TERAPET
Next Generation Imaging Technology

Terapet SA Announces Successful Heavy Ion Beam Tests at Yonsei Cancer Center Using Terapet's innovative patient specific Quality Assurance device, Qualγscan

Seoul, Korea October 3rd, 2024 Terapet SA, a Geneva-based CERN MedTech spin-off specializing in innovative nuclear medicine technologies, proudly announces the successful completion of its first heavy ion beam tests at the Yonsei Cancer Center, a leading hospital in South Korea. This achievement marks a significant milestone in the development of a world-first patient-specific Quality Assurance device in collaboration with Yonsei Cancer Center and Oncosoft Inc.

The tests utilized the latest version of Terapet's Qualyscan device, conducted within the framework of a bilateral innovation project funded by the Swiss Innovation Agency (Innosuisse) and the Korea Institute for Advancement of Technology (KIAT). Terapet, together with its partners, has been awarded CHF 1,835,000 and KRW 1,500,000,000 to advance this groundbreaking technology.

These pre-clinical tests aimed to demonstrate the feasibility of utilizing Terapet's technology in a heavy ion setting. The process involved comprehensive device installation, stress testing, and performance characterization at the Yonsei Cancer Center, where cancer patients are treated using advanced heavy ion beams. This successful collaboration not only showcases Terapet's innovative capabilities but also underscores the strength of Swiss-Korean partnerships in advancing medical technology.

About carbon ion therapy

Carbon ion therapy is an advanced treatment method for cancer and other tumor diseases. Compared to conventional x-ray radiotherapy, ion therapy has the advantage that healthy tissue surrounding the tumor receives less dose. This is because ions stop at a certain depth inside the patient, delivering a very high dose just before they stop (the Bragg peak). The dose beyond the tumor is close to zero. The lowered dose to healthy tissue is particularly important when treating children since they have a long life expectancy after treatment. Ion therapy is also superior for treating critical cancer types (e.g., brain tumors, prostate cancers) in which tumors are very close to critical organs, e.g., the brain, spine, optic nerves, etc.

About the Innosuisse-KIAT Consortium (109.136 INT-LS)

The bilateral Innosuisse-KIAT funding program aims to promote bilateral innovation projects between Switzerland and South Korea. Innosuisse has been cooperating with the South Korean innovation agency since 2013 with the aim of promoting bilateral innovation projects. Innosuisse and the Korea Institute for Advancement of Technology (KIAT) work together within the framework of the cooperation agreement signed in 2022.

The objective of this agreement is to encourage collaboration between Swiss and South Korean companies and research organizations to promote the exchange of knowledge and expertise, to establish sustainable partnerships and to increase business development opportunities. This enables companies to expand their competitive advantage by developing new products, improving technical processes or devising solutions. These innovations must offer added value for the economy, society or the environment.

Innosuisse is the Swiss Innovation Promotion Agency. It is a federal entity whose role is to promote science-based innovation in the interests of industry and society in Switzerland.

KIAT is the Korea Institute for Advancement of Technology. KIAT is quasi non-governmental organization under Ministry of Trade, Industry and Energy, with a mission to realize a technologically leading nation through related industrial technology policy and infrastructure strengthening and to promote academic-industrial collaboration, local industry promotion, middle-standing enterprises support, technology commercialization, research foundation building, material components industry support, and international technical cooperation.

About Terapet SA

Terapet, a CERN MedTech spin-off, has developed an innovative platform technology: a novel gamma ray detection system for imaging in nuclear medicine. Terapet develops, manufactures and sells medical devices for nuclear imaging. Their products will be used in hospitals, research centers, ion therapy facilities and the pharmaceutical industry.

About Yonsei Cancer Center (Heavy Ion Therapy Center)

Yonsei Cancer Center is the lead Korean partner in the collaboration. Yonsei Cancer Center has excellent medical facilities, ranking 4th in Korea in the world hospital evaluation, and its affiliated medical school is ranked 1st in Korea and Asia, building a top-level research environment. The hospital has a suitable research base, having won 1,236 contracts for national research projects worth 125.8 billion KRW in 2022. As the first hospital in Korea to start heavy ion therapy (HIT), the hospital has the necessary equipment for research, including HIT machines, related experimental equipment, development manpower, and verification capabilities. The consortium will develop an integrated solution for high-precision HIT patient-specific quality control, contributing to the improvement of patient treatment quality.

About Oncosoft Inc.

Oncosoft Inc. provides diagnosis, treatment, and follow-up management software by converting radiographic data into 3D through artificial intelligence technology. Oncosoft's technology and software enhance the reliability of cancer diagnosis and treatment by visualizing the patient's current condition and cancer progression in images and 3D visualizations.

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Figure 1: Terapet team at Yonsei Cancer Center. From left: Dr. Ben Brunt (Senior Data Scientist), Dr. Christina Vallgren (co-founder/CEO), Prof. Dr. Raymond Miralbell (co-founder/CSO), Dr. Michael Betz (Senior Electrical Engineer) and Robin Chappuis (Mechanical Engineer)

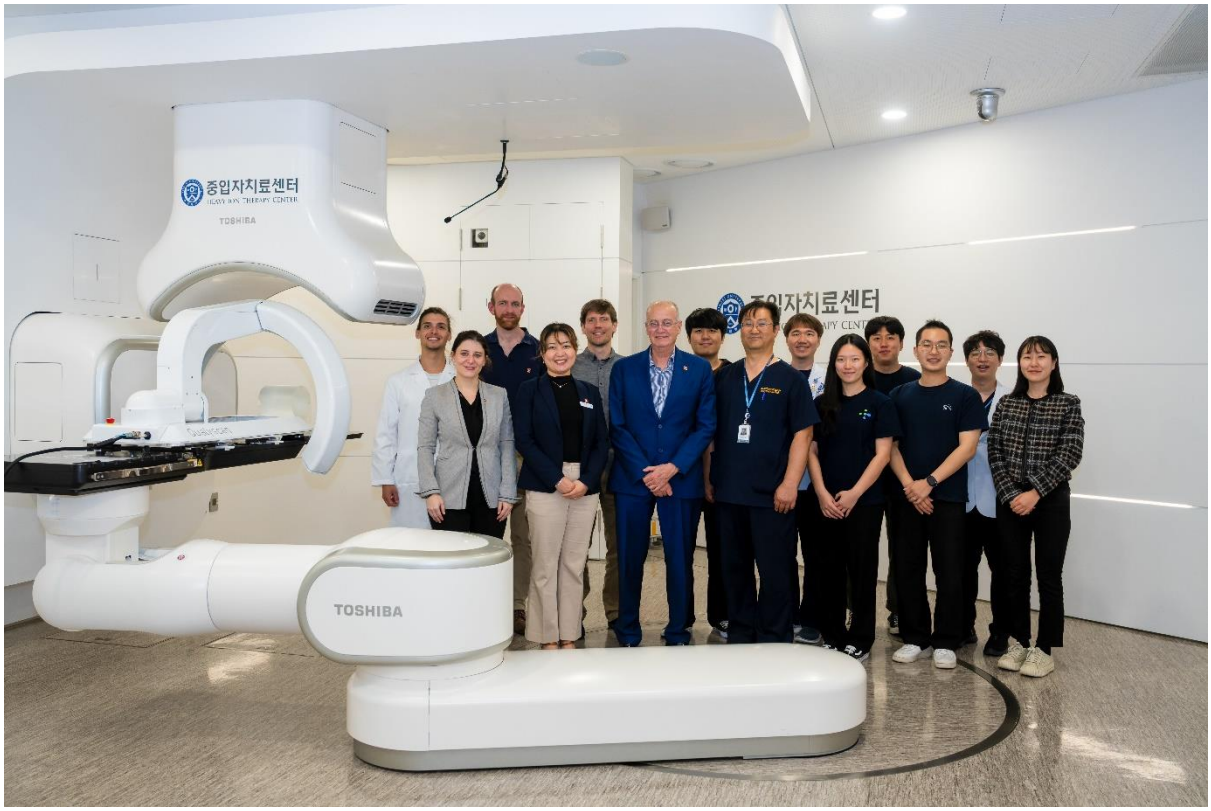

Figure 2: Swiss-Korean Team: Swiss Embassy, Terapet, Yonsei Cancer Center and Oncosoft

Figure 3:Terapet's Qualyscan in action at Yonsei Cancer Center (These pre-clinical tests were carried out with a goal to demonstrate the feasibility of using Terapet's technology in a heavy ion setting, involving device installation, stress-testing and performance characterization.)