



Dr. Douwes
informiert!



Oncothermia

The Loco-Regional Hyperthermia (LRH) Treatment

Dr. Douwes, the Medical Director St. George Hospital, founded in 1992 together with the Hungarian physicist Oncotherm, a technical company to develop hyperthermia devices. Since then these devices are in use of St. George Hospital and part of the Hyperthermia Center, the largest world wide.

Since that time, oncothermia has been accepted by many oncological practitioners and institutions as a viable and successful treatment option. Presently oncothermia is used in 15 countries around the world, and by more than 180 institutions.

More than 100,000 oncothermia treatments are conducted yearly and have delivered remarkable survival prolongation with good quality of life.

What is Oncothermia or Loco-Regional Hyperthermia (LRH) treatment?

Heat as treatment modality has been known and practiced for a very long time. Even Hippocrates and the ancient Egyptians used heat therapy to treat aches and pains. We also know that heat can cause considerable damage to living cells, hence the body can only survive for a short time in temperatures in excess of 42° C.

However, the destructive force of heat is also a blessing. Used skillfully, it can very effectively help to treat cancer. Malignant growths can be controlled or may even regress as a result of targeted hyperthermia. LRH is a noninvasive and particularly gentle method of treatment. It is highly effective because, on its own and in combination with traditional medicine and complementary forms of treatment, it is capable of bringing about a distinct improvement in the course of tumour diseases.

For these reasons St. George has hyperthermia integrated in its treatment concept for cancer. For more than twenty years now, we have been working aggressively to understand the benefits of hyperthermia therapy in the treatment of cancer and in the after-care of cancer patients. The clinical results are often outstanding!

How does Oncothermia work?

In LRH, focused and controlled heat is directed straight to the tissue or organ affected by the tumour. LRH uses capacitive heating, induced by transmitting low frequency radio waves directly to the site of the tumour.

With the region of the body affected by the tumour positioned between two applicators, the organ's internal temperature is raised to between 42° C to 48° C.

This temperature is maintained in the tumour tissue for 60 minutes, which triggers multiple biological effects:

- It impairs blood flow in the tumour resulting in inadequate heat dissipation, starving tumour cells of oxygen and nutrients prohibiting tumour metabolic cell division, maintenance and repair P53 gene, which drives cancer cells to suicide, is activated by hyperthermia
- It causes cancer cells to form characteristic heatshock proteins on their surface, unlike healthy tissue
- These heatshock proteins activate the body's own natural killer cells to attack the tumour cells Hence, hyperthermia works not only by heat destruction, inhibition of proliferation and induction of apoptosis, but also by stimulating the immune system response.

Can LRH be combined with other forms of treatment?

LRH has proven to be complementary to other treatments. In fact, it enhances the beneficial effects of chemotherapy and radiation. Even a tumour which was resistant to chemo and radiation therapy initially, will respond again to these therapies following hyperthermia treatment.

Which cancers can be treated by LRH?

LRH treats the following cancers:

- Brain tumours
- ENT tumours (Ear, Nose, Throat)
- Lymph node metastases and local lymphomas
- breast cancer
- Lung and liver tumours and metastases
- Skin cancer and skin metastases of various primary tumours
- Gastrointestinal cancer like stomach-, colorectal-, pancreas- & liver cancer
- Urogenital cancers (bladder & kidney cancer)
- Gynecologic cancers (Uterus, Ovarian, Cervical)
- Prostate cancer

Are there any adverse side-effects to LRH, and what are they?

Heating the tumour tissue to 42° C – 48° C affects adjacent healthy tissue, some skin rushes and small burning blisters can occur. However, the body's natural circulation is extremely efficient and soon dissipates the heat - something the tumour is not capable because of its more primitive blood supply.

For additional information and details on this exciting and effective technology available at St. George Hospital please feel free to contact us at: [Email: info@klinik-st-georg.de](mailto:info@klinik-st-georg.de)



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