



# The Potential of Thermography-Controlled, Contact-Free wIRA-Hyperthermia Combined with Hypofractionated Radiotherapy for Challenging Tumor Situations in the Head & Neck

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## Clinical Image

Hyperthermia applied as radiosensitizer or chemosensitizer has shown promising results in combination with radiotherapy or chemotherapy for treatment of many tumor types including recurrent breast cancer, pelvic tumors e.g. bladder or cervical cancer, head & neck cancer, soft tissue sarcoma and melanoma. To further improve the effectiveness of hyperthermia in the clinic technical research is needed into better controlled and more effective forms of heat delivery. Contact-free thermography-controlled wIRA-hyperthermia has proven its clinical usefulness specifically in the treatment of large-sized recurrent breast cancer and presents an extension to the already well known micro-wave technique. Superficial hyperthermia in combination with radiotherapy can be applied also for or other localizations e.g. head & neck cancer, melanoma and other skin tumors. However issues arise, when superficial tumor manifestations are spread largely and are extended over very various parts of face or neck (Figure 1). Such lesions can be very challenging, either for radiotherapy alone or in combination with additional hyperthermia. Despite the often clear palliative situation a relief of local symptoms and improvement of life quality is demanded. The scope of this study is to present our experiences with contact-free wIRA-hyperthermia in combination of hypofractionated radiotherapy in very different localizations and miscellaneous tumor entities in the head & neck region, where other tumor directed therapy were abandoned. This experience could lead to treatment protocols evaluating more in detail the use of this technique.

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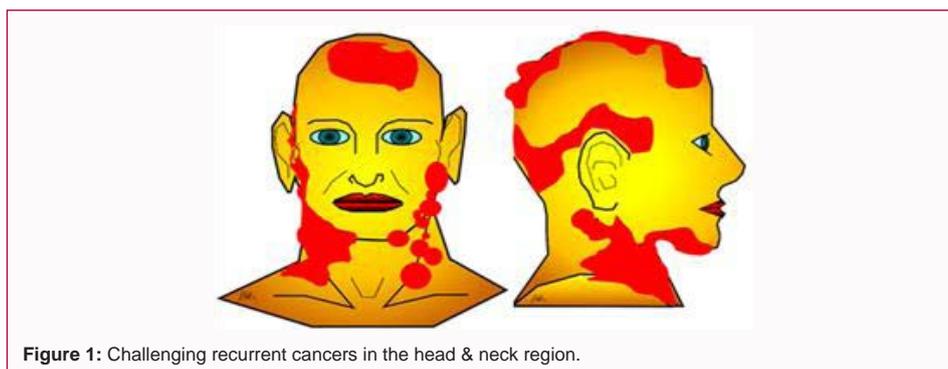


Figure 1: Challenging recurrent cancers in the head & neck region.