



## **Terumo announces first commercial clinical case using QuiremSpheres®**

Leuven (Belgium), 28 March 2017 - **Terumo Europe nv today announced the first commercial clinical case using QuiremSpheres® - the next generation radioembolization microspheres for advanced unresectable liver cancer.**

QuiremSpheres®, the next generation of radio-embolization microspheres, are the only commercially available microspheres that contain the radioactive isotope Holmium-166. In recent trials, holmium microspheres were shown to be safe<sup>[1]</sup> and effective<sup>[2]</sup> for the treatment of advanced liver cancer.

Unlike the widely adopted Yttrium-90 microspheres, QuiremSpheres® can be visualized in low concentrations by means of SPECT and MRI. This allows clinicians to quantitatively assess the distribution of microspheres in the liver, enabling accurate evaluation of treatment directly after the radio-embolization procedure.

QuiremSpheres® have been used for the first time outside of a research setting, in clinical practice at the University Clinic Carl Gustav Carus in Dresden, Germany. A multidisciplinary team, consisting of Prof. Dr. med R.T.Hoffmann and Prof. Dr. med. J. Kotzerke and their dedicated teams performed the radioembolization procedure on a patient with metastatic colorectal cancer in the liver.

Prof. Dr. med. R. Hoffmann, Head of Interventional Radiology at the University Clinic Carl Gustav Carus said "As a radiologist, I value the unique imaging capabilities of QuiremSpheres®. SPECT and MR-imaging opens new opportunities that we look forward to exploring. This will give us the confidence we need to start individualizing treatments."

In addition to the unique imaging capabilities, Holmium-166 also has a shorter half-life than Yttrium-90 [3]. Prof. Dr. med. J. Kotzerke, Head of the Nuclear Medicine department at the University Clinic Carl Gustav Carus commented: "The short halftime of holmium-166 results in a high initial dose rate. Therefore, we expect to see an improved radiobiological effect."

In reflection of the physician-led collaboration for the development of this treatment, Prof. Dr. M. Lam, heading the Nuclear Medicine department of the University Medical Center Utrecht in the Netherlands said "I am excited to see this treatment, which has been developed at our hospital, now becomes available for patients across Europe."

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<sup>[1]</sup> The recommended whole liver dose of 60Gy was identified as the maximum tolerated radiation dose in a phase I trial (no dose-limiting toxicity occurred in the 60Gy cohort) Smits et al, Lancet Oncol. 2012, Oct;13(10):1025-34. ClinicalTrials.gov Identifier: NCT01031784

<sup>[2]</sup> Study results have been published in PhD thesis of J.F. Prince; ISBN 978-90-393-6489-5; 2016. Publication in peer-reviewed journal is expected soon. ClinicalTrials.gov Identifier: NCT01612325

<sup>[3]</sup> Nijsen et al. European Journal of Nuclear Medicine, 1999, Jul; 26(7): 699-704



Peter Coenen, President of Interventional systems Terumo EMEA said: “We are grateful for the confidence that the Dresden clinical team places in us and QuiremSpheres®. We strongly believe that the unique imaging capabilities of QuiremSpheres® can be a game changer in the field of radio-embolization and this first patient treatment is an important milestone towards realizing its full potential.”

Jan Sigger, CEO of Quirem Medical B.V. – the manufacturer of QuiremSpheres® said: “We are excited that, after more than 15 years of research, QuiremSpheres® has become available for clinical use. Through our strategic partnership with Terumo, liver cancer patients across Europe can now benefit from the next generation microspheres for radio-embolization.”

### **About Terumo**

Tokyo-based Terumo Corporation is one of the world's leading medical device manufacturers with over US\$5 billion in sales and operations in more than 160 nations. Founded in 1921, the company develops, manufactures and distributes world-class medical devices including products for use in cardiothoracic surgery, interventional procedures and transfusion medicine; the company also manufactures a broad array of syringe and hypodermic needle products for hospital and physician office use. Terumo contributes to society by providing valued products and services to the health care market and by responding to the needs of health care providers and the people they serve. Terumo Corporation's shares are listed on the first section of the Tokyo Stock Exchange (No. 4543, Reuters symbol <4543.T>, or Bloomberg 4543: JP) and is a component of the Nikkei 225, Japan's leading stock index.

### **About Quirem**

Quirem Medical is an emerging medical device company with a mission to develop the next generation microspheres for targeted interventional treatment of liver malignancies. It is based in Deventer, the Netherlands and is a spin-off company from the University Medical Center in Utrecht.