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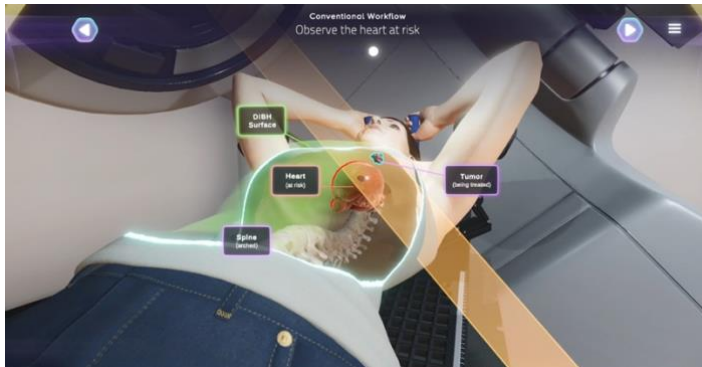**Breast Cancer Patients Now Have New Radiation Treatment Option that Visualizes the Heart and Addresses Co-Morbidities**

Brainlab Deep Inspiration Breath Hold with ExacTrac Dynamic® delivers new approach to solve challenges for wider cancer populations

With Brainlab ExacTrac Dynamic® Deep Inspiration Breath Hold module, clinicians are able to correlate internal and external anatomy, revealing any misalignment that may otherwise remain undetected. (Source: Brainlab)

CHICAGO, IL, August 11, 2022——Brainlab announced today the first group of breast cancer patients treated in United States with the ExacTrac Dynamic® Deep Inspiration Breath Hold (DIBH) module. Highlands Oncology is the first to treat and has already treated 19 patients in the first two weeks. By combining highly accurate surface guided technology with triggered X-ray imaging, Highlands Oncology clinicians have been able to address challenges that often necessitated large treatment margins, due to the lack of available technology and integration.

Breast cancer is the most prevalent cancer for women in the United States and second most deadly cancer for females according to the US government and breast cancer advocacy groups. While strides have been made in numerous therapies and survival has continued to improve, one key area has remained a challenge for doctors treating breast cancer: reducing late cardiac toxicity in their patients. In the ongoing pursuit of curative radiation treatment, clinicians find that they may undesirably irradiate the heart while attempting to eradicate breast cancer for left-sided cancer patients, as unmanaged breathing may bring the vital organ into the radiation targeting field. ExacTrac Dynamic® and its novel tracking technology actively monitors breathing with correlation to internal anatomy checks. New research out of Brussels demonstrates that application of this technology helps reduce cardiac toxicity and the possibility of lung cancer for patients in certain risk groups including those with high blood pressure, high cholesterol and obesity, but also critically, for those with persistent smoking habits.

Until now, patients receiving breast cancer radiation treatments have been typically treated using large treatment margins and without the benefit of internal anatomical verification during treatment. By incorporating 'on-the-fly' X-Ray confirmation, Brainlab technology streamlines the process and delivers confidence that the heart is outside of the treatment beam. This solution delivers correlation between internal and external anatomy in one shot, revealing any misalignment that may otherwise remain undetected.

"The clinical community has been waiting for a solution like this," said Hershey H. Garner, JD, MD, Chief of Radiation Oncology at Highlands Oncology. "For physicians, we often have the dilemma of shielding healthy tissue and organs at the expense of more aggressive cancer destruction. With ExacTrac Dynamic® and DIBH, we can now mitigate the risk to the heart with minimal trade off. We can now track a surrogate and image internal anatomy——since Brainlab technology can do both simultaneously. We have trusted Brainlab for our

most precise cranial setups and our team was impressed how easy it was to implement DIBH "out of the box" technology for our breast cancer patients."

"With this new technology, we knew the potential for increased clinician and patient interest would be high," said Sean Clark, President, Brainlab Inc. "Our customers are very excited about adding this technology to their armamentarium of cancer-fighting technology. Helping wider patient populations with co-morbidities achieve better cancer outcomes aligns perfectly with our mission to increase access to and consistency of treatment."

About Brainlab

Brainlab is a digital medical technology pioneer founded in 1989 and headquartered in Munich. The company employs more than 2000 people in 25 locations around the globe. Brainlab serves physicians, medical professionals and their patients in over 6000 hospitals in 121 countries.

Brainlab creates software-driven medical solutions that digitize, automate and optimize clinical workflows for neurosurgery, spine, trauma, craniomaxillofacial (CMF), general and vascular surgery as well as radiotherapy and radiosurgery. Core products center around surgical navigation, radiotherapy, digital operating room integration, and information and knowledge exchange. The Brainlab open framework operating system will allow third parties to develop medical applications to further advance the field of spatial computing and mixed reality.

Brainlab is dedicated to creating an impact in healthcare. The company connects opportunities from emerging digital technologies to transform healthcare at scale and help improve the lives of patients worldwide. For more information, please visit Brainlab and follow on LinkedIn, Twitter, Facebook and Instagram.

Press Contact

Debbra Verard
Director, Marketing and Communications
+1 (708) 409-1343
presse@brainlab.com