



# MARYLAND PROTON TREATMENT CENTER

AFFILIATED WITH UNIVERSITY OF MARYLAND  
MARLENE AND STEWART GREENEBAUM  
COMPREHENSIVE CANCER CENTER



## Hyperthermia

The Maryland Proton Treatment Center (MPTC) is the only center in the world to offer hyperthermia and proton therapy at the same facility. Since the fall of 2018, MPTC has offered deep-tissue external hyperthermia as a potential way to boost survival chances for patients.

### How it Works

- The hyperthermia system heats the tumor tissue to 104-110 degrees Fahrenheit.
- Doctors continuously monitor temperature with internal and external probes.
- A water-filled applicator is placed over the region to be treated, and non-invasive radio frequency energy is focused at the tumor site.
- The heat dilates the tumor blood vessels, bringing more oxygen into the tumor, which makes cancer cells more vulnerable to radiation therapy.
- The procedure is non-invasive and does not require anesthesia.
- Patients undergo one-hour sessions at therapeutic temperature, 2-3 times a week, for 4-5 weeks.



### The Benefits

Research has shown that hyperthermia can be especially useful in difficult-to-reach cancers in the abdomen and pelvic region. Studies have found that adding hyperthermia to standard treatments can significantly shrink tumors and improve survival for some cancer patients.

Deep-tissue hyperthermia can be combined with standard radiation therapy as well as proton-beam therapy to enhance the radiation cancer-killing effects.

Hyperthermia improves clinical outcomes with an acceptable side-effect profile.

Moderate temperatures (104-110 degrees Fahrenheit) have been shown to stimulate the immune system as well as damage and kill cancer cells, usually with minimal injury to normal tissues.

***“We are very pleased to be able to offer deep-tissue hyperthermia, which can be combined with standard radiation therapy as well as proton-beam therapy to enhance the cancer-killing effects of the radiation.”***

– Dr. Jason Molitoris, MD, PhD  
Assistant Professor of Radiation Oncology, University of Maryland School of Medicine

***For more information on hyperthermia,  
please call 410-369-5200***