

Quantum Clinic's New Integrative Cancer Programme With Oncothermia

Oncothermia – a widely used and researched method of selectively targeting cancer cells on a cellular level, available for the first time in the UK



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Certified in Class 3B Medical Laser Therapy.
Certified HeartMath coach.

Dr Aryan Tavakkoli is an experienced physician with over 25 years' experience in hospital medicine. Following a lifelong interest in holistic medicine, she opened Quantum Clinic in East Sussex to enable her to bring her expertise to her patients through the practice of integrative and functional medicine. Her passion is the integrative management of cancer. She has travelled and studied extensively in this area, with the aim of bringing her knowledge to the UK for the benefit of people with cancer. Her research in the field of integrative oncology included the discovery of oncothermia, which she will introduce to her practice this year. Oncothermia will be a groundbreaking addition to the current interventions available for cancer in the UK, and represents a leap forward in the integrative management of cancer.

Quantum Clinic – Services

From May 2019, Dr Tavakkoli will be expanding the services she offers at Quantum Clinic for people with cancer:

- **Oncothermia (new)**
- **Intravenous Vitamin C infusions (new)**
- **Mistletoe injections (new)**
- **Identification of metabolic pathway blockers for individual cancers (new)**
- **Functional Medicine consultation and laboratory testing**
- **Nutritional advice**
- **Targeted anti-inflammatory and anti-cancer supplements**
- **Oxygenation therapy ([Exercise with oxygen therapy](#))**
- **Microcirculation therapy ([Bemer physical vascular therapy](#))**
- **Mind-body therapy**

These services are offered as a comprehensive integrative package for patients with active cancer who are undergoing, or have undergone, conventional treatment. As such, this package is a complementary approach to conventional treatment. Please note that Dr Tavakkoli is not an oncologist. These services are not an alternative to conventional treatment and are not offered as a cure for cancer.

Dr Tavakkoli is pleased to offer this service at a discounted rate for the first 10 patients who book the programme.

Please see below for further details on oncothermia and the pricing structure.

Oncothermia

This will be the first time that oncothermia is available in the UK for the integrative approach to cancer.



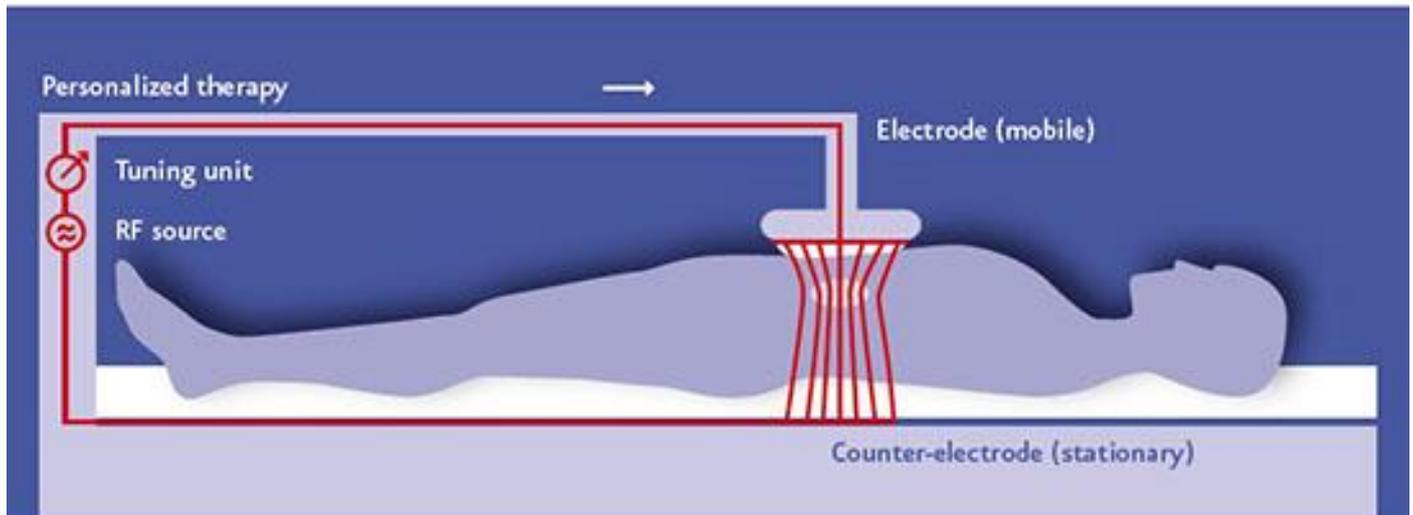
What is oncothermia?

Oncothermia is also known as ‘modulated electro-hyperthermia,’ or m-EHT. It is a widely used and researched method of selectively targeting cancer cells on a cellular level by passing both *focused and controlled heat*, and *an electric field*, through cancer tissue.

Oncothermia can be used with all stages of cancer. It is mainly used with metastatic cancer and advanced solid cancers that are inoperable.

How does it work?

Simply put, an electric field is generated by two electrodes. Since cancer cells have a higher conductivity than normal cells, the electric field flows predominantly through the cancer cells, that is, it flows *selectively* through cancer cells. The combination of deep heat and the electric field leads to changes in the cancer cell membrane which in turn triggers cell death (known as apoptosis).



The area of the body affected by the tumour is positioned between the two electrodes. The controlled heat and electric field that flows between them is maintained in the cancer tissue for 60 minutes (sometimes longer). This leads to changes in the membrane surrounding the cancer cells and numerous biological effects including:

- Reduction of new blood vessel formation by cancer cells (known as angiogenesis);
- Formation of heat shock proteins on the surface of cancer cells that activate the immune system to recognise the cancer cells;
- Activation of tumour suppressor genes such as p53.

The immune response to oncothermia has been shown to lead to an 'abscopal effect.' The abscopal effect refers to a phenomenon of tumour regression at a site *distant* from the primary site of therapy (indicating that the therapy has not only a local effect but also a distant effect, via the immune system ie. an immunomodulatory effect). That is, therapy at the site of the primary tumour could lead to an effect on distant metastases as well.

Research shows that oncothermia also enhances the effects of chemotherapy and reduces the risk of resistance to chemotherapy drugs.

How is oncothermia different to other types of hyperthermia?

There are differences between oncothermia and classical hyperthermia at both cellular and physiological level.

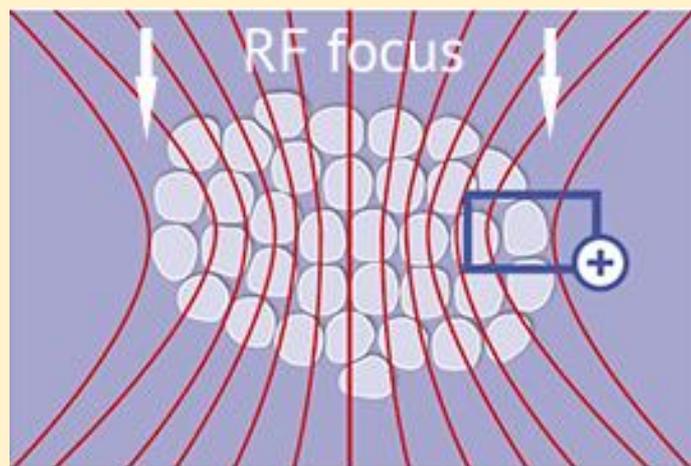
In traditional hyperthermia, both cancer tissues and healthy tissues are uniformly heated. The temperature difference between cancer tissues and surrounding healthy tissue is minimal. Whilst the high temperature does not cause damage to healthy cells, the energy is spread over both cancer cells and healthy cells.

In oncothermia, the electric field and resulting heat are *focused within* the cancer cells. Oncothermia results in most of the heat energy being transferred directly to the tumour. The temperature of the surrounding healthy tissue increases only very slightly.

Selective absorption

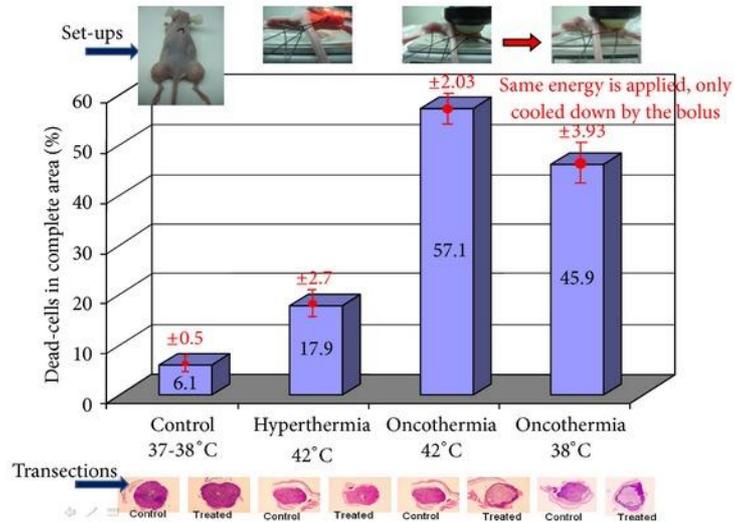
The heat used in oncothermia is absorbed selectively by cancer cells. The surrounding healthy tissue typically remains untouched and retains its normal temperature. Due to the focused energy flow of oncothermia, more than 95% of the energy dose is absorbed into the tumour. Other classical hyperthermia systems may use higher temperatures, but this does not necessarily translate into higher heat generation within the tumour itself. It is the efficiency of oncothermia at generating a high heat *selectively within tumour tissue* that makes it more effective.

In other words, whilst traditional hyperthermia focuses on temperature, oncothermia works by controlling the *absorbed energy*, ie. the heat, *within the tumour*.



In addition, the efficiency of the oncothermia system means that beneficial effects are produced even with lower temperatures than those used by classical hyperthermia systems.

The cell-destruction ability of oncothermia is three times higher than that of conventional hyperthermia at the same 42°C temperature



Hyperthermia versus Oncothermia: Cellular Effects in Complementary Cancer Therapy.
Hegy G, Szigeti GP et al. Evid Based Complement Alternat Med 2013;2013:672873

For which types of cancer can oncothermia be used?

Oncothermia can be used with all stages of cancer although its main use is with advanced solid cancers that are inoperable, as well as with recurrent cancer and metastases.

Data is available on the use of oncothermia in many types of cancer such as the following, including advanced cases with metastases:

- Lung cancer
- Cervical cancer
- Colorectal cancer
- Hepatocellular (liver) cancer
- Stomach cancer
- Malignant melanoma
- Breast cancer
- Renal cell (kidney) cancer
- Oesophageal cancer
- Ovarian cancer
- Pancreatic cancer
- Squamous cell cancers of head and neck
- Astrocytomas and glioblastomas

How effective is it?

Published data (see references below) shows that, when used as a complementary therapy along with traditional medical therapies, oncothermia can significantly improve patients' conditions, prolong survival and enhance quality of life.

Research shows that oncothermia has numerous biological effects including influencing the immune system to recognise cancer cells, preventing cancer cells from producing new blood vessels, reactivating tumour suppressor genes such as p53 and enhancing the effects of conventional treatments.

With its unique combination of electric field and heat, oncothermia has been used with encouraging results in tumours that are in constant motion (such as lung cancers), in regions with high levels of blood flow (such as the liver) and in regions with high levels of air circulation (lungs).

Are there any side effects?

Oncothermia is an easy to use, safe, non-invasive method that can be used for any stage of cancer and with no serious reported side effects.

Data on hundreds of thousands of applications of oncothermia indicate the following general rates of side effects:

Local redness:	<8%
Adipose (fatty tissue) burn:	<3%
Skin burn:	rare

Who is using oncothermia now?

Oncothermia is used in 32 countries worldwide, mainly in Europe. It is used both in conventional cancer centres and in integrative clinics.

Oncologists present their data and experience with oncothermia at international hyperthermia conferences such as the International Clinical Hyperthermia Society.

Data and research is published in the Oncothermia journal three times a year.



Quantum Clinic Is the only clinic offering oncothermia in the UK.

Please note that regrettably the following groups cannot be accepted on the programme for safety reasons:

- Under 18s (Dr Tavakkoli is an adult physician and licensed to see over 18s only)
- Women during pregnancy or breast feeding
- Brain tumours
- Presence of pacemaker
- Presence of metallic implant (please enquire, this is a relative contraindication)

Note on package of therapies:

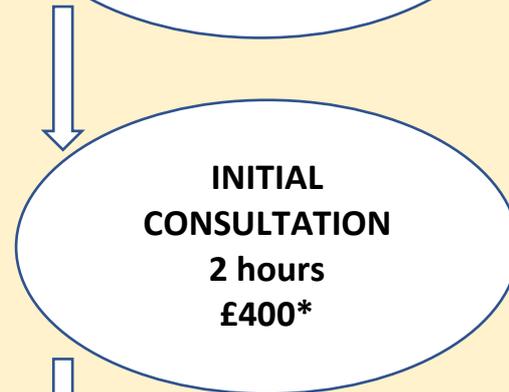
Dr Tavakkoli provides this combination of therapies as a comprehensive and more effective approach than offering individual therapies alone.

Individual sessions for therapies such as hyperthermia, intravenous infusions, injections, clinical advice etc can also be costly, therefore this programme is offered as a package, in which the overall price for the combined therapies is much reduced, compared with the individual charges for each therapy.

PROGRAMME AND STANDARD PRICING STRUCTURE



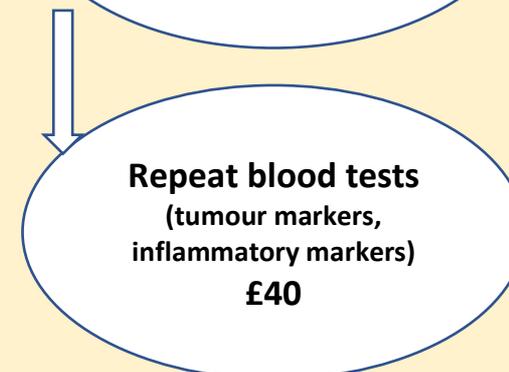
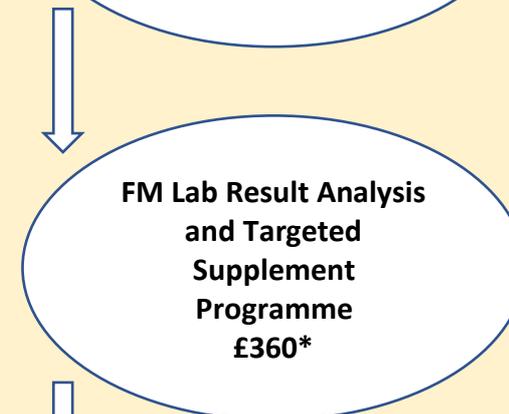
- Completion of online forms
- Relevant information (scan reports, letters) provided to Dr Tavakkoli.



- In-depth clinical review
- Lifestyle and nutrition advice
- Identification of metabolic pathway blockers
- Functional Medicine testing recommendations
- Mind-body therapy
- Provision of recommended supplements
- First mistletoe injection
- Blood tests



- Oncothermia 60-90 minutes
- Intravenous vitamin C
- Mistletoe injection
- Oxygenation therapy (EWOT)**
- Microcirculation therapy (Bemer PVT)***



- * Price does not include supplements or lab tests
- **Exercise with oxygen therapy
- ***Bemer physical vascular therapy

*Total for one month programme: £6,800
(price does not include supplements or laboratory tests)*

DISCOUNTS

Dr Tavakkoli is pleased to offer the following three options at discounted rates for the **first ten patients to book before 11th February 2019**. In order to receive the discount, full payment is required at the time of booking.

OPTION ONE

Full one month programme with 15% discount
£5,780 (normal price £6,800)

OPTION TWO (available for a limited period)

Oncothermia and Intravenous vitamin C **alone** for 2 weeks (6 sessions) with 15% discount
£2,040 (normal price £2,400)

OPTION THREE (available for a limited period)

Oncothermia and Intravenous vitamin C **alone** for 4 weeks (12 sessions) with 15% discount
£4,080 (normal price £4,800)

* Options two and three do not include any other elements of the programme.

Please note that due to the lengthy sessions, appointment slots are limited. Appointments are anticipated to begin in May 2019.

BOOKING

Dr Tavakkoli offers a free 20 minute telephone or Skype consultation for those interested in the programme. If you would like to know whether this programme is right for you and would like to take advantage of this offer, or if you wish to make a booking for the discounted programme, please contact Quantum Clinic:

Telephone: 01825 841155

Email: reception@quantumclinic.co.uk

References:

The safety and pharmacokinetics of high dose intravenous ascorbic acid synergy with modulated electrohyperthermia in Chinese patients with stage III-IV non-small cell lung cancer.

<https://www.ncbi.nlm.nih.gov/pubmed/28847527>

Point to note: Higher serum concentrations of vitamin C were obtained with simultaneous Oncothermia therapy.

Modulated Electrohyperthermia in Integrative Cancer Treatment for Relapsed Malignant Glioblastoma and Astrocytoma: Retrospective Multicenter Controlled Study.

<https://www.ncbi.nlm.nih.gov/pubmed/30580645>

Upregulation of heat shock proteins and the promotion of damage-associated molecular pattern signals in a colorectal cancer model by modulated electrohyperthermia.

<https://www.ncbi.nlm.nih.gov/pubmed/24973890>

Treatment outcome analysis of chemotherapy combined with modulated electro-hyperthermia compared with chemotherapy alone for recurrent cervical cancer, following irradiation.

<https://www.ncbi.nlm.nih.gov/pubmed/28693137>

In vitro comparison of conventional hyperthermia and modulated electro-hyperthermia.

<https://www.ncbi.nlm.nih.gov/pubmed/27556507>

Electro-hyperthermia up-regulates tumour suppressor Septin 4 to induce apoptotic cell death in hepatocellular carcinoma.

<https://www.ncbi.nlm.nih.gov/pubmed/27269053>

Combined treatment with modulated electro-hyperthermia and an autophagy inhibitor effectively inhibit ovarian and cervical cancer growth.

<https://www.ncbi.nlm.nih.gov/pubmed/30428738>

Comparison of biological effects of modulated electro-hyperthermia and conventional heat treatment in human lymphoma U937 cells.

<https://www.ncbi.nlm.nih.gov/pubmed/27551529>

Modulated electro-hyperthermia enhances dendritic cell therapy through an abscopal effect in mice.

<https://www.ncbi.nlm.nih.gov/pubmed/25242303>

Modulated electro-hyperthermia induced loco-regional and systemic tumor destruction in colorectal cancer allografts.

<https://www.ncbi.nlm.nih.gov/pubmed/29290768>

Oncothermia: a new paradigm and promising method in cancer therapies.

<https://www.ncbi.nlm.nih.gov/pubmed/24494322>

Current status of Oncothermia therapy for lung cancer.

<https://www.ncbi.nlm.nih.gov/pubmed/24782955>

Hyperthermia versus Oncothermia: Cellular Effects in Complementary Cancer Therapy.

<https://www.ncbi.nlm.nih.gov/pubmed/23662149>

Clinical and economic evaluation of modulated electrohyperthermia concurrent to dose-dense temozolomide 21/28 days regimen in the treatment of recurrent glioblastoma: a retrospective analysis of a two-centre German cohort trial with systematic comparison and effect-to-treatment analysis.

<https://www.ncbi.nlm.nih.gov/pubmed/29102988>

Immune effects by selective heating of membrane rafts of cancer-cells.

http://ascopubs.org/doi/abs/10.1200/JCO.2016.34.15_suppl.e14571