

## Corporate Medical Policy

### Thermography

<b>File Name:</b>	thermography
<b>Origination:</b>	7/1982
<b>Last CAP Review:</b>	6/2011
<b>Next CAP Review:</b>	6/2012
<b>Last Review:</b>	6/2011

### Description of Procedure or Service

---

Thermography is a non-invasive imaging technique that is intended to measure temperature distribution of various organs and tissues. The visual display of this temperature information is known as a thermogram. Thermography has been proposed as a diagnostic tool for a variety of conditions, e.g., complex regional pain syndrome, for treatment planning and to evaluate the effects of treatment.

Thermography involves use of an infrared scanning device. Infrared radiation from the skin or organ tissue reveals temperature variations by producing brightly colored patterns on a liquid crystal display. Interpretation of the color patterns is thought to assist in the diagnosis of many disorders such as complex regional pain syndrome (previously known as reflex sympathetic dystrophy), breast cancer, Raynaud's phenomenon, digital artery vasospasm in hand-arm vibration syndrome, peripheral nerve damage following trauma, impaired spermatogenesis in infertile men, degree of burns, deep vein thrombosis, gastric cancer, tear-film layer stability in dry-eye syndrome, Frey's syndrome, headaches, low-back pain, and vertebral subluxation. Thermography is also thought to assist in treatment planning and procedure guidance such as identifying restricted areas of perfusion in coronary artery bypass grafting, identifying unstable atherosclerotic plaque, assessing response to methylprednisone in rheumatoid arthritis, and locating high undescended testicles.

The American Chiropractic Association suggests that high-resolution infrared imaging is of value in the diagnostic evaluation of patients when the clinical history suggests the presence of one of the following situations:

To obtain early diagnosis and monitor reflex sympathetic dystrophy syndromes.

- To evaluate spinal nerve root fiber irritation and distal peripheral nerve fiber pathology for detection of sensory/autonomic dysfunction.
- To evaluate and monitor soft tissue injuries, including segmental dysfunction/subluxation, sprain, and myofascial conditions (sprains and myofascial pain syndromes) not responding to clinical treatment.
- To evaluate the physiological significance of equivocal or minor anatomical findings seen on myelogram, computed tomography (CT), and/or magnetic resonance imaging (MRI).
- To evaluate for feigned disorders.

Thermography can include various types of telethermographic infrared detector images and heat-sensitive cholesteric liquid crystal systems.

#### Regulatory Status

In 2002, the Dorex Spectrum 9000 MD Thermography System (DOREX, Inc.; Orange, CA) was cleared for marketing by the U. S. Food and Drug Administration (FDA) through the 510(k) process. The FDA determined that this device was substantially equivalent to existing devices for use in quantifying and visualizing skin temperature changes. Its indicated use is as an aid in diagnosis and follow-up therapy in areas such as orthopedics, pain management, neurology and diabetic foot care. This type of device is also known as a telethermographic system.

# Thermography

In 2003, several telethermographic cameras (Series A, E, P and S) by Flir Systems (McCordsville, IN) was cleared for marketing by the FDA through the 510(k) process. Their intended use is as an adjunct to other clinical diagnostic procedures when there is a need for quantifying differences in skin surface temperature.

Between 2006 and 2009, three new or updated thermography devices received 510(k) marketing clearance from the FDA based on demonstrating substantial equivalence to existing products.

***\*\*\*Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.***

## Policy

---

**Thermography is considered investigational. BCBSNC does not provide coverage for investigational services or procedures.**

## Benefits Application

---

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

## When Thermography is covered

---

Not applicable.

## When Thermography is not covered

---

The use of all forms of thermography is considered investigational.

## Policy Guidelines

---

No published studies have demonstrated how the results of thermography can be used to enhance patient management and/or improve patient health outcomes. The studies identified in a literature search through March 2011 tended to be small feasibility-type studies.

Thermography has also been considered in the diagnosis of breast cancer. The American College of Obstetrics and gynecology does not recommend thermography for breast cancer screening.

There is insufficient evidence to support the use of thermography for diagnosis. Studies are lacking that thermography can accurately diagnosis any condition or improve the accuracy of another diagnostic tool. Moreover, there are no published studies evaluating whether use of thermography in patient management, such as to select a treatment or determine treatment effectiveness, improves health outcomes. Thus, thermography is considered investigational.

## Billing/Coding/Physician Documentation Information

---

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at [www.bcbsnc.com](http://www.bcbsnc.com). They are listed in the Category Search on the Medical Policy search page.

# Thermography

*Applicable service codes: No specific code. These services may be reported with code 93799.*

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

## Scientific Background and Reference Sources

---

BCBSA Medical Policy Reference Manual - 3/96

Medical Policy Advisory Group - 1/99

Specialty Matched Consultant Advisory Panel - 9/2000

Medical Policy Advisory Group - 10/2000

Specialty Matched Consultant Advisory Panel - 8/2002

BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.12, 12/18/02

Specialty Matched Consultant Advisory Panel - 7/2004

Centers for Medicare and Medicaid Services. National Coverage Determination manual section number 220.11. Retrieved 3/2/06 from [http://www.cms.hhs.gov/mcd/viewncd.asp?ncd\\_id=220.11](http://www.cms.hhs.gov/mcd/viewncd.asp?ncd_id=220.11)

BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.12, 6/27/05

ECRI Hotline Response (2005, April) Thermography for detection of breast masses. Retrieved 1/26/06 from [http://www.ta.ecri.org/Hotline/Prod/summary/detail.aspx?e=6&doc\\_id=7135&q=thermography&am](http://www.ta.ecri.org/Hotline/Prod/summary/detail.aspx?e=6&doc_id=7135&q=thermography&am)

ECRI Hotline Response (2005, July) Thermography for diagnosing cardiovascular diseases. Retrieved 1/26/06 from [http://www.ta.ecri.org/Hotline/Prod/summary/detail.aspx?e=6&doc\\_id=8848&q=thermography&am](http://www.ta.ecri.org/Hotline/Prod/summary/detail.aspx?e=6&doc_id=8848&q=thermography&am)

BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.12, 7/20/06

BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.12, 2/14/08

BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.12, 5/13/2010

American College of Obstetricians and Gynecologists (ACOG). Breast cancer screening. Washington DC): American College of Obstetricians and Gynecologists (ACOG); 2003. 12 p. (ACOG practice bulletin; no. 42). The currency of the guideline was reaffirmed in 2006.

BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.12, 5/12/2011

## Policy Implementation/Update Information

---

7/82	Original Policy: Experimental/Investigative
12/83	Reaffirmed: Experimental/Investigative
7/87	Evaluated: Investigational for spinal nerve root dysfunction, peripheral nerve injuries, reflex sympathetic dystrophy, psychogenic pain, carpal tunnel syndrome, triggerpoints, temporomandibular joint disease, stress fractures, external wound infections, and amputation complications.
7/96	Reaffirmed: National Association reviewed 3/96. No changes. Reaffirmed: Medical Policy Advisory Group
1/99	Medical Policy Advisory Group.

# Thermography

- 8/99 Reformatted, Medical Term Definition added.
- 10/00 Specialty Matched Consultant Advisory Panel review. No change recommended in criteria. System coding changes. Medical Policy Advisory Group review. No change in criteria. Approve.
- 2/02 Coding format change.
- 9/02 Specialty Matched Consultant Advisory Panel review 8/2002. No changes in criteria. Format changes.
- 8/26/04 Specialty Matched Consultant Advisory Panel review 7/23/2004 with no changes made to policy criteria. References added. Benefit Application and Billing/Coding sections updated for consistent policy language. Code descriptions removed.
- 6/5/06 Description of procedure expanded for clarification. Rationale added to Policy Guidelines. Policy number added to Key Words. Updated references. Specialty Matched Consultant Advisory Panel review 5/3/2006 with no changes to policy coverage criteria.
- 6/16/08 Specialty Matched Consultant Advisory Panel review 5/15/08. No change to policy statement. (adn)
- 3/30/09 CPT codes 93760, 93762 deleted.
- 6/22/10 Policy Number(s) removed (amw)
- 9/28/10 Description section revised. Investigational statement reworded but intent is unchanged. Specialty Matched Consultant Advisory Panel review 8/25/10. Draft accepted as written. (adn)
- 7/19/11 Updated Rationale and References. No change in Policy Statement. CPT code 93740 deleted from Billing/Coding section. Specialty Matched Consultant Advisory Panel review 6/29/11. Policy accepted as written. (adn)

---

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.