

## Press Release

San Francisco, CA, USA, Sept 28, 2025

Annual Meeting of the American Society for Radiation Oncology (ASTRO)

### Siemens Healthineers Presents Photon-Counting CT Scanner Designed for Radiation Therapy Planning Support in Cancer Patients

- **Naeotom Alpha.Prime for radiation treatment planning offers photon-counting technology for high accuracy**
- **Novel technology delivers enhanced image contrast and resolution for confident decisions**
- **New scanner complements existing CT portfolio for radiation therapy**

At this year's Annual Meeting of the American Society for Radiation Oncology, Siemens Healthineers is showcasing its photon-counting CT scanner for use in radiation therapy (RT) imaging. Naeotom Alpha.Prime for RT is equipped with a novel cadmium telluride (CdTe) crystal detector that adds a wealth of new clinically relevant information and improves image resolution and contrast, paving the way for precise radiation therapy. CT is a key modality in RT because it provides very detailed three-dimensional images of a patient's anatomy and helps calculate how radiation will interact with various tissues, enabling accurate dose calculation.

Siemens Healthineers introduced the world's first photon-counting computed tomography (PCCT) scanner in 2021. Since then, PCCT has successfully arrived in radiology departments across the globe. As a next step and in co-creation with several clinical partners around the world, Siemens Healthineers has transferred all RT-specific features to photon-counting CT to fully leverage its advanced imaging capabilities for treatment planning. By transferring prescriptions and scanning requirements from Oncology Information System ARIA CORE<sup>1</sup> directly to Naeotom Alpha.Prime, a digital workflow is established. This leads to an automatic selection of the corresponding RT scan protocol, thereby further enhancing the entire radiation therapy simulation process. Patients who receive radiation therapy can benefit from optimized treatment plans resulting from additional clinically relevant information from a single scan, and tumors can be targeted for accurate radiation therapy.

“Photon-counting technology marks a significant leap in radiotherapy imaging. With Naeotom Alpha.Prime for RT, we bring this innovation into clinical practice – allowing for more detailed images providing additional information for treatment planning”, said Gabriel Haras, head of Cancer Therapy Imaging at Siemens Healthineers. “At Siemens Healthineers, we are committed to expanding access to advanced imaging for radiotherapy teams and their patients, in line with our vision of a world without fear of cancer.”

Hrvoje Kaučić, MD, Chief Oncologist at Radiochirurgia Zagreb, Croatia, who has been working with the new scanner in RT for the past six months, said: “Compared to previous images, those acquired with our new photon-counting CT scanner show considerably greater detail. For instance, we can now detect very small liver lesions, as small as 4 mm, on post-contrast images. The enhanced visibility provided by Naeotom Alpha. Prime in RT enables us to use much narrower clinical margins – ultimately leading to improved patient outcomes.”

The products and systems mentioned herein are not commercially available in all countries. Due to regulatory reasons their future availability cannot be guaranteed.

The statements by Siemens Healthineers’ customers described herein are based on results that were achieved in the customer's unique setting. Because there is no “typical” hospital or laboratory and many variables exist (e.g., hospital size, samples mix, case mix, level of IT and/or automation adoption) there can be no guarantee that other customers will achieve the same results.

<sup>1</sup> Availability with 3rd party OIS systems to be clarified by customer with corresponding OIS vendor. Requires syngo CT VB20 and ARIA 18.1 MR1 or higher (incl. ARIA Documents Workspace); Requires VAIS 1.8 or higher; Requires FHIR4ARIA 4.5 or higher

A press picture is available here:

<https://www.siemens-healthineers.com/press/photon-counting-radiation-therapy>

Further information on photon-counting CT can be found here:

<https://www.siemens-healthineers.com/radiotherapy/ct-for-rt/naeotom-alpha-prime-rt>

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