Flow Measurement With Dual Energy CT

Tech ID: 33871 / UC Case 2024-9AQ-0

BRIEF DESCRIPTION

An innovative technology that uses dual energy CT to measure blood flow in organs, offering a non-invasive, accurate assessment of diseases like INOCA.

FULL DESCRIPTION

This technology leverages dual energy CT to accurately measure the blood flow in various organs such as the heart, lungs, kidneys, liver, and lymphatic system, following a standard contrast injection similar to CT angiography. It aims to provide a more accurate functional assessment of diseases, overcoming limitations of current methods like catheter-based approaches, PET, and CMR by offering a non-invasive, less risky, and potentially more cost-effective solution. The technology addresses common issues such as motion misregistration artifacts and the need for absolute flow measurement in disease assessment.

SUGGESTED USES

- Non-invasive diagnostic tools for cardiovascular diseases
- Functional assessment of organ diseases in medical imaging centers
- Advanced imaging technology for research institutions studying organ perfusion
- Development of more accurate and patient-friendly imaging solutions in healthcare technology
- Enhancement of clinical workflows through automated image segmentation and analysis

ADVANTAGES

- Non-invasive and less risky compared to catheter-based approaches
- Overcomes limitations of PET and CMR such as claustrophobia, cost, radiation dose, and availability
- Capable of providing both anatomical and pathophysiological information
- Addresses motion misregistration artifacts through dual energy CT technology
- Automates segmentation based on dual energy material decomposition, improving clinical workflow
- Applicable with all scanners capable of dual energy CT, enhancing accessibility

PATENT STATUS

Patent Pending

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OTHER INFORMATION

CATEGORIZED AS

- **Imaging**
  - Medical
- **Medical**
  - Imaging
  - Other
  - Screening

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