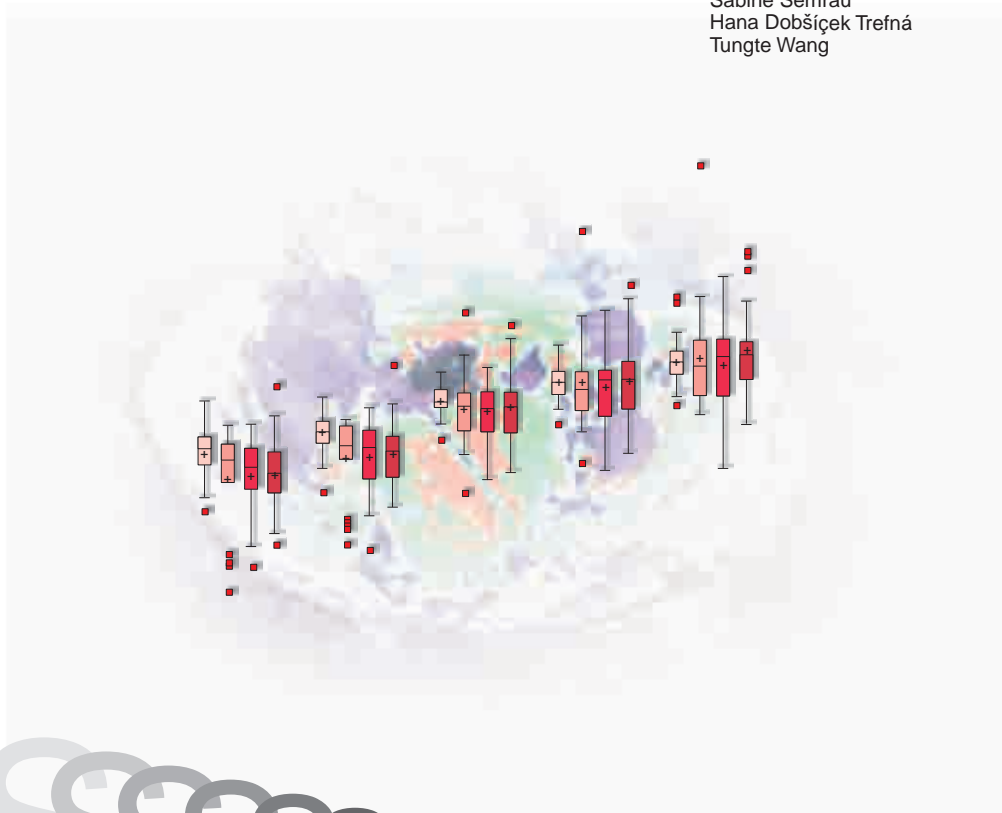


# Hyperthermia in Oncology – Principles and Therapeutic Outlook

2nd edition

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# **Hyperthermia in Oncology – Principles and Therapeutic Outlook**



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## ***MEDICINE - STATE OF THE ART***

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UNI-MED Verlag AG, one of the leading medical publishing companies in Germany, presents its highly successful series of scientific textbooks, covering all medical subjects. The authors are specialists in their fields and present the topics precisely, comprehensively, and with the facility of quick reference in mind. The books will be most useful for all doctors who wish to keep up to date with the latest developments in medicine.

## ***Preface and acknowledgements***

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During the past decade clinical evidence on the beneficial use of additive local and regional hyperthermia procedures as part of multimodality treatment approaches for several malignant diseases has increased significantly. With the publication of relevant clinical trials and analyses, additive local and regional hyperthermia procedures regained attention globally among oncological professionals and its potential beneficial effect is described in several guidelines. Therefore, the evidence-based use of hyperthermia treatments is reimbursed by health insurances in various countries. Today, hyperthermia plays a role in the treatment of chest wall recurrences after breast cancer, locally advanced cervical cancer, locally advanced and recurrent rectal cancer, high risk soft tissue sarcoma, anal carcinoma and bladder cancer.

Recent technical advances are contributing to improved quality assurance. With the help of CT- or MRI-based planning systems, the temperature distribution in the target area can be preplanned and optimized before the patient is exposed, and in the clinical setting, the calculated heat distribution can be verified with a dedicated MRI scanner for non-invasive thermometry. Meanwhile, hyperthermia treatment quality assurance and delivery standards had been improved and published by a dedicated team of physicists, technicians and clinicians.

This booklet is dedicated to the interested reader without any expertise in local and regional hyperthermia. It is designed to provide instant access: The first part of the book gives a compact overview on the definition of hyperthermia, the physical mode of action for controlled tissue heating, and the biological effects associated with hyperthermia. In the second part, hyperthermia procedures and clinical indications are described and practical recommendations for the treatment delivery and quality assurance are given. In the third part, clinical results for the combined use of hyperthermia with radio- and/or chemotherapy are summarized. A special spotlight is set on the role of hyperthermia in the treatment of childhood malignancies. This part of the booklet is completed with the presentation of currently open or future clinical trials.

We hope that the interested reader will enjoy reading and will get fast access and understanding for the potential of quality-assured local and regional hyperthermia procedures in combination with oncological standard treatments.

*Erlangen, January 2024*

*Oliver J. Ott  
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# Contents

<b>1.</b>	<b>Principles of Hyperthermia</b>	<b>13</b>
1.1.	Definition of Hyperthermia .....	13
1.1.1.	Different Temperature Regimes.....	13
1.1.2.	Heating Techniques .....	14
1.1.3.	References .....	14
1.2.	Physical Basics and Hyperthermia Applications .....	14
1.2.1.	Electromagnetic Irradiation.....	14
1.2.2.	Interaction of Non-Ionizing Electromagnetic Radiation with Matter.....	16
1.2.3.	Practical Realizations .....	17
1.2.4.	Planning and Optimization .....	20
1.2.5.	Harmful Effects of Non-Ionizing Radiation.....	21
1.2.6.	Further Heating Techniques .....	21
1.2.7.	Heat Transport .....	22
1.2.8.	References .....	23
1.3.	Biological Rationale of Hyperthermia .....	23
1.3.1.	Biological Rationale and Mode of Action of Hyperthermia .....	23
1.3.2.	Interaction of Hyperthermia and Chemotherapeutic Agents .....	24
1.3.3.	Interaction of Hyperthermia and Ionizing Radiotherapy .....	24
1.3.4.	Immune Modulation by Hyperthermia .....	25
1.3.5.	References .....	26
<b>2.</b>	<b>Techniques, Clinical Use and Quality Assurance</b>	<b>29</b>
2.1.	Hyperthermia Treatment Techniques.....	29
2.1.1.	Classical Techniques.....	29
2.1.2.	Recent Developments .....	31
2.1.3.	References .....	33
2.2.	Practical Recommendations.....	35
2.2.1.	Treatment Planning .....	39
2.2.2.	Treatment Monitoring.....	41
2.2.3.	Treatment Documentation .....	42
2.2.4.	Requirements and Characterization of Equipment.....	42
2.2.5.	Safety Aspects .....	43
2.2.6.	Hyperthermia Staff Requirements.....	43
2.2.7.	References .....	43
2.3.	Quality Assurance.....	44
2.3.1.	Heat Dosimetry .....	44
2.3.2.	The Hyperthermia QA Guidelines and Their Principles .....	45
2.3.3.	Thermometry and Verification .....	47
2.3.5.	Future Aspects .....	48
2.3.6.	References .....	48
<b>3.</b>	<b>Clinical Results of Quality-Assured Hyperthermia</b>	<b>51</b>
3.1.	Hyperthermia Alone .....	51
3.2.	Chemotherapy and Hyperthermia.....	51
3.2.1.	Peritoneal carcinomatosis of epithelial ovarian cancer (EOC) .....	51

3.2.2.	Non-muscle-invasive bladder cancer (NMIBC) .....	52
3.2.3.	High-risk soft tissue sarcomas (HR-STs) of adults.....	53
3.2.4.	Localized relapse or metastatic disease of soft-tissue sarcoma .....	54
3.2.5.	Pancreatic Cancer .....	55
3.2.6.	Breast Cancer .....	56
3.2.7.	Cervical Cancer.....	56
3.2.8.	Pediatric Cancer.....	56
3.2.9.	References .....	57
3.3.	<b>Radiotherapy and Hyperthermia .....</b>	<b>59</b>
3.3.1.	Breast Cancer .....	59
3.3.2.	Rectal Cancer .....	60
3.3.3.	Cervical Carcinoma.....	62
3.3.4.	Further Results .....	63
3.3.5.	References .....	63
3.4.	<b>Radiochemotherapy and Hyperthermia.....</b>	<b>64</b>
3.4.1.	Breast Cancer .....	64
3.4.2.	Rectal Cancer .....	64
3.4.3.	Cervical Carcinoma.....	65
3.4.4.	Anal Cancer .....	66
3.4.5.	Bladder Cancer.....	67
3.4.6.	Esophageal Carcinoma .....	68
3.4.7.	Further Fields of Research .....	69
3.4.8.	References .....	69

#### **4. The Role of Hyperthermia in Pediatric Oncology 71**

4.1.	<b>Indications .....</b>	<b>71</b>
4.2.	<b>Locoregional Radiofrequency Hyperthermia in Children and Adolescents.....</b>	<b>71</b>
4.2.1.	Application of Hyperthermia and Thermometry .....	71
4.2.2.	Analysis of Temperatures .....	73
4.2.3.	Hyper-PEI Treatment Schedule.....	73
4.3.	<b>Limitations .....</b>	<b>74</b>
4.4.	<b>Results .....</b>	<b>75</b>
4.4.1.	Experimental Studies.....	75
4.4.2.	Clinical Studies.....	76
4.4.2.1.	Radiofrequency Hyperthermia and Chemotherapy .....	76
4.4.2.2.	Radiofrequency Hyperthermia and Radiotherapy.....	77
4.5.	<b>Technical Approach and Perspectives .....</b>	<b>79</b>
4.6.	<b>Surgical Techniques for Isolated Hyperthermic Perfusion with High-Dose Chemotherapy ..</b>	<b>82</b>
4.6.1.	Isolated Hyperthermic Limb Perfusion .....	82
4.6.2.	Hyperthermic Intraperitoneal Chemoperfusion.....	82
4.7.	<b>Clinical Aspects .....</b>	<b>83</b>
4.8.	<b>References.....</b>	<b>84</b>

#### **5. Current and Future Clinical Trials 87**

5.1.	<b>Chemotherapy and Hyperthermia.....</b>	<b>87</b>
5.1.1.	References .....	90