NEW MEDICAL TECHNOLOGY

HIGH DOSE PER PULSE RADIOTHERAPY WITH REAL TIME IMAGING

ON-LINE TUMOR IMAGING

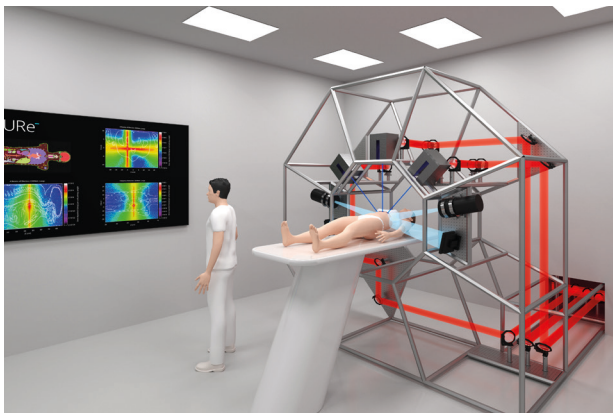
Real time evaluation and adaption of treatment
Pulsed treatment increases accuracy of dosage
Precise control over treatment area
Synchronization of imaging and radiation source to within tens of milliseconds

LASER PLASMA TECHNOLOGY

Compact laser electron acceleration
Up to 100 mGy per dosage pulse
Electron beam energy up to 200 MeV
Operation modes: single pulse or 10 Hz

SPECIFICATION

Field Size	1 cm x 1 cm
Dose rate	1 Gy/s
Dmax	15 cm
Imaging time window	10 ms



HOW DOES IT WORK?

This technology supports a new radiotherapy machine that offers the highest dose rate available on the market. Due to ultra-fast laser technology, a synchronized x-ray system can perform imaging of the tumor during the irradiation within a time window short enough to evaluate and adapt treatment.

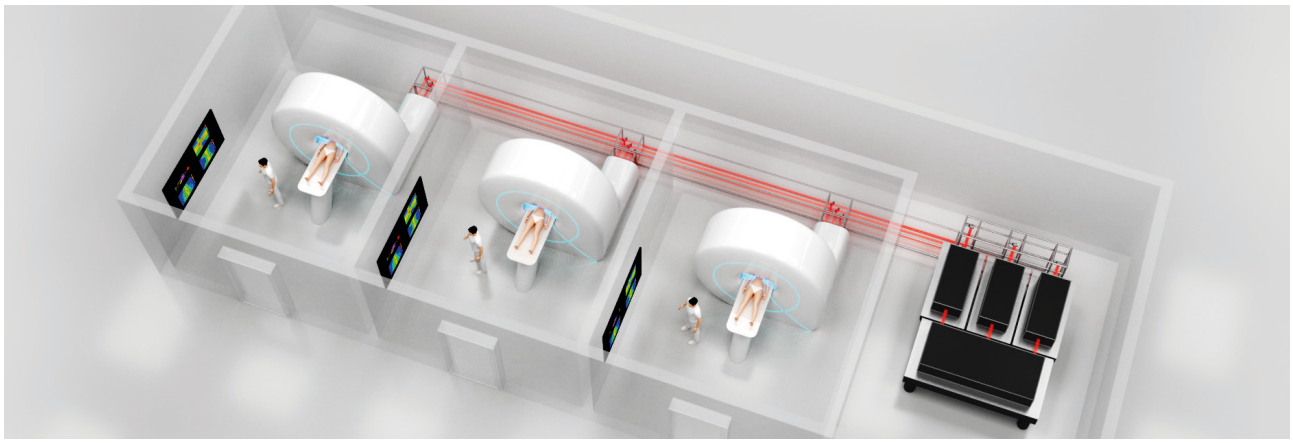
ABOUT US

ELI Beamlines is an international user facility that is involved in the development and operation of state-of-the-art laser systems, including some of the most powerful lasers in the world.

Our in-house development of high power lasers has led to many new and unique engineering solutions for highly demanding applications where commercial solutions satisfying our stringent requirements did not exist.

CURRENT STATUS

This technology is patented and protected in the EU and the US. The ELI Beamlines research team is working on a prototype.



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