

## The action of hyperthermia in metastatic colorectal cancer in combination with chemotherapy

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### ABSTRACT

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**Introduction:** Hyperthermia is characterized as the fourth pillar in treating cancer, including surgery, chemotherapy and radiation. Clinical studies suggest that the combination of hyperthermia with radiation and chemotherapy, can bring very good results in treating various types of cancer, including colon cancer.

**Purpose:** To investigate the effects of hyperthermia in metastatic colorectal cancer in combination with chemotherapy.

**Materials and methods:** A clinical study, which recruited 32 patients with diagnosed colorectal cancer. The patients were divided into a reference group (15 patients), which received chemotherapy and sessions of hyperthermia and in a control group (17 patients), which only received chemotherapy. For the application of hyperthermia, the Celsius 42+ machine was used. Imaging tests were performed before and after taking the regimens, in order to evaluate the effectiveness of each treatment approach.

**Results:** Through the imaging assessment, a positive outcome of the disease was observed, for the team of hyperthermia (reference group). Specifically, when compared with the control group, the reference group showed a shrinkage of metastatic foci, derived from colon cancer. In contrast, in the control group there was an increase of dimensions compared with hepatic metastases and metastases in the abdomen, while a steady state was maintained regarding thoracic metastases.

**Conclusions:** The beneficial effects of hyperthermia are undeniable, as year after year resulting more and more clinical trial data that support this view. The consolidation of the application of hyperthermia cancer treatment, is now a matter of time.

**Key words:** colon cancer, colorectal cancer, treatment, hyperthermia, oncothermia, chemotherapy, supplementary therapy

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