

## **HYPERTHERMIA**

The use of hyperthermia as a support to cancer immunotherapy is supported by an increasing number of scientific studies. Scientific results have demonstrated improved antitumor immune responses with the addition of mild hyperthermia.<sup>24</sup> In addition to the benefit hyperthermia provides in tumor fighting through the immune system, it also can sensitize tumor cells to be more likely to die during radiation therapy and chemotherapy.<sup>25</sup>

Dr. Anderson has hyperthermia facilities in both the hospital and outpatient centers he works with and has seen very positive benefits for cancer patients. In an effort to provide the best information about cancer hyperthermia, we have asked our colleague Dr. Gurdev Parmar to describe his experience using hyperthermia in cancer care in North America:

"I have been using the Oncotherm modulated electro-hyperthermia device for providing loco-regional hyperthermia (LRHT) for solid tumours since June of 2010. We have now administered over 15,000 of these treatments at our clinic, treating over 25 solid tumour types, and only five cases of superficial burns, and four cases of subcutaneous fibrosis (relatively minor side effects). I have also gained experience in using the Heckel HT2000 device for providing fever-range whole body hyperthermia (FR-WBHT) treatment, having administered over 1,000 of these treatments at our clinic. The mechanisms of action of hyperthermia include heat-induced cytotoxicity, vasodilation for drug delivery, improved oxygenation for radiosensitization, and induction of heat shock proteins that result in an in-vivo tumor vaccine-like response. In fact, the Oncotherm device holds a U.S. patent with this description:

"The present invention relates to a vaccine composed of at least one immune stimulant and radiofrequency waves using capacitive coupling and to a method, especially an in-situ and in vivo vaccination method for treatment of primary cancer and its metastases even in disseminated cell-states, which cannot be detected by presently available imaging methods or for prevention of relapse of the cancer disease, and especially for enabling and supporting the patient's own immune system to recognize and kill the cancer cells and to build up a memory to prevent relapse of a cancer disease' (US 20150217099 A1).

"We have collected data on every patient treated with hyperthermia in our clinic thus far, first retrospectively in 2015 looking back the first five years, and prospectively since then. I have attached a few of the KM curves from this retrospective study, comparing the outcomes of our clinic's patients who included LRHT and/or FR-WBHT in their treatment, versus the same cohort in the SEER database, who presumably used standard of care alone. All 10 of the most commonly treated cancer types in our clinic over those first five years showed a significant improvement in survival. As I have been treating patients with cancer since the year 2000, 10 years before adding hyperthermia, I have observed an improvement in the outcomes of my patients with hyperthermia, both in terms of quality of life and overall survival. Our retrospective data represents the largest data set on the subject matter I am aware of in North America, and supports my observations. We are constantly working toward starting a well-designed prospective trial to further investigate what seems to be a promising approach.

"Our clinic has an experienced team of naturopathic physicians in our cancer care center, surrounded by an incredible support staff. We have hosted patients from every continent, and regularly host patients from across the lower mainland;

B.C., Canada; and the U.S. We provide full laboratory services, numerous IV and injection therapies, pharmaceutical prescriptions, botanical medicines, acupuncture, nutritional supplements, dietary and lifestyle advice, and all other manners of intervention with evidence and history of safe and effective use in an integrative naturopathic setting. We provide consultation for patients just being worked up for a potential cancer diagnosis by biopsy, through primary therapy, and into secondary prevention, survivorship and palliative care.”

— Gurdev Parmar, ND, FABNO,  
founder and medical director, Integrated Health Clinic,  
Fort Langley, British Columbia, Canada

The extensive experience of Dr. Parmar is in line with what we have seen clinically ourselves. Hyperthermia is an incredible addition to the tools of integrative oncology for optimal cancer care.