AuntMinnie.com

CLINICAL NEWS | RADIATION ONCOLOGY/THERAPY

International researchers begin testing new MRI-guided proton therapy

Researchers at Dresden University Medical Center in Germany with OncoRay National Center for Radiation Research in Oncology have begun MR-integrated proton therapy research using a full-body MRI-guided proton therapy machine.

By — AuntMinnie.com staff writers

Jan 12th, 2024

Researchers at Dresden University Medical Center in Germany are partnering with OncoRay's National Center for Radiation Research in Oncology on proton therapy research using a full-body MRI-guided proton therapy machine.

Under the collaboration, scientists in medicine, medical physics, biology, and engineering will test a new form of radiotherapy for treating cancer. The machine is designed to rotate around the patient for

real-time imaging and proton beam radiation therapy using innovative types of patient positioning in both lying o upright positions, according to the researchers.

“This new prototype with integrated full-body MRI makes it possible to visualize moving tumors using high-contrast real-time imaging. Our work aims to develop a technique to irradiate tumors only when they are hit reliably by the proton beam,” explained Prof. Aswin Hoffmann, PhD, in a statement. Hoffmann leads the experimental MR-integrated proton therapy research group at OncoRay National Center for Radiation Research in Oncology.

Prof. Aswin Hoffmann, PhD, (right) presents the prototype for MRI-guided proton therapy to Saxony's Minister-President Michael Kretschmer (center) and Saxon State Minister for Science Sebastian Gemkow (left). Photo used with permission, copyright UKD / Michael Kretzschmar

The prototype allows researchers at the Helmholtz-Zentrum Dresden-Rossendorf laboratory with Dresden University Medical Center to use real-time MRI imaging to monitor cancer patients during their radiation treatment and also improve the targeting accuracy of proton therapy. The researchers aim to demonstrate the added value of the machine for mobile tumors in the chest, abdomen, and pelvis, according to Hoffmann.
