

Hyperthermia Therapy of Cancer: A New Approach with an Old Treatment Modality



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Hyperthermia therapy is a special type of medical treatment in which body tissue is exposed to slightly higher temperatures (+ 42°C or more). Hyperthermia artificially elevates the body temperature to achieve therapeutic benefits. This medical treatment dates back to more than 3,000 B.C. and, in the past 75 years, has been applied in different fields of modern medicine.

Modern Hyperthermia clinics in the USA, Japan, Germany, Italy, and other countries apply various methods in the successful clinical treatment of primarily cancer, using a combination of local, regional and whole body hyperthermia procedures and medical equipment devices. The metabolism of cells, tissues, and organs is dependent on temperature. Any deviation from the constant will alter the rate of the metabolic process and will result in a pathological condition.

Malignant cells, as well as the macromolecular complexes of rapidly dividing viruses and bacteria, have a high rate of metabolism and a low thermal tolerance.

The cytotoxicity of hyperthermia is dependent on both temperature and time. However, the activation energy of the cell thermal death rises exponentially at temperatures above 42°C where thermo-labile bio-structures (tumor cells, several types of viruses, certain antibodies, etc)

undergo irreversible damage, without any effect on the healthy cells.

HEATHEAL is internationally registered. It applies a Whole Body Hyperthermia (WBH) proprietary procedure which enables raising the core body temperature above 42°C by means of immersing the anesthetized patient in a special water bath which warms the body through convection. **It is well-known that, in medical applications of hyperthermia, any increase in the body temperature by even 1/10th of a degree results in a substantial enhancement of the treatment.** The procedure is very safe, minimally invasive, and lasts just 40-60 minutes.

HEATHEAL requires a treatment preparation, unique anesthesia protection, forced ventilation and constant monitoring of the patient's vital functions by the treating expert medical team. As such, it ensures the very safe and effective treatment of patients suffering from cancer, HIV, and other viral and immune system diseases.

HEATHEAL induces the production, expression, and release of Heat Shock Proteins (HSP) which enhance the adaptive immune response in both cancer and HIV patients through the uptake and presentation of HSP by dendritic cells, which in turn activate and induce cytotoxic T-cell migration from lymph nodes.

Hyperthermia can be considered as the fourth pillar of the cancer therapies, along with chemotherapy, radiation and surgery, and is applied either as an adjunct treatment to existing therapies as well as on its own. **As an adjunct oncological treatment, hyperthermia boosts the effectiveness of chemotherapies and radiation therapies, enabling a substantial reduction in their doses, and thus in their adverse effects; on its own, HEATHEAL stimulates the body's own immune system and induces malignant cell death (necrosis).** In all cases, significant improvements are observed in reducing metastases and pain level.

Hyperthermia pushes cancer cells towards acidosis (lower cellular pH) which decreases the cell's viability and

transplantability. It also increases apoptosis and damages the membranes, cytoskeleton, and nuclear functions of malignant cells, causing them irreversible destruction.

Hyperthermia causes heat shock protein to be exposed on the surface of malignant cells but not on normal cells, allowing monoclonal antibodies to home in just on the malignant cells.

Hyperthermia has had impressive results in the shrinkage and even the complete eradication of tumors, and in some cases, converting inoperable cancer forms to operable ones.

Hyperthermia improves the therapeutic index of TBI (total body irradiation), not only by increased neoplastic cell killing, but also by inhibiting the expression of radiation induced damage to the normal cell population; it also oxygenates the inner hypoxic cells of the tumor which are resistant to radiation but very sensitive to heat, making hyperthermia an ideal companion to radiation therapy.

Essentially, radiation kills the well-vascularized, better nourished and oxygenated outer cells, while Hyperthermia selectively destroys the chronically hypoxic, nutritionally deficient, and acidic inner cells. At the same time, Hyperthermia inhibits the malignant cells (through the accumulation of proteins) from repairing the damage sustained by the therapies.

In HIV, Hyperthermia decreases the viral load to negligible levels while substantially increasing the immune system competence (CD4 count). It is also highly effective in the treatment of a number of other diseases including Hepatitis (B & C), Tuberculosis, Asthma, Malaria, among others.

Hyperthermia boosts the overall health and energy of the body and is very effective in providing pain and arthritis relief, controlling bleeding, and useful in other conditions such as prostatic hypertrophy and psoriasis. As such, it may be used by healthy persons to improve their general well-being, and also by remissive cancer patients as a preventive treatment against future recurrence of metastasis.

Hyperthermia is currently in daily clinical application, with outstanding patient success and numerous publications. The Gisunt⁸ Clinic in Germany (where our HEATHEAL treatment facility is located) is a model of successful integrative medicine, combining state of the art medical technology with holistic naturopathy.

Dr. Holger Wehner, MD of the Gisunt Clinic, is a renowned oncologist and a professor of integrative medicine.

Dr. Wehner is also one of the initial founders and the current President of the German Society of Hyperthermia,



and has published numerous articles on Hyperthermia in German Medical Journals.

To date well over 4,000 HEATHEAL® procedures have been safely and successfully performed. Compared to other treatments, HEATHEAL® is very cost-effective, an aspect which enhances its attractiveness to patients, doctors as well as medical insurance entities.

Lebanon, who is a pioneer in the transfer of modern medical technology in the region, should welcome the establishment of a hyperthermia center in Lebanon. This treatment modality will always be performed under the direct supervision of certified and licensed medical doctors. The center will be set-up to the highest international standards of quality care, and safety, in line with the facility in Germany and with our long tradition of medical excellence.