Press release: September 26, 2019

Multiple abstracts presented at ASTRO demonstrate the technical capabilities and clinical utility of the Elekta Unity MR-linac system

Elekta Unity enables anatomic adaptive paradigms while establishing the foundation for biological adaptive paradigms that are the next evolution of precision radiation medicine

STOCKHOLM – Elekta (EKTA-B.ST) today announced that its Elekta Unity magnetic resonance radiation therapy (MR/RT) system was featured in 21 abstracts at the American Society for Radiation Oncology (ASTRO) Annual Meeting, which took place September 15-18 in Chicago. Elekta Unity is a high-field MR/RT system that allows clinicians to see and track difficult-to-visualize soft tissue anatomies in real-time during radiation dosing. The data presented at ASTRO describe clinical experience with Elekta Unity in the year since the first patient was treated on the system.

“The Elekta Unity MR-Linac abstracts presented at ASTRO add to the existing body of literature, which now comprises more than 210 peer-reviewed publications demonstrating the current value and future potential of high-field MR-guided radiation therapy,” said Richard Hausmann, President and CEO, Elekta. “The initial clinical experience with Elekta Unity is consistent with our expectations of how treatment adaption based on daily anatomical changes would improve the safety and efficacy of radiation therapy. The clinical data also support the use of Elekta Unity in the treatment of cancers that are not amenable to traditional forms of radiation therapy. The technical studies continue to validate the benefits that Elekta Unity’s anatomic adaptive paradigms provide today while demonstrating its future potential to enable the biological adaptive paradigms of tomorrow.”

Kevin Brown, Distinguished Scientist, Elekta, highlighted several abstracts that are emblematic of the clinical value that Elekta Unity can provide:

- *Initial clinical experience of stereotactic body radiation therapy (SBRT) for liver metastases, primary liver malignancy, and pancreatic abdominal nodal recurrences with 4D-MRI based online adaptation and real-time MRI monitoring using a 1.5 Tesla MR-linac*[2]
  Dr W. Hall, Medical College of Wisconsin, presented their initial experience treating ten patients for both liver and abdominal tumors using Elekta Unity. Adaptive plans were based on pre-beam motion-averaged or mid-position images derived from respiratory-correlated 4D-MRI. Dr. Hall reported changes observed in the quantitative diffusion-weighted images acquired during plan adaptation. These data demonstrate that treatments on the Elekta Unity system were well tolerated by all patients and that quantitative MR imaging can be acquired during treatment sessions.

  Dr. Hall also noted that these patients are being accrued in the MOMENTUM study with the goal of learning about the impact of MR Linac.

- *MRI response assessment during radiotherapy for head and neck squamous cell carcinomas*[3]
  B. Peltenburg, UMC Utrecht, used serial T2 weighted MR images acquired on Elekta Unity to evaluate treatment response in head and neck tumors treated with

(chemo)radiotherapy. They report the treatment response observed in the T2 images for twenty-five patients with stage II, III or IV head and neck squamous cell carcinoma were included in the PREDICT study. The authors conclude that the high-quality MR images that Elekta Unity provides make on-line MR guided adaptation of the tumor volumes a promising tool for future treatment of head and neck cancer by providing early recognition of patients with poor response to treatment and allowing treatment modification.

- *The PRISM trial – first UK experience of MRI-guided adaptive radiotherapy*[4]
  This abstract reported data from the first five patients treated in the PRISM (Prostate RT Integrated with Simultaneous MRI) trial, which is designed to assess the feasibility, safety and tolerability of MRI-guided radiation therapy in the treatment of prostate tumors. At every fraction a new daily plan was created. RT delivery was carried out with real-time cine MRI. Results show that treatment was well tolerated with no unexpected toxicity, and all patients received all fractions on Elekta Unity with a new online plan in 99/100 fractions. This preliminary experience supports the feasibility of daily online replanning of prostate MRIgRT.

To learn more, visit elekta.com/Unity.

**Elekta Unity is pending a new 510(k) premarket clearance for diffusion-weighted imaging.*

[1] Jensen HR, Thomsen JB, Chrstiansen RL, Bertelsen A, Bernchou U, Brink C and Mahmood F. *International Journal of Radiation Oncology*Biology*Physics. 2019 Sept 1; 105(1):s239.* https://doi.org/10.1016/j.ijrobp.2019.06.348

[2] Hall WA, Straza Jr MW, Chen X, Mickevicius N, Erickson BA, Schultz CJ, Ahunbay EE, Li A and Paulson ES. *International Journal of Radiation Oncology*Biology*Physics. 2019 Sept 1; 105(1):s90. https://doi.org/10.1016/j.ijrobp.2019.06.564*

[3] Peltenburg B, Philippens M, de Bree R and Terhaard C. *International Journal of Radiation Oncology*Biology*Physics. 2019 Sept 1; 105(1):s740-741. https://doi.org/10.1016/j.ijrobp.2019.06.844*

[4] Pathmanathan A, Bower L, Creasey H, Dunlop A, Hall E, Hanson I, Herbert T, Lawes R, Mcquaid D, McNair, Mitchell A, Murray J, Ofuya M, Parker C, Rossan J, Smith G, Huddart RA, Oelfke U, Nill S and Tree A. *International Journal of Radiation Oncology*Biology*Physics. 2019 Sept 1; 105(1):s301. https://doi.org/10.1016/j.ijrobp.2019.06.1856*

# # #

For further information, please contact:
Oskar Bosson, Global EVP Corporate Communications and Public Affairs
Tel: +46 70 410 7180, e-mail: Oskar.Bosson@elekta.com
Time zone: CET: Central European Time

Raven Canzeri, Global Public Relations Manager
Tel: +1 770 670 2524, e-mail: raven.canzeri@elekta.com
Time zone: EST: Eastern Standard Time

About Elekta
For almost five decades, Elekta has been a leader in precision radiation medicine. Our nearly 4,000 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.
Visit elekta.com or follow @Elekta on Twitter.