novocure® | R&D day

leveraging physics to address critical unmet needs

TRANSLATIONAL RESEARCH

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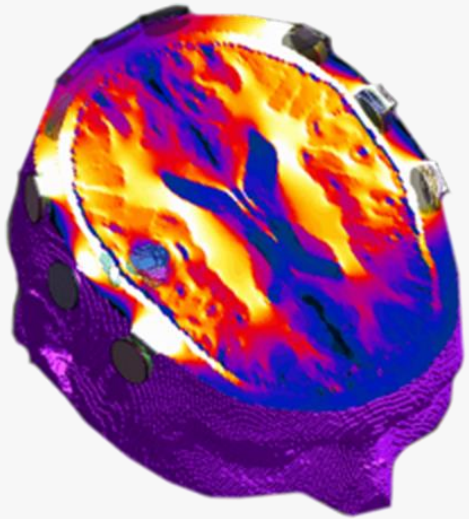
patientforward

TTFields dosimetry and treatment planning

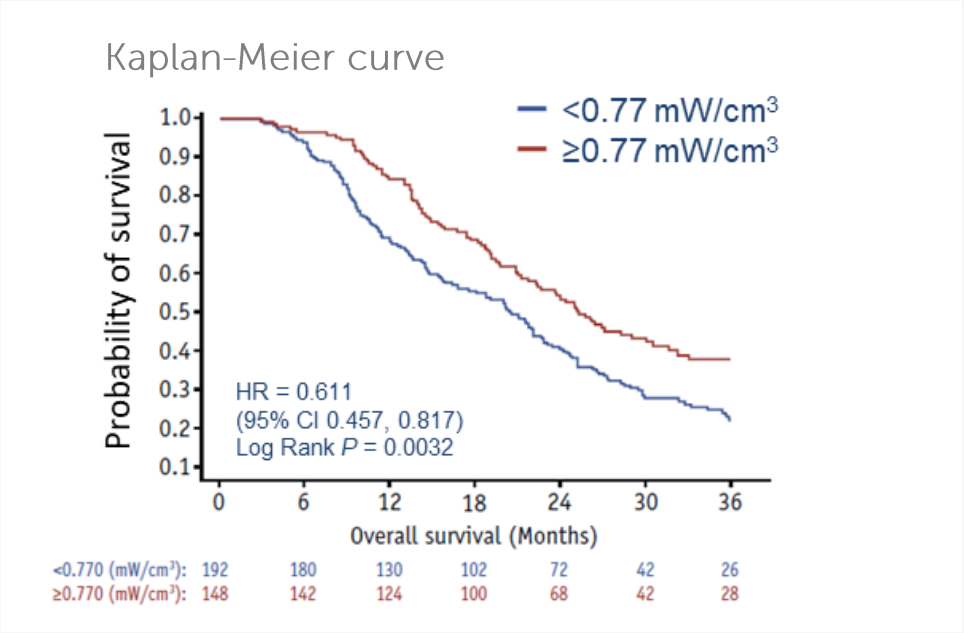


a how to define TTFields dose

b how does dose influence patient outcome

c how to utilize TTFields doses to better plan treatment

correlation between TTFields dose at the tumor and overall survival



Correlation of Tumor Treating Fields Dosimetry to Survival Outcomes in Newly Diagnosed Glioblastoma: A Large-Scale Numerical Simulation-Based Analysis of Data from the Phase 3 EF-14 Randomized Trial

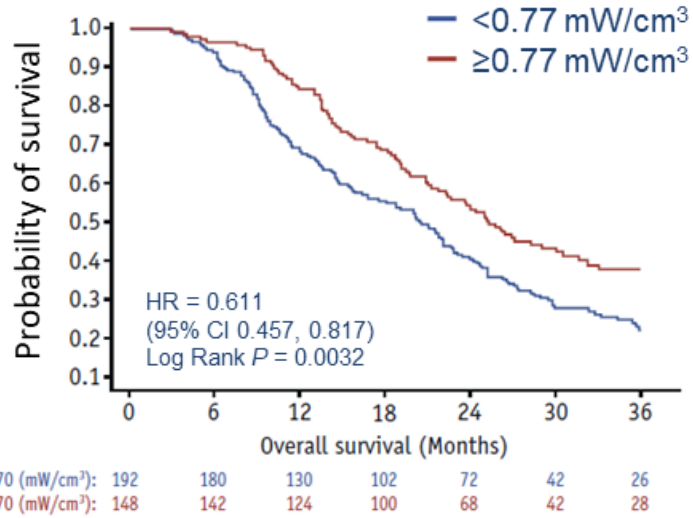
Matthew T. Ballo, MD, Noa Urman, MSc, Gitit Lavy-Shahaf, PhD, Jai Grewel, MD, Ze'ev Bomzon, PhD, and Steven Toms, MD

correlation between TTFields dose at the tumor and overall survival

TTFields dose =

field intensity delivered to tumor X time on therapy

Kaplan-Meier curve



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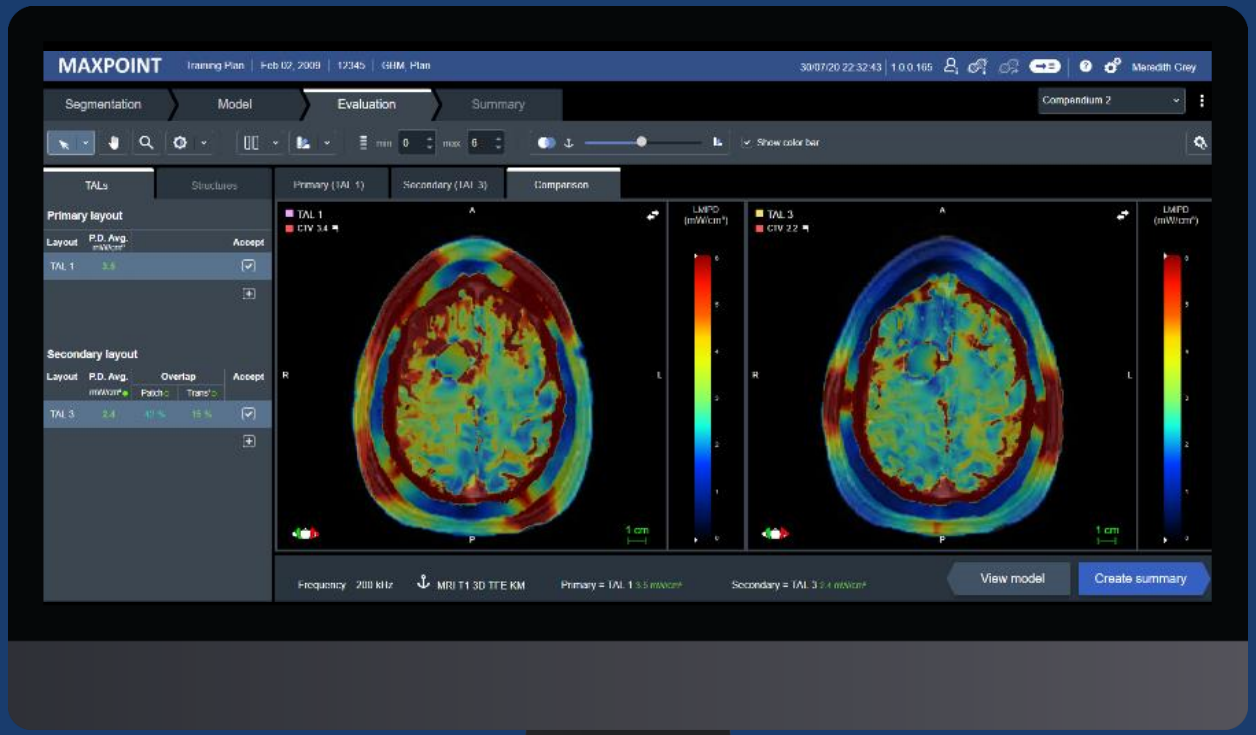
MAXPOINT™

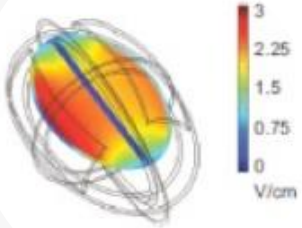


patientforward

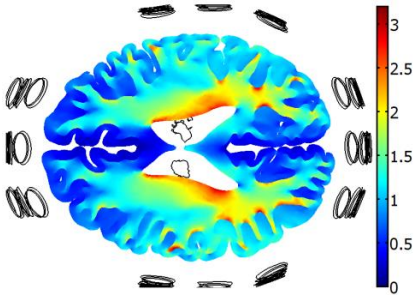
MAXPOINT™ is an investigational product that has not been approved by the FDA

computational models critical to estimate field distribution and predict response

2007



2013



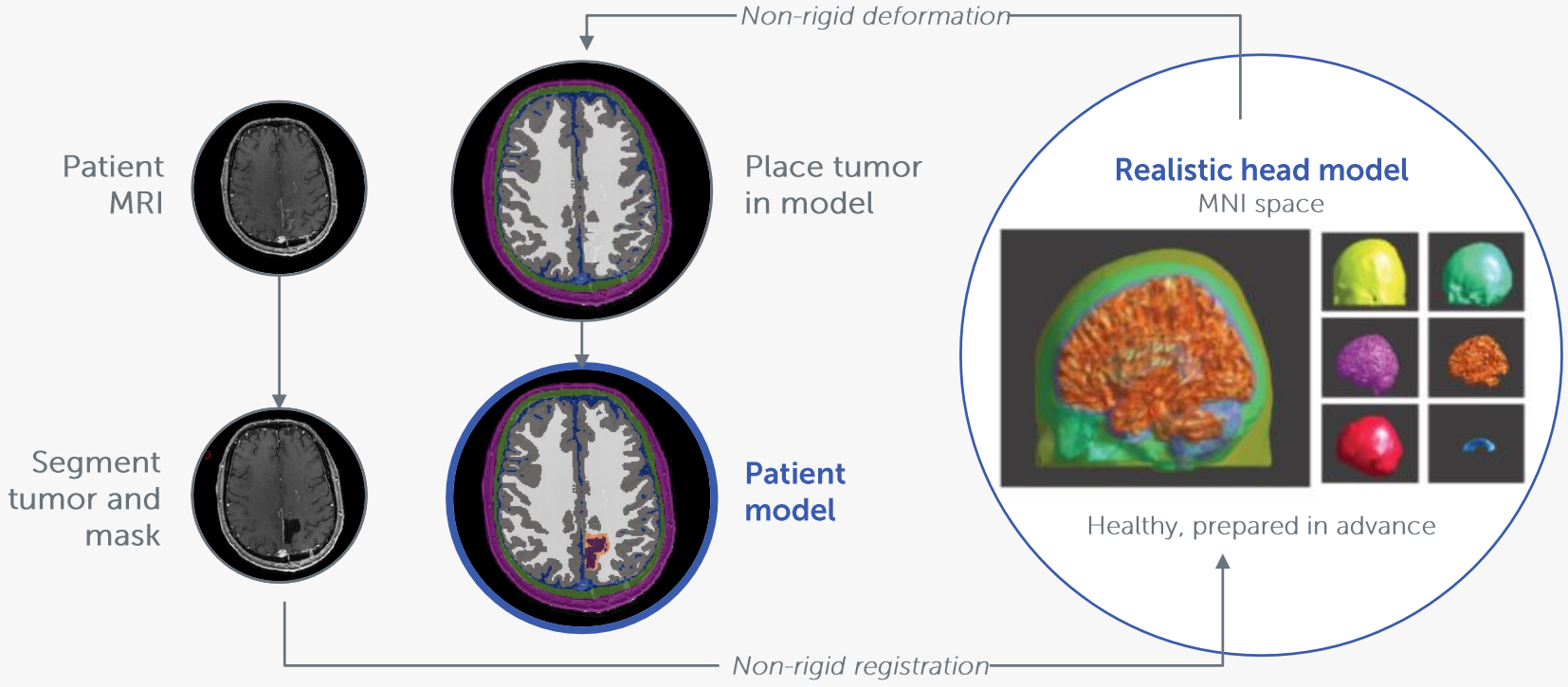
early models were labor intensive

hours to days to generate

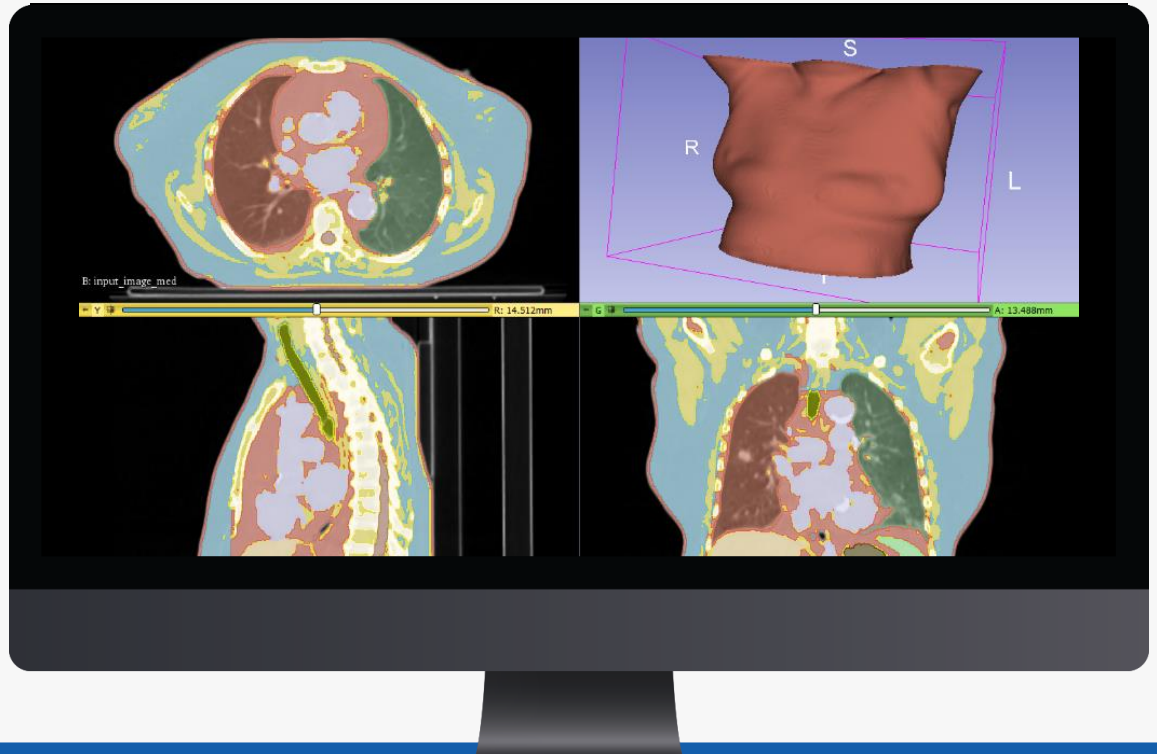
Kirson ED, Ddbaly V, Tovarys F, et al. Alternating electric fields arrest cell proliferation in animal tumor models and human brain tumors. Proc Natl Acad Sci USA. 2007;104(24):10152-10157

Miranda, Mekonnen, Salvador and Basser; University of Lisbon and NIH, Bethesda, MD e-poster presented at International Society for Magnetic Resonance in Medicine (ISMRM) April 20-26, 2013; Salt Lake City, UT) http://www.ismrm.org/13

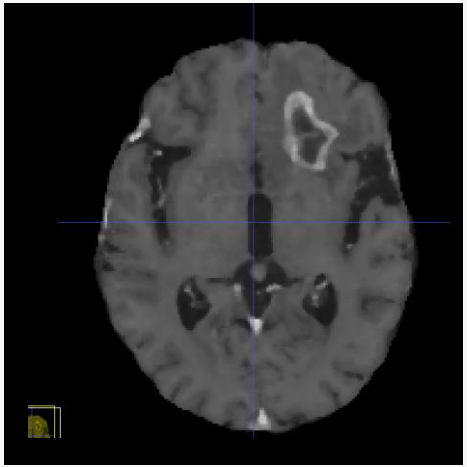
patient-specific computational model developed



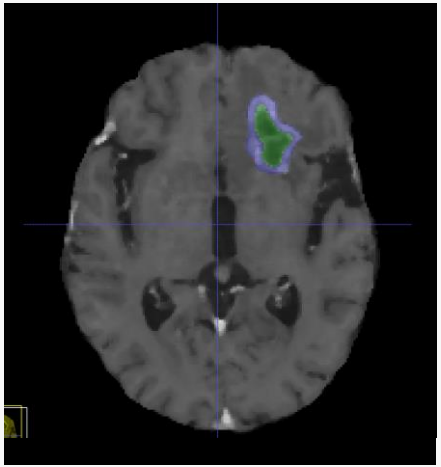
continued focus on customizing TTFields treatment planning



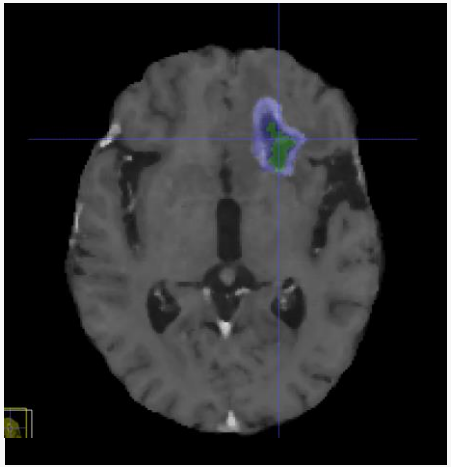
tumor segmentation may enable predictive outcomes



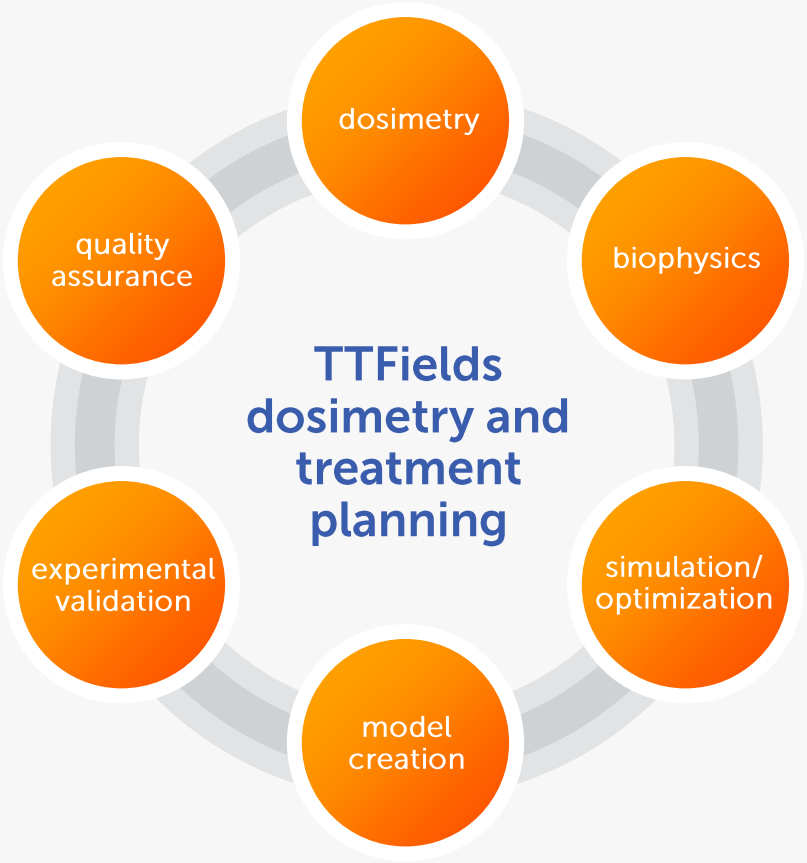
Original



Segmentation result



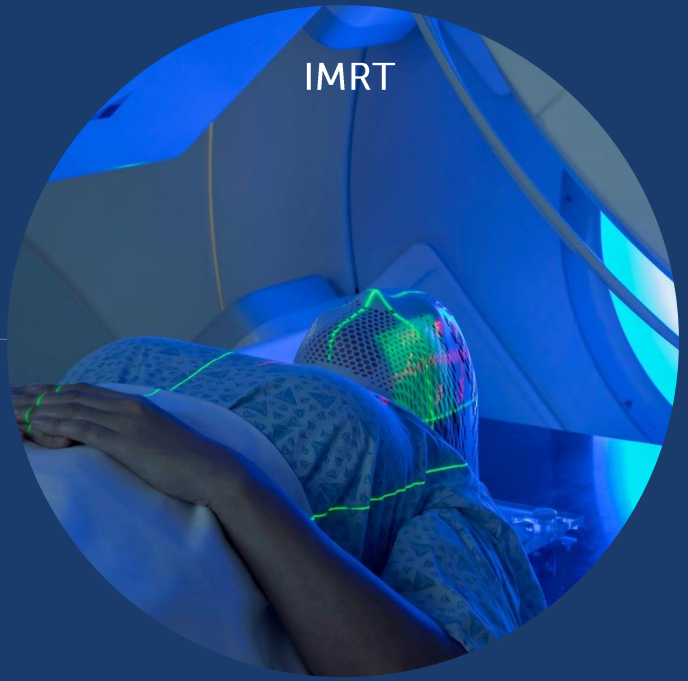
Manual segmentation



vision for the future of TTFields treatment planning

Single-field RT

IMRT



just the beginning for TTFields dosimetry and treatment planning

advance hardware for personalized TTFields delivery

utilize the treatment planning software to replan treatment for patients

historical medical data with MRI and CT incorporated into predictive algorithms