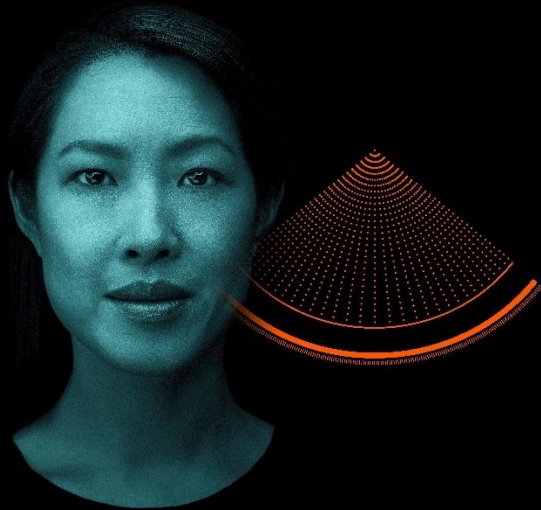
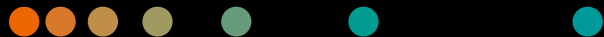


Ultra-high resolution photon-counting detector CTA of the head and neck: Image quality assessment and vascular kernel optimization

NAEOTOM Alpha Publication Summary



Photon-counting is NAEOTOM



Key findings of the case study



“Median overall **image quality** for the reference reconstruction was 3 (IQR, 3-3) for both readers, and for **UHR was highest for Bv64** [5 (IQR, 5-5)] for both readers.”



“Median **small-vessel visualization** for the reference reconstruction was 1 (IQR, 1-2) for both readers, and for **UHR was highest** for Bv76 [5(IQR, 5-5)] for reader 1 and Bv76 [5(IQR, 5-5)] or Bv80 [5(IQR, 5-5)] for reader 2.”



“Median **calcified plaque blooming** artifact for the reference reconstruction was 1 (IQR, 1-2) for both readers, and for **UHR was highest** for Bv72 [5 (IQR, 4-5)] and Bv76 [5 (IQR, 4-5)] for both readers.”

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UHR: Ultra-high resolution
CTA: CT angiography

PCD-CT: Photon-counting detector CT
EID: Energy-integrating detector

NAEOTOM Alpha is not commercially available in all countries. Its 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 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.

*“UHR-PCD CTA yielded **reduced blooming artifact** from calcified plaques or stents and **improved soft plaque and small-vessel visualization.**”*

*“UHR PCD CTA with targeted kernel selection may **address challenges** currently encountered when using conventional EID CTA for evaluation of the head and neck vasculature.”*

*“The present study used a smaller slice thickness of 0.2 mm and yielded a **substantially lower radiation dose** (mean CTDIvol, 15.7 mGy).”*