



IMAGING

Quantitative Imaging for Personalized Cancer Medicine

MISSION AND OBJECTIVE

The Quantitative Imaging for Personalized Cancer Medicine (QIPCM) team's mission is to provide end-to-end medical imaging solutions to help clinical trials achieve improved consistency and reliability in study data. To realize this objective, QIPCM has established the required infrastructure and support services for international multi-centre clinical trials.

RESEARCH INTERESTS AND EXPERTISE

Our team of imaging specialists includes medical physicists, radiation oncologists, research associates, IT and technologists - all with expertise in the quantitative imaging realm. Our current areas of research interest include, but are not limited to, quantitative imaging including scanner QA and protocol development, hypoxia imaging, functional MR, perfusion imaging and PET/MR.

CAPABILITIES

QIPCM Services:

- Centralized data repository for multi-centre clinical trials
- Data anonymization
- Scanner QA
- Imaging protocol development
- Image analysis
- Remote data access through a Windows virtual machine (commercial image processing software available)

The QIPCM clinical trial data archiving and analysis platform consists of a customizable image anonymizer and secure transport pipeline (RSNA's Clinical Trial Processor), a centralized data repository located within the University Health Network (UHN) firewall and remote access through virtual infrastructure for analysis and review. This unique setup ensures that images are anonymized at the trial site and no personal health information is transmitted over the Internet. The anonymized images received from the remote sites undergo image quality control before they are subsequently stored on the clinical trial picture archiving and communication system (PACS) where they are subject to trial-based permission controls.

In addition to the data storage and review platform, a suite of quantitative imaging services are available.

TRACK RECORD

The platform serves 25 clinical trials, 18 of which are currently open and active. These trials span 14 hospitals and imaging centres in Canada and the United States. The image store currently holds over 2.45 million individual tomographic slices from over 800 patient exams. Additionally, QIPCM has provided PET scanner QA services for three different multi-centre trials at 10 different sites across North America as well as PET/MR commissioning services within UHN.

CONTACT INFORMATION

TECHNOLOGY SUB-PROGRAM
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