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## Elekta Unity MR-Linac featured in 72 abstracts at European radiation oncology congress

MADRID– Elekta (EKTA-B.ST) today announced the presentation of 72 abstracts demonstrating the technical capabilities and clinical utility of the Elekta Unity MR-Linac. The research described in the abstracts was conducted at 14 leading cancer centers worldwide, reflecting the broad global adoption of the system. The abstracts were reported at the European Society for Radiotherapy and Oncology (ESTRO) which took place 27-31 August in Madrid, Spain.

“The Elekta Unity data presented at ESTRO include a growing number of abstracts reporting clinical data in multiple anatomic sites, which is a direct result of the increased clinical implementation and maturation,” said Kevin Brown, Distinguished Scientist at Elekta. “We are especially excited about eight reports regarding MRI-based biomarkers that may predict response to therapy, which may help optimize patient selection and ensure that patients receive personalized treatment based on their unique tumor biology. These reports demonstrate the ease with which this biomarker data can be acquired during a Unity treatment session which lowers a barrier to impactful research. This ease will also be essential for eventual cost-effective implementation of the research findings. There are also several abstracts that utilize data from the [MOMENTUM study](#), which is designed to build a robust body of real-world clinical data and insights and facilitate understanding of how Elekta Unity may be deployed in clinical practice to improve patient outcomes.”

Mr. Brown highlighted several abstracts that exemplify the innovative approaches that members of the MR-Linac Consortium are pursuing to optimize the clinical use of Elekta Unity in real-world settings:

### [Radiographer-led online image guided adaptive radiotherapy: A qualitative investigation](#)

To maintain and increase uptake of MRgRT’s cutting-edge technology, traditional roles and responsibilities for radiographers, clinicians and physicists may need to evolve. This abstract describes an effort to provide an in-depth understanding and subsequent impact of the roles required to deliver MRgRT using Focus Group Interviews. Thirty participants took part (Radiographers: n=18, Physicists: n=9 and Clinicians: n=3), and the consensus among the group was to move toward a radiographer-led process with training preferably delivered in a blended way, both before and during treatments. The authors conclude that roles must be created with sufficient support and robust governance to enable evaluation of effectiveness, impact, ongoing sustainability, and responsiveness. A training framework created collaboratively with all stakeholders and professions involved would ensure consistency in skills and knowledge.

### [First results from the national network for quality assurance of MR images in RT in Denmark](#)

MRI images are less geometrically accurate compared with CT images, which can impact radiation dose delivery in MRgRT. This abstract describes the first results from a Danish national network for quality assurance (QA) of MR images used in radiation therapy in Denmark. A general MRI sequence was used to test the geometric accuracy of MRI scanners (n=8) and MR-linacs (n=2) at seven of eight Danish radiation therapy centers and one radiology department. Except for one MRI scanner, the results were below 0.43 mm within 200 mm diameter spherical volume and below 1.2 mm for a 350 mm diameter spherical volume (DSV). No dependence on magnetic field strength was seen. These findings demonstrate both the ability to deliver an MR-led precision radiation therapy workflow and the value of QA systems in optimizing MRgRT.

[MR-guided SBRT for localized prostate cancer: the first results from the MOMENTUM study](#)

As the first high-field MR-guided radiation therapy system, Elekta Unity enables new treatment approaches for a broad array of cancers, including prostate cancer. To ensure that the promise of this technology is fully realized, the MR-linac Consortium launched the [MOMENTUM study](#), which is designed to build a robust body of real-world clinical data and insights regarding implementation and use of Elekta Unity. This abstract describes the first data output from the MOMENTUM study, and includes short-term results (three and six months of follow-up [FU]) for 156 patients with prostate cancer treated with ultrahypofractionated radiation therapy (5 x 7.25 Gray). No grade  $\geq 3$  genitourinary or gastrointestinal toxicity was reported, and no significant deterioration of patient-reported outcomes scores were observed. The percentage of men reporting no difficulty getting or maintaining an erection remained constant throughout FU (44.4% at baseline, 40.0% at 3 months FU, and 42.9% at 6 months FU). These findings support the safety and efficacy of ultrahypofractionated radiation therapy delivered with Elekta Unity for the treatment of prostate cancer.

[Repeatability of diffusion-weighted MRI in head and neck cancer at a 1.5 T MR-Linac](#)

For imaging biomarkers acquired on MR-Linacs to be useful they need to be accurate, repeatable on individual patients, and reproducible across different MR-Linacs. The aim of this study was to determine the repeatability of apparent diffusion coefficient values derived from diffusion-weighted MRI in patients with head and neck cancer acquired on Elekta Unity. When analyzed at the Volume of Interest level the within subject coefficient of Variation ranged between 3.3% in the parotid glands and 8.3% in the GTV. These are promising results and support further development towards quantitative MRI for online adaptive RT.

To learn more about Elekta Unity, visit [elekta.com/Unity](http://elekta.com/Unity).

*Elekta Unity has CE mark and 510(k) clearance but is not available in all markets.*

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**About Elekta**

For almost five decades, Elekta has been a leader in precision radiation medicine. Our more than 4,400 employees worldwide are committed to ensuring everyone in the world with cancer has access to – and benefits from – more precise, personalized radiotherapy treatments.

Headquartered in Stockholm, Sweden, Elekta is listed on NASDAQ Stockholm Exchange.

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