

INTEGRATIVE AND INDIVIDUALIZED CANCER THERAPY CONCEPT

Disease is a wake-up call for reclaiming health and transforming life. Cancer is not a fate or punishment, but a demand on the patient to change the present lifestyle patterns. An integrative, holistic and individualized approach is the new, modern way of cancer treatment. Due to the side effects of conventional cancer treatment, which sometimes are more disabling than the disease itself, cancer care specialists are recognizing the value of integrative programs. These programmes incorporate treating methods like local and wholebody **hyperthermia**, specialized diets, health-promoting herbs, nutrients and **mind-body therapies**. This integrative cancer therapy concept (ICTC) provides patients with a "survivor's edge" **by enhancing quality of life, reducing toxicity and improving future prospects**.

The individual approach to cancer care begins with a detailed patient assessment, including biochemical, molecular and gene-based profiles and clinical evaluations of physical status, stage of cancer disease, additional coexisting diseases, nutrition, quality of life, and well-being. These data are used to create an individualized treatment plan (TP) that emphasizes patient involvement and includes a customized drug regimen with non-toxic anticancer drugs, a nutritional regimen as well as a therapeutic physical and psychological program. Each patient's biology is continually changing, hence the treatment options are constantly reviewed and revised based on the most current diagnostic and medical data. This means that every component of the treatment is individualized to match every patient's unique needs. ICTC never start chemotherapy with a patient who is not fit enough to withstand and benefit from the treatment. **Conventional cancer treatment may bring the patient into catabolic situation with a high level of toxins in his system which may paralyse the immune system.** Patients after the chemotherapy often suffer from post-treatment symptoms such as fatigue and depression. Hence the cancer patients should be detoxified physically, supported psychologically and strengthened nutritionally.

One of the complementary treatment, hyperthermia, has an oncolytic effect - inhibits proliferation, and produces heat shock to the proteins mainly in cancer cells, which make them recognizable for natural killer cells. That means it boosts not only the immune system, it also induces a specific anti cancer immunity. Hyperthermia has a lot more interesting mechanism to destroy cancer, especially if one uses electro hyperthermia or oncothermia. Oncothermia is self focussing and has much deeper penetration and can therefore also be used for liver, lung and brain metastases.

Targeting the disease and its micro environment is a modern goal. Several target substances entered the market lately and have promising clinical effects. One of these targets is the blockage of tumor angiogenesis (the growth of blood vessels that feed tumors). Blocking the formation of vessels is slowing down cancer growth, facilitating apoptosis - the programmed cancer cell death, and preventing cancer metastases. The tumor vessels are not as well built as normal capillaries; they are less organized and cannot constrict and relax as normal capillaries. In the early phase of hyperthermia, when the temperature in tumor tissue is rising, the vessels relax to

increase the blood flow to the tumor tissue, but as soon as the temperature goes higher than 40°C the constriction of the blood flow stops, it comes to formation of micro thrombi causing hypoxemia in the cancer tissue, which together with other important mechanisms induce apoptosis and cancer cell death. So hyperthermia is an elegant form of anti-angiogenesis.

ICTC patients tolerate chemotherapy with only mild or negligible side effects. This is highly significant, since as many as one third of all cancer patients abandon chemotherapy before its completion due to their inability to tolerate its physical side effects and the associated psychological stress. A review of patients with metastatic drug resistant ovarian cancer showed an extended survival time with ICTC of over 70% . ICTC has also benefited patients whose cancers were previously inoperable, by reducing the size of their tumors to a size that makes surgery possible.

In integrative treatment patient has a daily detoxification program, a diet rich in antioxidants and plant-based supplements that incorporate the full spectrum of nutrients found in good quality healthy food. The cancer diet contains no sugar, is low in saturated fats, high in fibers, complex carbohydrates, fruits, cruciferous vegetables, omega-3 fatty acids, and plant-based sources of protein. Unlike conventional cancer management, the ICTC targets one of the most serious consequences of the disease, known as cancer cachexia. This is a type of malnutrition associated with appetite suppression, muscle wasting, weight loss, and weakness. 20-30% of cancer patients actually die from complications of malnutrition, rather than from cancer itself. There is always the risk that conventional cancer treatment may bring the patient into a catabolic state and may induce cachexia. As long as the patient is in a catabolic situation he has no chance to win the battle. Diets that are high in EPA and proteins help cancer patients suffering from cachexia to gain weight and improve their nutritional status. The oil-protein diet also opposes cancer cachexia through its anti-inflammatory effects and its ability to displace arachidonic acid, a pro-inflammatory omega-6 fatty acid, from cell membranes. Reducing intake of foods containing arachidonic acid, such as red meat, egg yolks, poultry, and dairy products, also helps shift the body's biochemistry away from a pro-inflammatory environment. A high intake of L-carnitine, L-glutamine, alpha lipoic acid and coenzyme Q 10 can likewise have a beneficial muscle-sparing effect and can help to prevent cancer cachexia.

Nutritional supplementation program, emphasizes the use of nutrients such as fish oil rich in EPA (eicosapentaenoic acid), EGCG (epigallocatechin gal-late, the principal polyphenol in green tea), selenium, zinc, silymarin (a flavonoid in milk thistle), lycopene, calcium, magnesium, chromium, vit. C, vit. B12, boswellia, folic acid, vit. D3, vit. K and mistletoe extracts, to name the few.

Conventional treatments are important tools in the treatment of cancer, the integrative modern approach means that we use both – conventional with extra care and complementary to make the treatment more friendly.

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