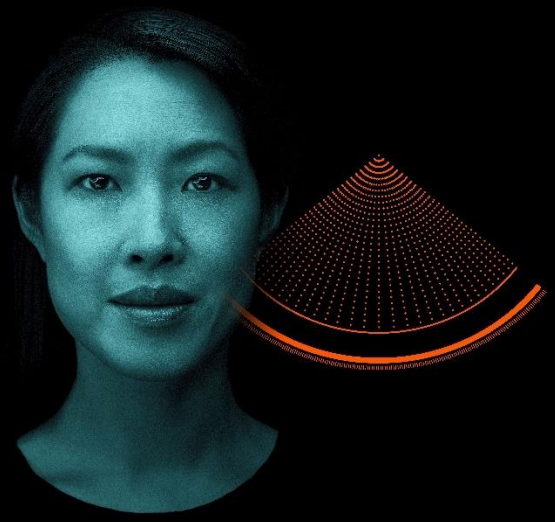
A prospective study of the diagnostic performance of photon-counting CT compared with MRI in the characterization of renal masses

NAEOTOM Alpha
Publication Summary



Photon-counting is NAEOTOM

Key findings of the case study

- "The inter-reader reliability and per-RCC sensitivity of PCCT scans acquired on an investigational whole-body PCCT were comparable to MRI scans in detecting and characterizing renal masses."
- "Radiologists had a similar level of performance in classifying renal lesions in PCCT and MRI scans, despite the presence of additional sequences allowing tissue characterization in MRI."
- "Both readers had similar intrareader per-RCC sensitivity in detecting neoplastic renal lesions on PCCT and MRI studies (R1: 94% vs 90%, P = 0.5; R2: 73% vs 79%, P = 0.13)."

*"In conclusion, this prospective study on the feasibility and per RCC sensitivity of PCCT scans showed that it was **comparable to MRI scans** in identifying and qualitatively characterizing a wide range of renal cancer subtypes. Further advantages in PCCT over MRI studies may be realized with optimization of scan timing and imaging parameters along with quantitative approach toward lesion characterization through radiomics."*

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RCC: Renal cell carcinoma
MRI: Magnetic resonance imaging
PCCT: Photon-counting CT

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