

## 2<sup>nd</sup> World Congress on **Breast Cancer**

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#### The role of hyperthermia as complementary treatment in metastatic breast cancer

**Background:** Hyperthermia as complementary treatment is an important tool to improve the efficacy of chemotherapy and radiation in cancer. Hyperthermia treatment includes superficial hyperthermia, deep regional hyperthermia but also whole body hyperthermia. Beside a temperature dependent increase of the efficacy of cytostatic drugs or radiation there are also direct effects of hyperthermia on cancer cells at temperatures around 42 C° (107.6 F°).

**Methods:** Hyperthermia is used together with radiation in locally recurrent disease or together with chemotherapy in patients with metastatic disease. 1. Superficial hyperthermia with water filtered infrared-A light (1200 nm, Hydrosun device). 2. Local regional hyperthermia is used for superficial disease, e.g. inflammatory skin involvement with short wave irradiation with 13,56 MHz (Oncotherm EHY 2000 device is used for the localized breast tumor or metastatic tissues e.g. liver metastases and 3. whole body hyperthermia is performed by whole body radiation with water filtered infrared-A light (1200 nm) for patients with metastatic disease. Chemotherapies are given to local hyperthermia session or to whole body hyperthermia.

**Results:** Early studies about simultaneously hyperthermia and radiation showed about doubled response rates compared to radiation alone. Even in pretreated patients with metastatic breast cancer using a combination of whole body hyperthermia and chemotherapy showed response rates between 70-80%. Using cytostatic drugs in more moderate doses together with hyperthermia patients had only little side effects.

**Conclusion:** Studies and own experiences show that hyperthermia in metastatic breast cancer shows promising results, in particular as breast cancer is a disease sensitive to different types of chemotherapy and radiation.

#### Biography

Alexander Herzog has obtained Medical degree at University of Heidelberg, Germany in 1984. Later on, he has done research at the German Cancer Research Center in Heidelberg about vaccine treatments against cancer in animal models. His specialization is in internal medicine and oncology in the university hospital of Heidelberg. He is a Consultant and Head Physician in different oncological hospitals. For more than 20 years he has been working in his own hospital specialized in hyperthermia complementary treatments in oncology. He is Professor at the University of Sevilla, Spain, but also gives lectures at the University of Gießen.

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