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Towards clinical implementation of quantitative PET and SPECT imaging

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STELLINGEN

Behorende bij het proefschrift

Towards Clinical Implementation of Quantitative PET and SPECT Imaging

1. The slow accumulation of clinical evidence hampers further implementation of quantitative PET and SPECT in clinical care, limiting their benefits to improve patient outcomes.
2. Given complexity to study kidney hemodynamics non-invasively, [^{82}Rb]Cl PET/CT offers a promising tool to assess renal perfusion. - *This Thesis*
3. Advancing the clinical use of quantitative [^{18}F]FDG PET in long COVID care requires a deeper understanding of its underlying disease mechanisms. - *This Thesis*
4. The clinical introduction of quantitative SPECT could enable therapy response monitoring in the treatment of coronary artery disease. - *This Thesis*
5. High-sensitivity PET scanners should be used to shorten scan duration or lower injected radiopharmaceutical activity, potentially improving patient experience, safety and sustainability while maintaining the required image quality.
6. The clinical implementation of semi-quantitative SPECT parameters using [$^{99\text{m}}\text{Tc}$] Tc-sestamibi could enable response prediction in patients with locally advanced breast cancer. - *This Thesis*
7. Technical physicians play a key role in optimizing and improving the efficiency of complex technological applications in medical imaging.
8. Outdated clinical guidelines delay the implementation of advanced nuclear imaging technologies.
9. Absolute freedom leads to a loss of direction and purpose. - *Based on a quote by Franz Kafka "Freedom in research requires clear direction and strong choices"*
10. Each generation tends to overestimate its own intelligence and underestimate that of others. - *Based on a quote by George Orwell*