

Q.A. Confidential - is it time to ditch the spreadsheets for nuclear medicine quality assurance testing?"

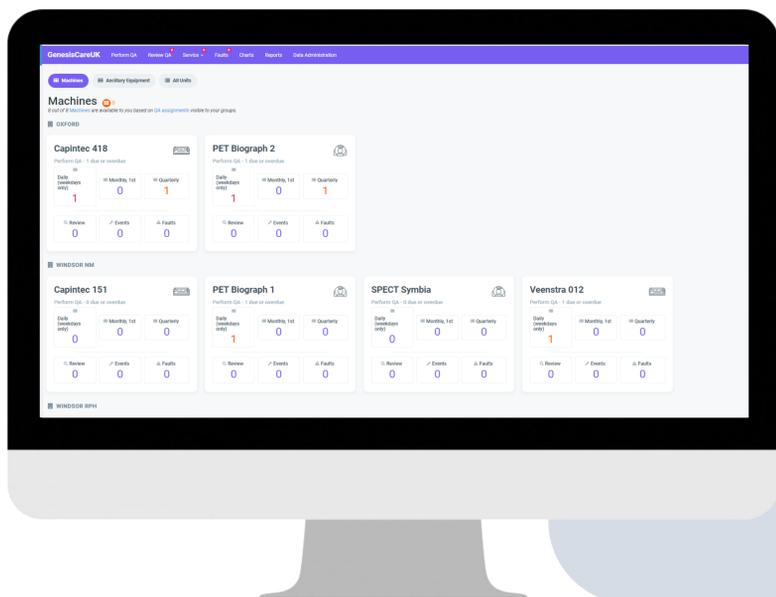
Nathaniel Scott, *GenesisCare UK*

The Aim

Many nuclear medicine departments rely on excel spreadsheets to track and perform QA tests. These spreadsheets are time consuming, have limited functionality and are error prone. We aimed to **identify and implement a QA platform** that would replace the need for spreadsheets, and significantly improve nuclear medicine QA management across multiple GenesisCare sites.



Requirements: Customisable . User Friendly . QA Scheduling . Trend Analysis . Multisite . Vendor Independent



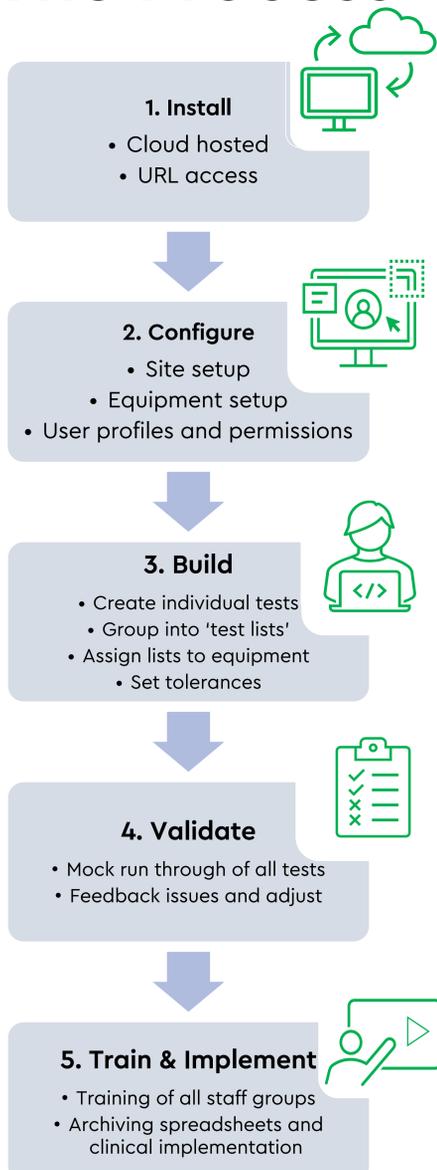
The Software



We implemented a comprehensive cloud-based quality assurance platform called **RadMachine**. This is Radformation's commercial product built off of QATrack+; an open-source software that has been widely used for quality assurance of radiotherapy equipment. This was the **first implementation** of the commercial platform in a nuclear medicine setting.

Tests were created and implemented for a range of nuclear medicine equipment including PET-CT, SPECT-CT, radionuclide calibrators, dose rate meters and contamination monitors.

The Process



The Features

- Data Administration** (Screenshot of menu)
- Backend Configuration** (Screenshot of configuration page)
- QA Reports & audit** (Screenshot of report)
- Python scripting capabilities** (Screenshot of code)
- Customisable QA Scheduling** (Screenshot of calendar)
- Automated plots of QA results** (Screenshot of line graph)
- Automated email notifications** (Screenshot of email notification)

The Results

- 20** Spreadsheets relating to equipment quality assurance replaced
- 15** Pieces of equipment set-up with testing schedules (PET-CT, Gamma Camera, Calibrators, Monitors)
- 3** Sites using software clinically
- >200** Individual tests created

Challenges

- No previous use of system in nuclear medicine for reference
- Real-time decay calculations
- Understanding test structure

Future

- Utilise fault logging and service event features
- Incorporate other diagnostic imaging equipment into platform

Conflict of Interest Declaration

Radformation have funded my conference fee for attendance at BNMS 2023 Spring Meeting

