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Nota di contenuto	1. Cell Biological Effects of Alternating Electric Fields -- 2. Fundamental Physics of Alternating Electric Fields Therapy -- 3. Biophysical Effects of Alternating Electric Fields -- 4. Computer Simulation of Alternating Electric Fields Therapy -- 5. Response Pattern and Modeling of Tumor-Treating Fields -- 6. Clinical Efficacy of Alternating Electric Fields for Recurrent Glioblastoma -- 7. Alternating Electric Fields in Clinical Practice with Emphasis on PRiDe Registry -- 8. Alternating Electric Fields Therapy for Newly Diagnosed Glioblastoma -- 9. Supportive Care in Patients Using Alternating Electric Fields Therapy -- 10. Future Directions for Alternating Electric Fields.
Sommario/riassunto	This concise text provides a complete overview of alternating electric fields therapy -- also known as tumor treating fields -- for glioblastoma and other types of solid tumor malignancies. Readers are given a fundamental understanding of this novel anti-cancer treatment modality by learning from clinical trial data as well as the physical and cell biology effects on tumor cells when alternating electric fields are applied both in vitro and in vivo. Chapters illustrate the physics behind electric field propagation in space and other media. This is followed by

a review of our current understanding of the electric field effects on dividing cells - including the disruption of cytokinesis, proper chromosome segregation and activation on the cell surface chaperons that induce immunogenic cell death. Data from phase III trials for the treatment of recurrent and newly diagnosed glioblastomas are included, as well as some of the ancillary post hoc analyses that were performed by various investigators. The remainder of the chapter covers other solid tumor malignancies, including non-small cell lung cancer, pancreatic cancer and ovarian cancer, as this treatment modality is being applied to systemic malignancies. Alternating Electric Fields Therapy in Oncology offers oncologists, neurologists, radiation oncologists, biomedical engineers, cell biologists and mitosis researchers the fundamentals needed for clinical practice.
