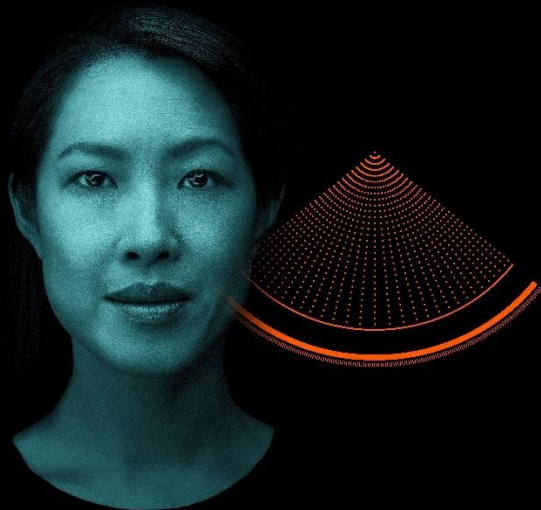
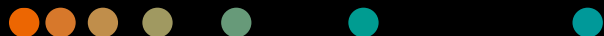


## Synthetic hematocrit from virtual non-contrast images for myocardial extracellular volume evaluation with photon-counting detector CT

### NAEOTOM Alpha Publication Summary



Photon-counting is NAEOTOM



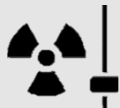
#### Key findings of the case study



"Myocardial ECV was computed using the synthetic hematocrit and compared with the ECV using the blood hematocrit as a reference."



"Virtual non-contrast images from cardiac late enhancement scans with photon-counting detector CT allow the calculation of a synthetic hematocrit, which enables accurate computation of myocardial extracellular volume."



"Synthetic hematocrit derived from VNC images enables accurate computation of myocardial extracellular volume (ECV), potentially obviating the need for additional blood tests or repeat imaging, thus reducing the need for further radiation exposure."

**Authors:** Mergen, V., Eur Radiol. 2024

**Institute:** University Hospital Zurich, Switzerland

<https://doi.org/10.1007/s00330-024-10865-7>

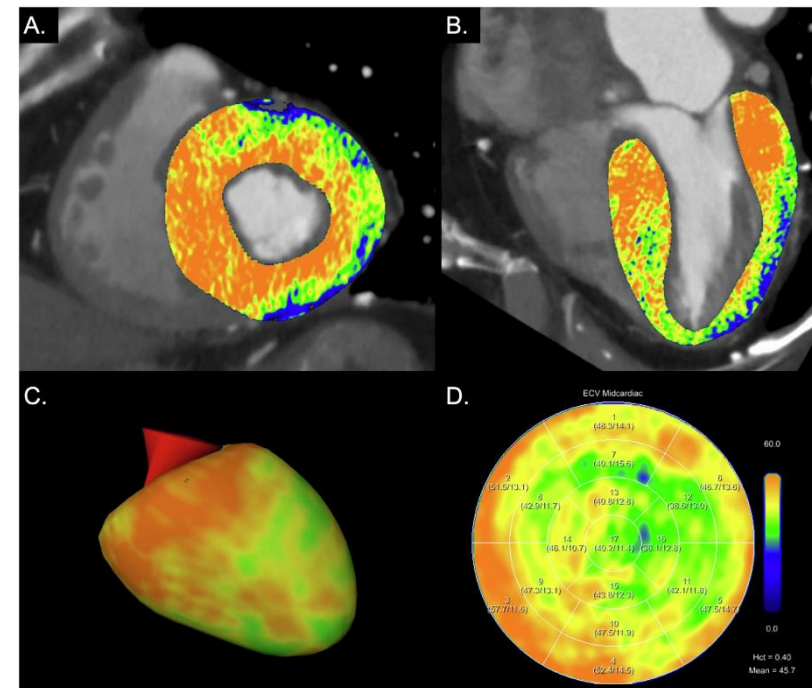
ECV: Extracellular Volume  
VNC: Virtual non-contrast

PCD-CT: Photon-counting detector CT

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.

*"Synthetic hematocrit calculated from VNC images enables an **accurate computation of myocardial ECV** with PCD-CT."*



Myocardial extracellular volume (ECV) computation in an 84-year-old male patient with severe aortic stenosis.