



## University Medical Center Groningen performed the first automatic log-based patient QA enabling to treat more patients

**Louvain-la-Neuve, Belgium, June 14, 2019** – IBA (Ion Beam Applications S.A., EURONEXT), the world's leading provider of proton therapy solutions for the treatment of cancer, is pleased to announce the physics team of University Medical Center Groningen (UMCG) has developed and clinically implemented a novel automated treatment log-based patient QA approach on May 15<sup>th</sup>. This enables to reduce the time needed for the in-beam measurement-based conventional patient QA.

With this new approach, the center is now able to streamline and reduce the QA time per patient, extract more clinically relevant information from the QA data and establish continuous quality control of the treatment throughout the course. Furthermore, this will allow to reduce time to continue treatment course with adapted plans, when needed, and make a step towards supporting online adaptive workflows.

This new automated patient QA approach combines several open source projects: CAPTAIN, an automatic workflow manager using web-technology, a DICOM PACS database (Orthanc) providing an interface with the TPS, computation routines from open-REGGUI and others, developed at UMCG, and a Monte-Carlo proton dose engine (MCsquare).

CAPTAIN, open-REGGUI and MCsquare are open-source research tools supported by the openPath initiative (more information on these open source tools: <https://openpath.software>). The openPath initiative is aimed at researchers, medical physicists and clinicians so that, together, we can find the path to accelerate research! It is the first time that a center applies the extensive internal QA validation of UMCG to use the open source software platform in the clinic.

**Stefan Both, Prof, Head of Physics, at UMCG commented:** “Thanks to the support of IBA and the OpenPath platform, we managed to develop and implement an automated patient QA process that will allow us to considerably reduce the time to perform patient QA operations from about 45 minutes to 5 minutes, this means we have today the capacity to treat additional 1 to 2 fractions per day, shorten with 2 days the time from simulation to treatment delivery and explore adaptive proton therapy protocols to maximize the clinical potential of the proton treatment beam.”

**Damien Prieels, Research Director at IBA added:** “Thanks to the open source platform OpenPath, proton therapy professionals can benefit from the experience of peers by having access to work shared by the community. With the milestone reached today, the entire PT community can benefit from the tremendous work on patient-QA performed by the experienced researchers from UMCG. This illustrates how the collaborative work of the open source community, including IBA and its customers, enables to accelerate research. Supporting this open source community allows IBA to



stay at the forefront of the technology, contributes to expand the use of proton therapy and secures the performances of IBA customers.”

### **About IBA**

IBA (Ion Beam Applications S.A.) is a global medical technology company focused on bringing integrated and innovative solutions for the diagnosis and treatment of cancer. The company is the worldwide technology leader in the field of proton therapy, considered to be the most advanced form of radiation therapy available today. IBA’s proton therapy solutions are flexible and adaptable, allowing customers to choose from universal full-scale proton therapy centers as well as compact, single room solutions. In addition, IBA also has a radiation dosimetry business and develops particle accelerators for the medical world and industry. Headquartered in Belgium and employing about 1,500 people worldwide, IBA has installed systems across the world.

IBA is listed on the pan-European stock exchange NYSE EURONEXT (IBA: Reuters IBAB.BR and Bloomberg IBAB.BB). More information can be found at: [www.iba-worldwide.com](http://www.iba-worldwide.com)

### **About UMCG**

University Medical Center Groningen (UMCG) is one of the largest hospitals in the Netherlands and is the biggest employer in the north of the country. A staff of almost 12,000 people work in patient care and in leading medical research, focusing on ‘healthy ageing’. For its research and educational function the hospital has close ties with University of Groningen. Some 3,400 students are currently enrolled in degree courses to become physicians, dentist, or movement scientist, and over 450 are doing a medical residency. Patients come to UMCG for basic care, but also for highly specialized diagnostics, examinations or treatments. All patients in the north of the country with complicated or rare conditions are eventually referred to UMCG. Excellent care is always based on the latest insights and given by the best doctors and nursing staff. Together with the support services they always focus on that one common goal: building the future of health. For more information visit:

[www.umcg.nl](http://www.umcg.nl)

### **For further information, please contact:**

#### **IBA**

#### **Aymeric Harmant**

Global Marketing Director

+32 10 203 796

[global.marketing@iba-group.com](mailto:global.marketing@iba-group.com)