



Locoregional Hyperthermia in Cancer Care: Patient Resource

What is locoregional hyperthermia (LRHT)?

Hyperthermia as a medical treatment refers to heating the body, or part of the body, to higher than typical temperatures, usually 39-44°C. Locoregional hyperthermia (LRHT) is a particular type of hyperthermia that only heats a part of the body (where a tumor is located) to high temperatures, ideally 41-43°C.

What is LRHT used for?

LRHT is used by some people with cancer with the goal of improving the effects of other cancer treatments like chemotherapy and radiotherapy. It is also sometimes used as palliative treatment.

LRHT is not to be used as a cure for cancer. LRHT should not be considered an alternative for chemotherapy or any other cancer treatments.

Does LRHT work?

Well over 100 studies have looked at the effect of LRHT on people with cancer. Many of these studies looked at whether it is safe and feasible, but others have looked at how effective it is. Hyperthermia appears to be most effective when used with other treatments (usually chemotherapy or radiotherapy). There is limited research on its use as a sole therapy. In general, there is evidence that LRHT can improve treatment outcomes (i.e. provide better tumor shrinking, better survival, or lower recurrence rates) in patients with: breast cancer that has returned to the breast/ chest wall, cervical

cancer, esophageal cancer, gastric (stomach) cancer, head and neck cancer, and soft-tissue sarcoma. There is some promising evidence for other types of cancer including bladder cancer, melanoma, rectal cancer, and pancreatic cancer, but more research is needed before making conclusions. It should be noted that hyperthermia has been studied and used without safety concerns for patients with brain tumors, colon and anal cancers, liver and biliary cancer, Hodgkin's lymphoma, lung cancer, ovarian cancer, prostate cancer, and vulvar and vaginal cancer. It is important to discuss with your healthcare provider whether LRHT is likely to provide benefit for you or not, as effects will vary based not only on the type of cancer, but also the cancer stage, past treatments, current treatments, and planned treatments.

How does it work?

LRHT can do many things in the body, some of which are quite complex. Hyperthermia may: - Cause blood vessels to dilate, which may improve delivery of medications to the tumor. - Enhance the effect of radiation therapy and many types of chemotherapy (this is often called radiosensitizing and chemosensitizing). - Impact immune function, and in some cases may help the immune system to identify and kill cancer cells.

Is it safe?

LRHT is generally safe and well tolerated when administered with an approved device by a qualified healthcare provider or technician. There are times when LRHT may not be safe, including patients with: implanted medical devices, inability to feel or respond to pain, severe lung or heart disease, fever, organ



transplant, recent surgery, poor circulation in the area, or previous radiation to the area. You should discuss the safety of the treatment with your healthcare provider.

What are the side effects?

Side effects are generally mild and include:

- Discomfort during treatment
- Mild pain
- Redness to the area
- Skin burns
- Subcutaneous fibrosis
- Deep burns (to the layer under the skin) have rarely been experienced

Can it interact with other treatments and medications?

LRHT can be used alongside chemotherapy and radiation therapy. LRHT has not been well studied with immunotherapy or targeted therapies, and thus no comment can be made regarding these combinations at this time. There are no known interactions with other commonly used cancer treatments such as hormone blocking therapies, although research is limited. There are no known interactions with other commonly used medications except for medications that alter your level of consciousness, ability to feel pain, or ability to communicate. You should always discuss your medications with your health care team before starting any new treatment.

What is the recommended frequency and length of use of LRHT?

Treatments are generally administered 1-2 times/week for the duration of conventional treatment (i.e. chemotherapy or radiation therapy). However, treatment may be continued longer-term, and may be administered more frequently depending on the individual circumstance and discussion with a healthcare provider. Treatments usually last approximately 1 hour.

Where can I get more information?

For more detailed information including references you can read the companion healthcare professional version on the [CCNM research website](#). You can also consult with a health care provider such as a naturopathic doctor, medical doctor, or nurse practitioner who is experienced in the use of hyperthermia.

Disclaimer

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