

Electronic Medical Interpretation

|   |                  |                       |                    |
|---|------------------|-----------------------|--------------------|
| <b>Patient name:</b>                            |                  | <b>Scan date:</b>     |                    |
| <b>Date of birth:</b>                           |                  | <b>Report ref:</b>    | 485142             |
| <b>Patient ID:</b>                              |                  | <b>Report type:</b>   | Full Body + Breast |
| <b>Referring practitioner:</b>                  | self             | <b>Thermographer:</b> | sanne lodahl CCT   |
| <b>Reported &amp; electronically signed by:</b> | Matt Sullivan MD |                       |                    |

**All normal protocols were observed**

#### **HISTORY AND SUBJECTIVE COMPLAINTS**

Age/Gender:53/female Occupation:  
Primary Care Physician: Referring  
Physician:

Clinical Concerns:

Current Symptoms: Since 5/2017 pain behind the left shoulder blade through shoulder and arm with sleeping fingers

Current Treatment:

Current Medication:

Thermogram Hx:

Previous Report #'s:

Results of clinical correlation:

Surgical Hx: 1970 inguinal hernia right side - 1993 implants-2014 breast ceiling Dental

Hx:

General Hx: 1995 broken left leg laterally just below the knee

1998 broken right foot

Family Hx:

Diagnoses:

Skin Lesions or Physical Abnormalities:

(Female Patient Only)

Ob/Gyn Hx: Since 2011 hormone spiral

Mammogram/Ultrasound Hx: Mammography due to routine Notes:

#### **THERMOGRAPHIC INTERPRETATION:**

##### **HEAD AND NECK:**

Frontal thermal activity as appreciated on the oblique and lateral images appears to be muscular. The lateral neck regions are warm as well; the posterior neck musculature are moderately warm more so towards the left.

Mid forehead and orbital thermal activity appears to be sinus related.

Hyperthermia at the ear canals is consistent with an inflammatory process.

Specific intensity towards the right side of the mouth is suggestive of a dental focus.

Distinct markings adjacent to the lower jaw as seen on the lateral images appear to be lymph related.

Hypothermia at the posterior neck base is suggestive of degenerative change involving the lower cervical (and/ or upper thoracic) vertebral levels.

There are no thermal findings to indicate clinically significant TMJ, thyroid gland or carotid artery dysfunction.

#### BREAST:

Some asymmetry is seen in the breasts. The left breast appears to be larger when compared to the right and as such a degree of failure or migration involving the right breast implant cannot be excluded. The breasts are noted to be warm overall. Thermal markings are situated superiorly on both sides. A distinct marking is present at the lower inner right breast and markings are present laterally on both sides as seen on the lateral images. Findings overall do not appear suspicious at this time but should be monitored for any future change.

This study is suitable to be archived and compared with a repeat study in three months to establish a baseline, prior to annual testing.

There are no asymmetries present at the anterior or posterior torso that indicate an increased risk for cardiac dysfunction.

Baseline cardiac risk is elevated based on the tobacco history.

#### BACK:

Hypothermia at the posterior neck base is as noted above.

The adjacent upper back regions are noted to be warm consistent with increased muscular tension. Specific intensity is noted towards the upper trapezius on the right; left sided findings may have relevance to clinical symptoms involving the scapular region on this side.

Hypothermic areas are noted at the lower thoracic levels bilaterally and appear consistent with some degree of pulmonary dysfunction or irritation. Further assessment is recommended in the presence of suggestive symptoms.

The lumbar spine is moderately warm suggestive of a degree of degenerative change.

#### ABDOMEN:

Specific intensity is evident towards the upper right as seen best on the lateral image and may correspond to the gallbladder. Further assessment is recommended in the presence of associated symptoms.

Increase specifically at the central upper abdomen may correspond to the stomach or the lower esophagus.

Thermal activity is noted at the mid pelvis, particularly to the left of the midline. Uterine and adnexal dysfunction are considerations and gynecologic assessment is recommended.

#### UPPER EXTREMITIES:

Specific intensity at the posterolateral aspect of the right upper arm may correspond to an inflammatory dermatologic or subcutaneous lesion. Clinical examination is recommended.

Distinct markings at both posterior elbows and involving the thumb bases appear to be joint related.

There is no finding throughout the left upper extremity to correlate with the patient's clinical symptoms involving the finger numbness. Please note that radicular dysfunction cannot be excluded particularly in light of thermal findings at the posterior neck base.

#### LOWER EXTREMITIES:

Distinct intensity at the lateral hip left side may be joint related.

Thermal markings evident at the forelegs appear consistent with underlying superficial varicosities. There is no finding at present to correlate with the relevant orthopedic history.

#### DISCUSSION:

The thermal findings in both breasts should be considered low risk for significant developing pathology pending the establishment of a stable baseline.

As above, implant integrity on the right is at issue. MRI may provide a more definitive assessment.

Further assessment (clinical examination and CXR) may be indicated with regards to the lungs. Smoking cessation is strongly encouraged.

Right upper quadrant abdominal sonography may be indicated for further assessment of the thermal findings.

Gynecologic assessment is encouraged as above.

Radicular dysfunction is a consideration with regards to clinical symptoms involving the left upper extremity. Cervical spine MRI and/ or nerve conduction testing should be considered for more definitive assessment.

#### FOLLOW UP:

Suggest clinical correlation of thermal findings with patient history and symptoms.

Suggest standard follow up breast imaging in three months before continuing with annual comparative studies.

#### BREAST CANCER SCREENING GUIDELINE:

A monthly breast self examen, an annual physical examination of the breasts by a doctor and periodic evaluation by other objective tests are recommended for a comprehensive breast cancer screening and to assess the structural component of breast tissues.

Breast thermography should not replace mammography or ultrasound when indicated, but can be a valuable adjunct in evaluation of breast health.

#### Clinical Impression with Breast Thermology Classification Grading System

**Left Breast:**

At Low Risk

**Right Breast:**

At Low Risk

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#### BREAST THERMOLOGY CLASSIFICATION KEY:

##### **Within normal Limits (Normal)**

This indicates a normal thermal profile with no thermal findings consistent with risk for disease or other developing pathology. Normal thermal contours, statistical analysis and differentials are recorded.

Annual comparative follow-up is recommended after a stable baseline has been established.

##### **At Low Risk (Non Suspicious)**

This indicates low grade thermal activity which is not suspicious for serious pathology.

Thermal findings may be associated with benign changes such as glandular hyperplasia, fibrocystic tissue and the development of cysts and fibroadenomas.

Annual comparative follow-up is recommended after a stable baseline has been established but more frequent followup may be clinically indicated.

This does not rule out existing non-active or encapsulated tumors.

##### **At Some risk (Equivocal)**

These findings indicate thermal activity likely to represent benign changes such as inflammation, acute cysts or fibroadenoma, infection, or even normal personal variant.

Clinical correlation is indicated with any associated history or symptoms. Other objective means of evaluating the breasts may be justified.

##### **At Increased Risk (Abnormal)**

This represents a significant risk for existing or developing malignant breast disease.

Benign pathology or personal variant cannot be ruled out but is less likely.

Clinical correlation is justified and objective evaluation and additional testing is indicated. A follow-up thermal study in 3 months should be part of a comprehensive testing panel.

##### **At high Risk (Suspicious)**

This represents a high risk of confirming malignant breast disease.

Benign processes or personal variant are very unlikely.

Urgent clinical correlation is indicated with a comprehensive panel of testing and evaluation with all possible alacrity. A follow-up thermal study in 3 months should be a part of this evaluation.

## **Previously Confirmed Malignancy**

This records and acknowledges a current diagnosis of malignant pathology in the patients history.

## **Advisory**

Thermography will not show any cancers from a structural or pathological perspective.

It will show positive physiological findings in 83% of malignancy (specificity), leaving 17% of cancers that present as thermographically silent due to the type of pathology, long term cancer which the body has accommodated or encapsulation and age of patient.

The utility for including thermography as an adjunctive screening test in previously confirmed malignancy is for the establishment of a baseline and detection of any physiological change over time, correlation with other tests and the monitoring of response to treatment.

Breast thermography screening is an adjunctive test to mammography, ultrasound and MRI and is a specialized physiological test designed to detect angiogenesis, hyperthermia from nitric oxide, estrogen dominance, lymph abnormality and inflammatory processes including inflammatory breast disease, all of which cannot be detected with structural tests.

Follow-up and interval screening of less than 12 months should be determined by patients healthcare professional as considered appropriate.

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## **Procedure:**

This patient was examined with digital infrared thermal imaging to identify thermal findings which may suggest abnormal physiology.

Thermography is a physiologic test, which demonstrates thermal patterns in skin temperature that may be normal or which may indicate disease or other abnormality.

If abnormal heat patterns are identified relating to a specific region of interest or function, clinical correlation and further investigation may be necessary to assist your health care provider in diagnosis and treatment.

Thermal imaging is an adjunctive test, which contributes to the process of differential diagnosis, and is not independently diagnostic of pathology.

Breast thermography is a way of monitoring breast health over time.

Every woman has a unique thermal pattern that should not change over time, like a fingerprint.

The purpose of the two initial breast studies (usually obtained three months apart) is to establish the baseline pattern for each patient to which all future thermograms are compared to monitor stability. With continued breast health, the thermograms remain identical to the initial study.

Changes may be identified on follow up studies that could represent physiological differences within the breast that warrant further investigation.

The ability to interpret the first breast study is limited since there are no previous images for comparison.

This exam is an adjunctive diagnostic procedure and all interpretive findings must be clinically correlated.

DITI is not a substitute for mammography.

## **Protocols:**

The thermographer certifies that this exam was conducted under standard and clinically acceptable protocols.

## **Patient History:**

The interpretation represents objective descriptions of thermal patterns.

Clinical significance of such patterns is interpreted in relation to and limited by the patient data and history provided.

## **Reporting:**

Results are reported by certified thermologists.

Results are determined by studying the varying patterns and temperature differentials as recorded in the thermal images.

### Normal Findings:

Normal findings are diffuse thermal patterns with good symmetry between similar regions on both sides of the body. Comparative imaging may identify specific asymmetries that have remained stable and unchanged over time and therefore regarded as normal.

### Abnormal Findings:

Abnormal findings may be localized areas of hyperthermia or hypothermia, or thermal asymmetry between similar regions on both sides of the body with temperature differentials of more than 1° C.

There may be vascular patterns that suggest pathology.

Comparative imaging may identify specific changes or new asymmetries that warrant further investigation.

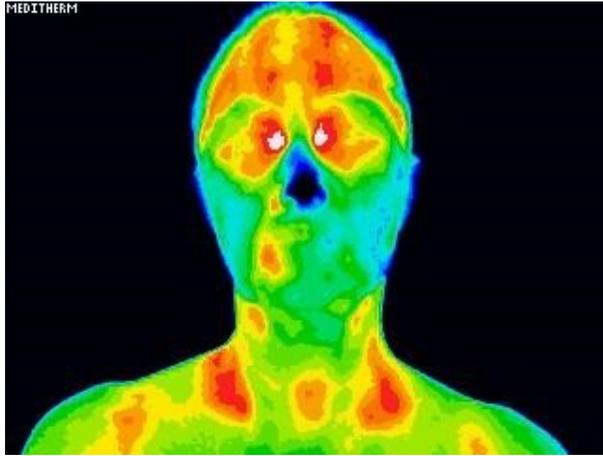
**The referring health care provider should contact EMI administration with any questions relating to this interpretive report.**

**This Report is intended for use by trained health providers to assist in evaluation, diagnosis, and treatment. It is not intended for use by individuals for self-evaluation or self-diagnosis.**

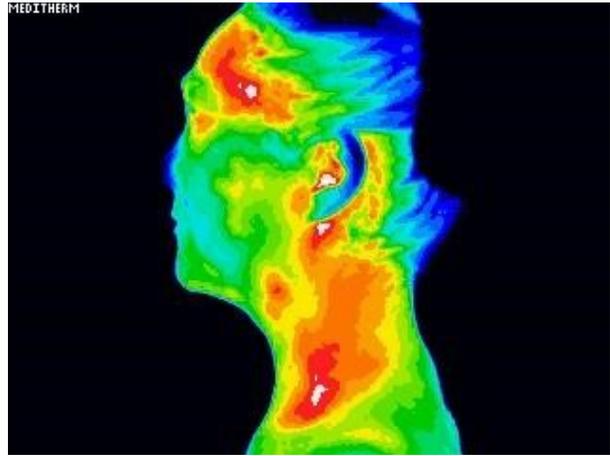
**This Report does not provide a diagnosis of illness, disease or other condition.**

**Clinical Thermology is a screening procedure subject to both false negative and false positive results.**

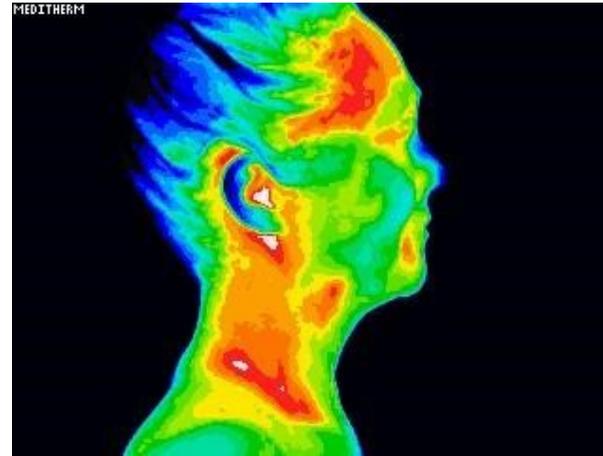
**It is most reliable when a stable baseline is obtained followed by regular repetitive screening for changes. Results must be interpreted in the context of historic and current clinical information.**



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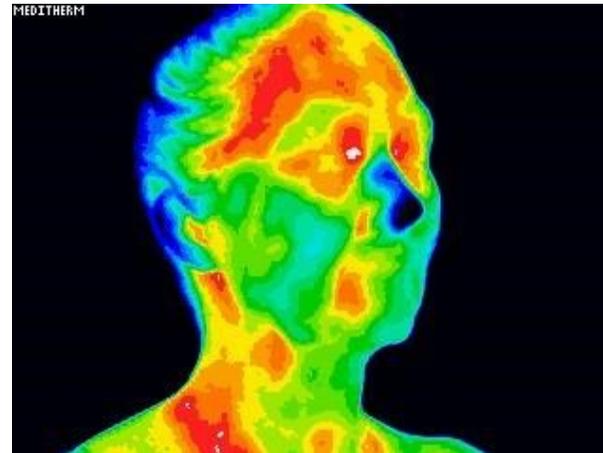
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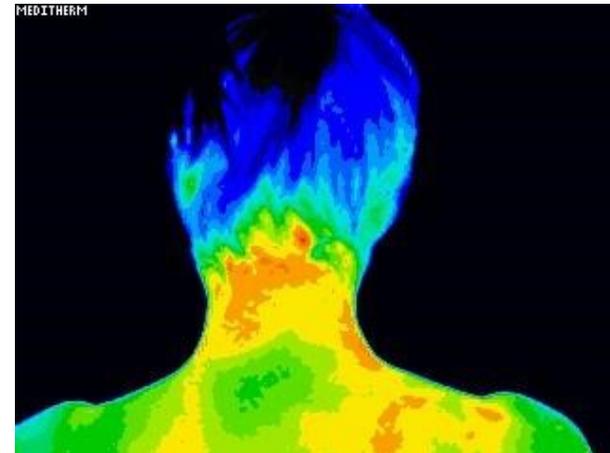
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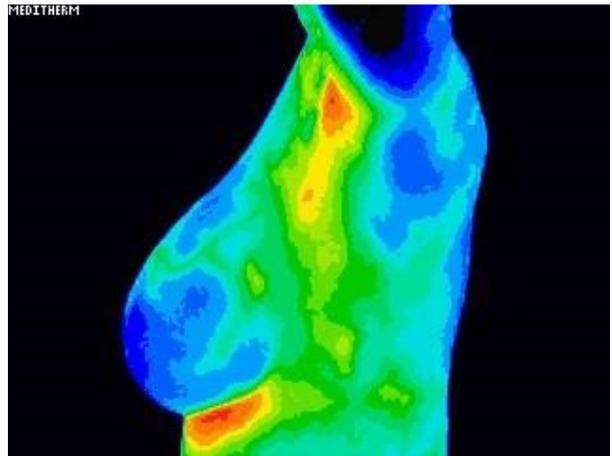
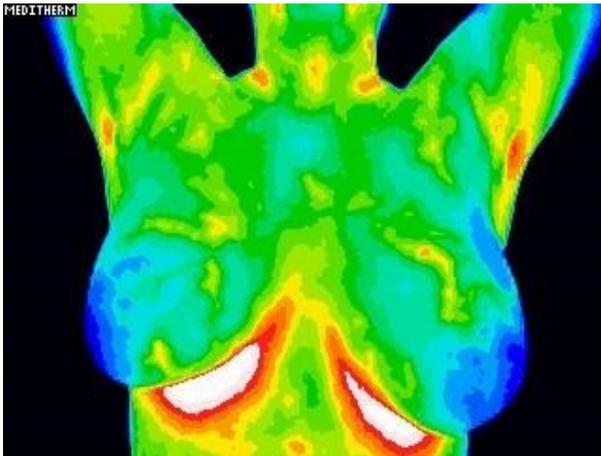


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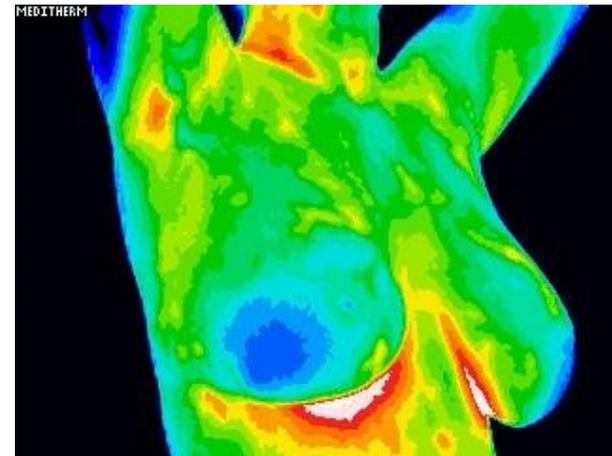
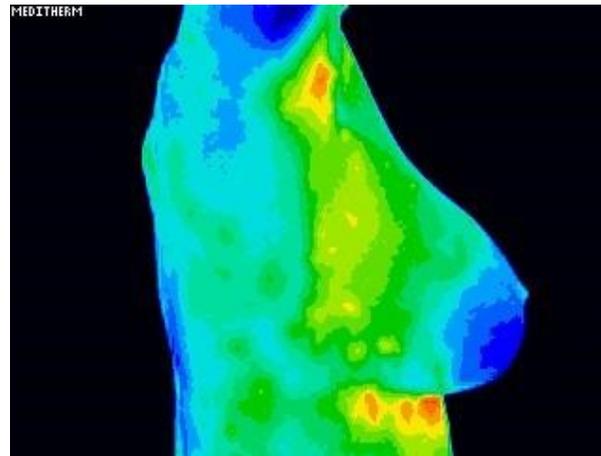


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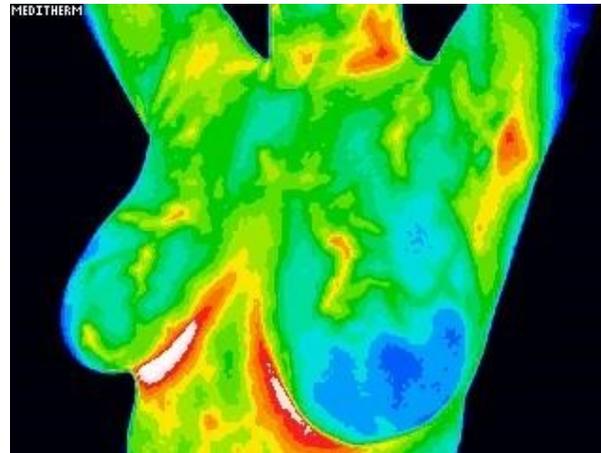
Thermogram standard color scale @ 8° temperature range



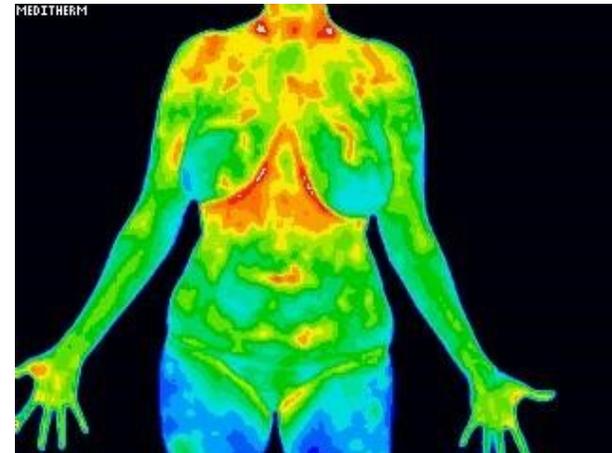
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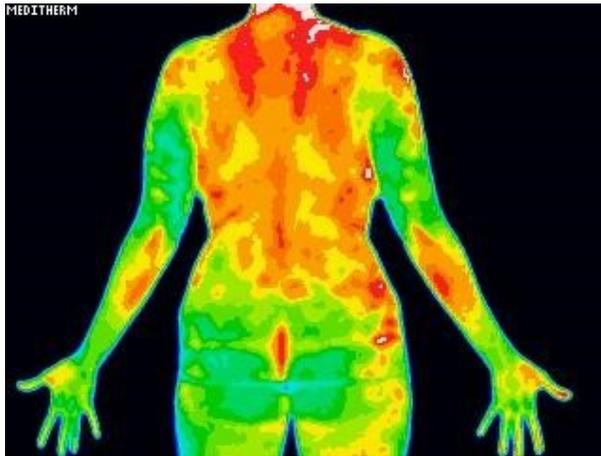


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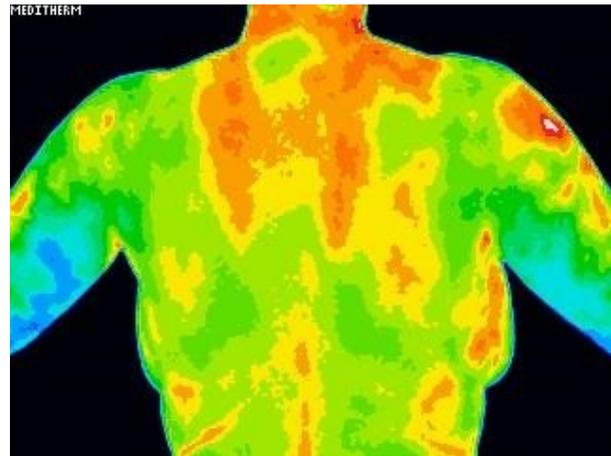


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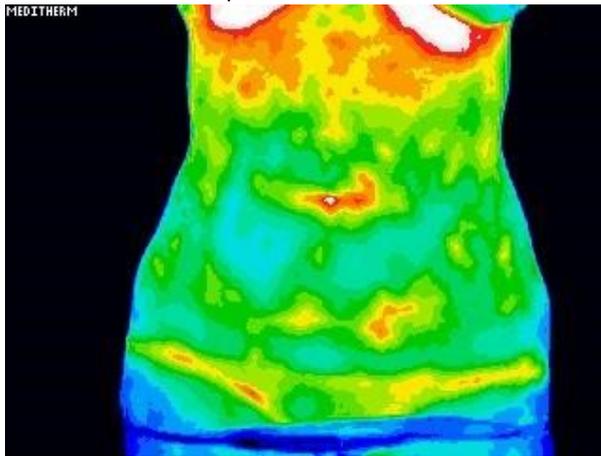




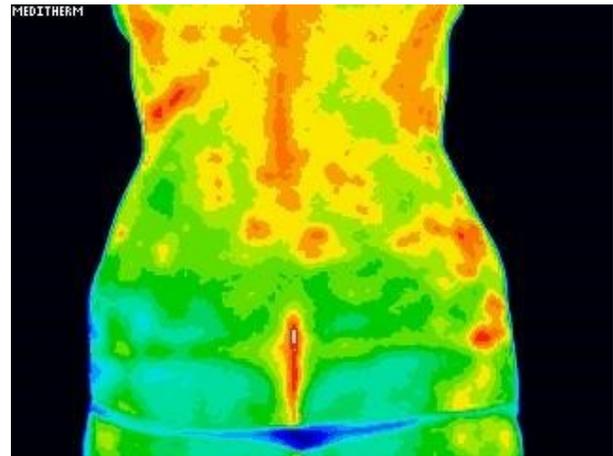
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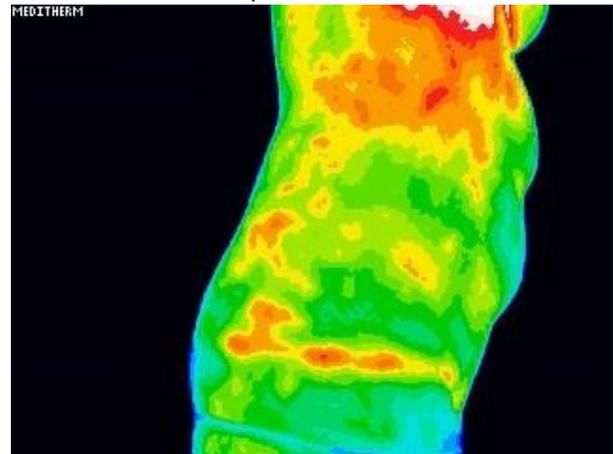
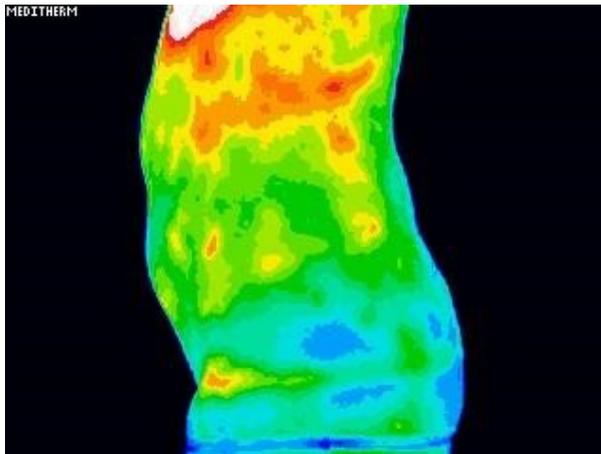
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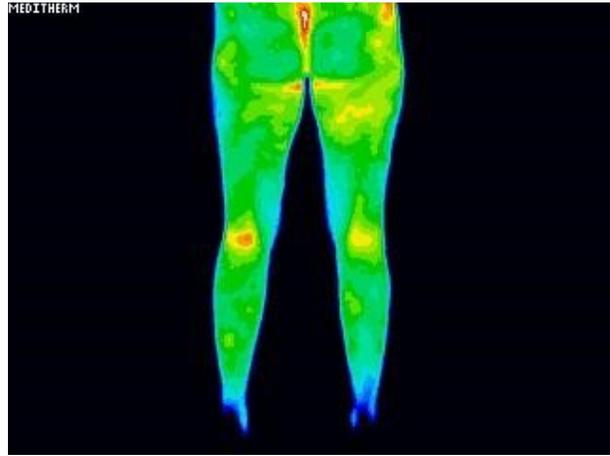
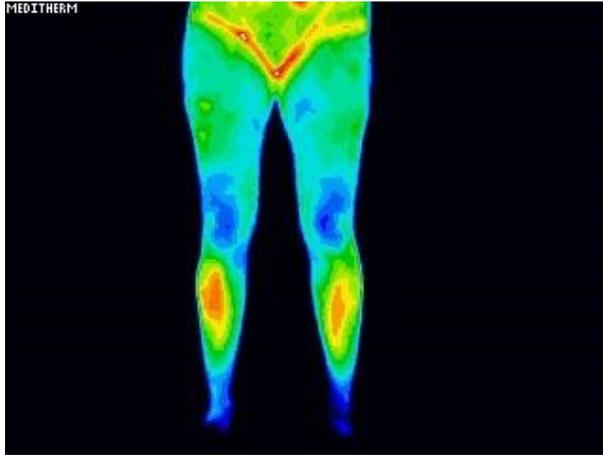
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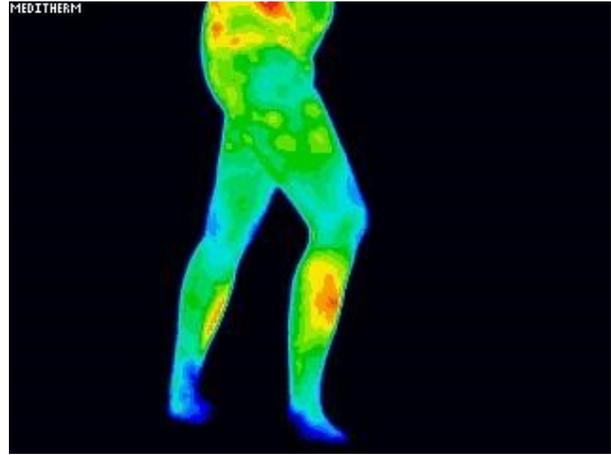
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Thermogram standard color scale @ 8° temperature range  
+ [color scale] -



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