

*Evolent	
Clinical guideline: HYPERTHERMIA	Original Date: November 2013
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GENERAL INFORMATION

- *It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.*
- *Where a specific clinical indication is not directly addressed in this guideline, medical necessity determination will be made based on widely accepted standard of care criteria. These criteria are supported by evidence-based or peer-reviewed sources such as medical literature, societal guidelines and state/national recommendations.*

INDICATIONS FOR HYPERTHERMIA WITH RADIATION THERAPY

- Superficially recurrent melanoma¹
- Chest wall recurrence of breast cancer²⁻¹²
- Recurrent cervical lymph nodes from head and neck cancer

FREQUENCY OF PROCEDURE

- A maximum of ten (10) hyperthermia treatments may be delivered two times per week at 72-hour intervals

CONTRAINDICATIONS FOR HYPERTHERMIA

- The use of intraluminal, endocavitary, interstitial, regional deep tissue hyperthermia exceeding 4 cm. in depth and whole-body hyperthermia are considered *investigational*.
- There cannot be any evidence of depth of tumor recurrence greater than 4 cm.
- There can be no evidence of metastatic disease for which systemic chemotherapy or hormonal therapy is planned or being given.

NOTE: Hyperthermia is not approvable when used alone or in conjunction with chemotherapy.

BACKGROUND

Hyperthermia in combination with radiation therapy has FDA approval¹³ for the “palliative management of certain solid surface and subsurface malignant tumors (i.e. melanoma, squamous or basal cell tumors, adenocarcinoma, or sarcoma) that are progressive or recurrent despite conventional radiation therapy.”¹⁴ The National Cancer Center Network recommends the use of hyperthermia be limited to treatment centers with appropriate training, expertise, and equipment.

OVERVIEW

(Adapted from the National Cancer Institute¹⁵)

Hyperthermia is a treatment for cancer in which body tissue is exposed to high temperatures. Research has shown that hyperthermia can damage and kill cancer cells in some circumstances when it is used with radiation therapy.

Local Hyperthermia - Heat is applied to a small area only. Local hyperthermia is typically administered every 72 hours (i.e., twice a week) for a total of 10 to 12 treatments using applicators that are placed close to, or in, the tumor. Local hyperthermia can be administered using various techniques: external, intraluminal or endocavitary, and interstitial.

- **External Hyperthermia**^{16,17} - This technique is used for cancers that are on, or just below, the skin. The tumor is heated externally using applicators that are placed on, or near to, the affected area. Heat is then applied using high-frequency energy waves generated from a device outside the body (such as a microwave or ultrasound).
- **Intraluminal or Endocavitary Hyperthermia** - This technique may be used to treat cancers that are within or near to body cavities. A sterile probe that can be heated is placed inside the cavity where the tumor is. This heats the affected area.
- **Interstitial Hyperthermia** - This is used to treat tumors that are deep within the body. Under anesthetic, probes or wires are placed within the tumor tissue and then heated. This method allows tumors to be heated to a higher temperature than external techniques.

Regional Hyperthermia - Various approaches may be used to heat large areas of tissue, such as a body cavity, organ, or limb. This includes **all** of the following:

- **Deep Tissue**¹⁸ - This may be used to treat cancers within the body, such as cervical or bladder cancer. External applicators are positioned around the body cavity or organ to be treated, and microwave or radiofrequency energy is focused on the area to raise its temperature.
- **Regional perfusion** - In this procedure, some of the patient's blood is removed, heated, and then perfused back into the limb or organ.
- **Continuous hyperthermic peritoneal perfusion (CHPP)** - This is a technique used to treat cancers within the peritoneal cavity. During surgery, heated chemotherapy drugs flow from a warming device through the peritoneal cavity. The peritoneal cavity temperature reaches 106–108°F.

Whole-body hyperthermia - used to treat metastatic cancer. This can be accomplished by several techniques that raise the body temperature to 107–108°F, including the use of thermal chambers or hot water blankets.

Additional Terminology:

Hyperthermia is also called thermal therapy or thermotherapy.

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POLICY HISTORY

Date	Summary
May 2023	Deleted additional resources
January 2022	No significant changes

Reviewed / Approved by Clinical Guideline Committee

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