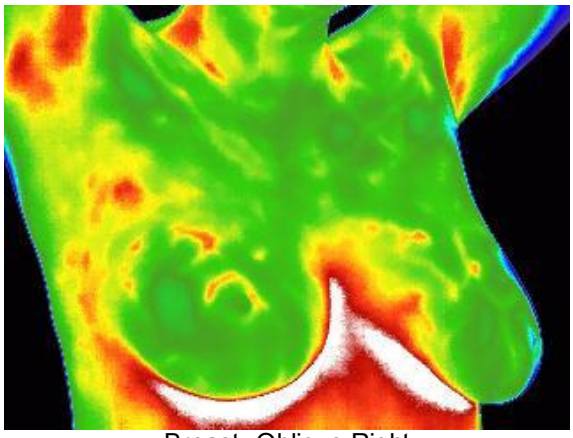

Neck, Posterior


Breast, Anterior


Breast, Lateral Right


Breast, Lateral Left


Breast, Oblique Left


Breast, Oblique Right

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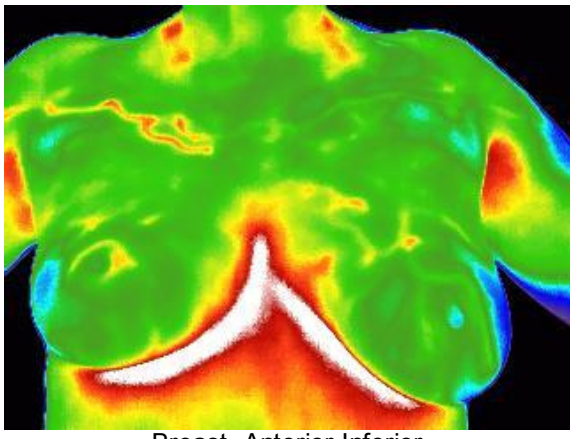
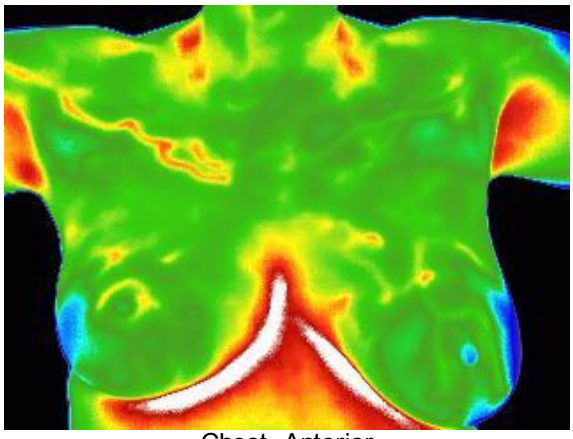
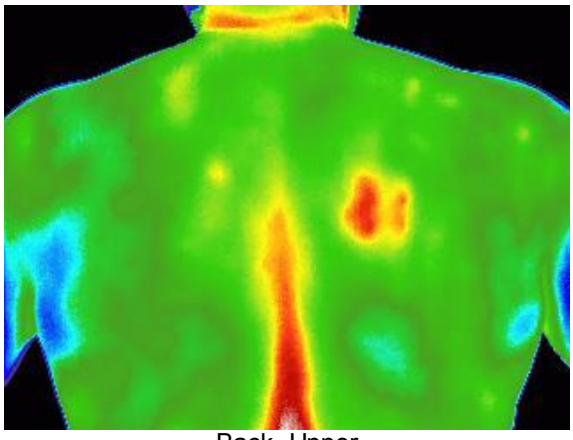
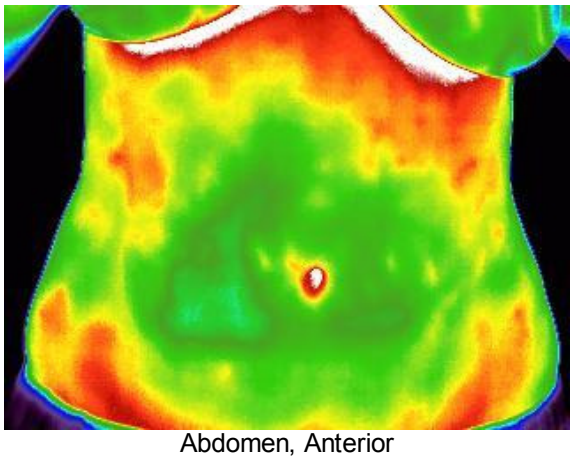
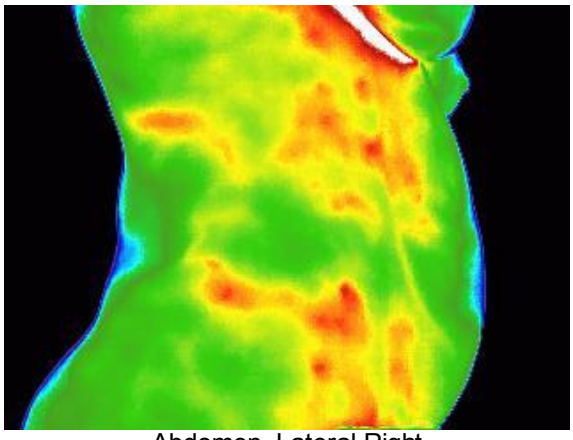
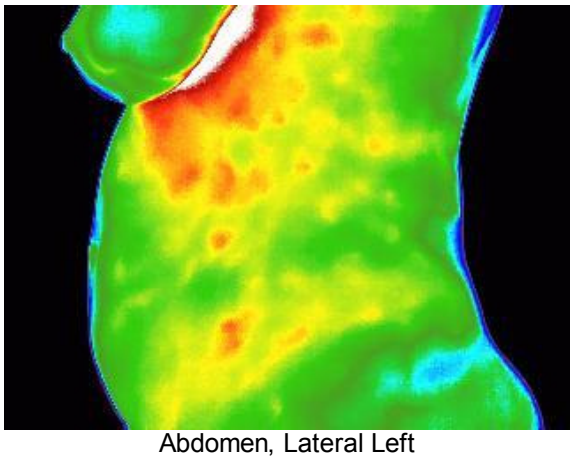

Breast, Anterior Inferior


Chest, Anterior


Back, Upper


Abdomen, Anterior


Abdomen, Lateral Right


Abdomen, Lateral Left

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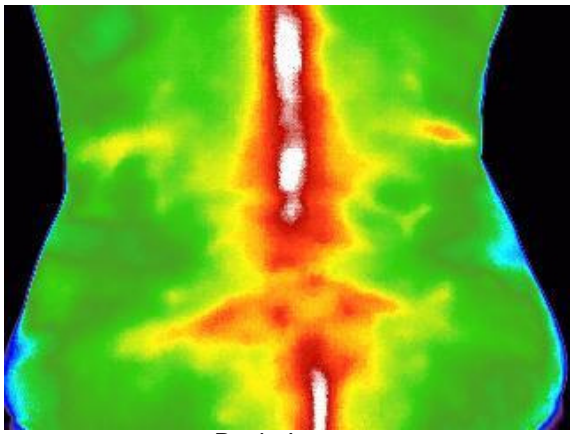
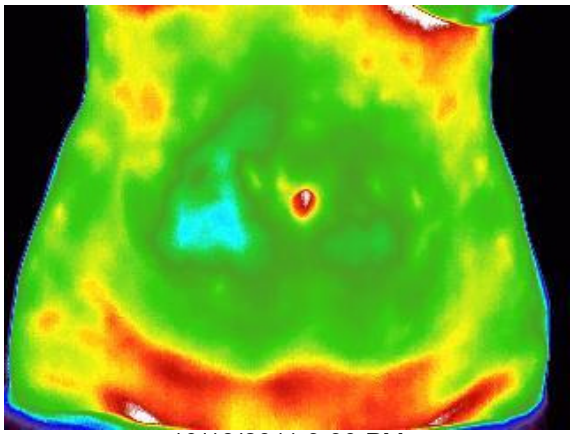

Back, Lower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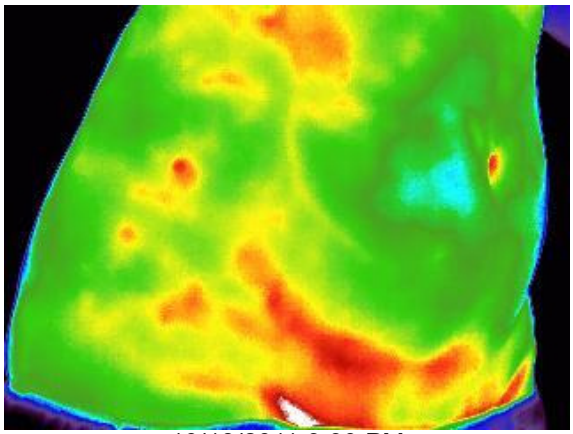
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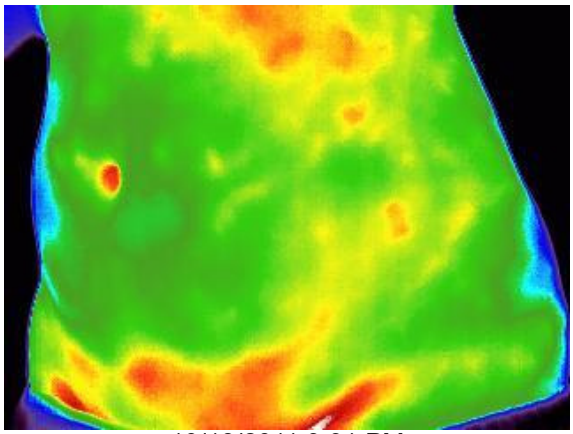
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