Optimizing the patient pathway with MOSAIQ® IQ Scripts™

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# About

**St. James’s Institute of Oncology**

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<th>Location</th>
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| Leeds Teaching Hospitals  
Leeds, Yorkshire, UK | 12 Elekta linear accelerators—10 clinical, 2 research  
Research linacs  
- Synergy®, HexaPOD™ Couchtop, AlignRT,  
VMAT, Research MOSAIQ® server  
- Linac 1: Supports clinical trials, clinical R&D, SBRT, VMAT  
- Linac 2: Clinical Agility MLC, Physics hardware evaluations |
The St James’s Institute of Oncology, based at The Leeds Teaching Hospitals NHS Trust, UK is a purpose-built state-of-the-art oncology center with 10 floors dedicated to exceptional cancer care for patients throughout the region and beyond. Leeds Teaching Hospital’s goals are to be the hospital of choice for patients and staff, and to achieve the best possible clinical outcomes for every patient, every time, across all services.

Background

St. James’s has been using MOSAIQ® since 2006 and most recently implemented a beta version of MOSAIQ v2.41 on their research suite.

MOSAIQ provides the Radiation Oncology Management System for St. James’s. It manages all aspects of radiation oncology treatment and is the primary data source for treatment verification, scheduling and capturing of HRG codes; used for costing and reporting. In addition, Leeds employs MOSAIQ Workflow Management Tools to provide functions such as eBooking within MOSAIQ via the use of assessment forms, and process control through extensive use of Quality Checklists (QCLs). The Crystal Reports tool is used to inform workflow management and for other reporting tasks.

The development of MOSAIQ at Leeds is tied to a radiotherapy service strategy, which in part is designed to model patient related processes within MOSAIQ. An early priority was to develop an electronic referral system within MOSAIQ, called “eBooking.”

“Collaborating with Elekta on MOSAIQ IQ Scripts has enabled St. James’s to identify multiple ways of improving workflow and efficiency in the department, which can only be a good thing for both patients and ourselves.”

Peter Enever
Advanced Practitioner
St. James’s Radiation Oncology Management System Goals

The St James’s radiotherapy service strategy has five goals:

- Improve the patient experience
- Reduce the likelihood of clinical incidents
- Measure and improve clinical outcomes
- Provide high quality data for analysis and review
- Improve the efficiency of the Radiation Oncology Services

Projects at St. James’s have their priority assessed against these goals, with the eBooking project scoring well.

Stage One—eBooking

Implementation of the eBooking system in July 2010 significantly improved the experience of radiotherapy patients by expediting referral processes. A key objective was to ensure it was a cost-neutral solution. So, St. James’s staff decided to use existing MOSAIQ functionality, customizing an assessment form for electronic referrals.
The Challenge

Peter Enever, Advanced Practitioner at St. James’s, explained, “With our radiotherapy referrals, the old paper method was extremely protracted and complex, and it involved too many people and processes. It also crossed many different staff groups with lots of handover points. This is where the errors occurred. We recognized the need to improve the old system and began to explore MOSAIQ as a true electronic workflow tool, using assessments and quality checklists.”

St. James’s used QCLs in MOSAIQ to reduce the radiotherapy referrals workflow from 23 steps to just 12. Peter continues, “It was a significant step forward with the new process and a major reduction in the number of steps that reduced the referral pathway from up to 7 days—to a maximum of 24 hours. “However, we believed this process was still labor intensive and still relied heavily on specialist knowledge and staff intuition. Further automation was required to take this a step further.”

Stage Two: IQ Scripts Editor

The release of the MOSAIQ IQ Scripts Editor in MOSAIQ version 2.41 will provide an opportunity for St. James’s to enhance eBooking. With MOSAIQ IQ Scripts, the steps in the workflow will be reduced to just four (see diagram below).

Bob Wheller
Head of Radiotherapy Technology Services
Upon implementation of IQ Scripts Editor, the patient will be registered and a pre-booking QCL appended with assigned Assessment form (IQ Script trigger). Doctors no longer need to select the correct patients. The item will be displayed using a QCL as a prompt. The Completion of Assessment triggers Booking QCL items and, from this point onward—with just QCL after QCL and a few Assessments added—the workflow is complete. There is no requirement for a booking report or complex use of Assessment approval statuses.

Benefits of MOSAIQ IQ Scripts for St. James’s

- Reduction in the number of “clicks”
  - Speeds up the process
  - Helps people engage with MOSAIQ
  - Reduces staff workload
- Greater automation means fewer steps, which means fewer errors
- Reduction in resources required
- Supports patient safety through automation
- Removal of patient selection

“Appending massive lists of QCL items is a thing of the past,” says Enever. “With MOSAIQ IQ Scripts, users can append a single item at the start of the process and that’s all that is required.”

Further Examples of IQ Scripts

St. James’s has implemented several instances of IQ Scripts to enhance workflow. Enever notes, “We are now using an SBRT assessment form clinically. It was designed and implemented within a week of installation of the IQ Script functionality. The assessment now appears as a separate pane automatically in the MOSAIQ record with just one click. Any staff member can now complete a Patient Assessment regardless of MOSAIQ access rights, as access rights to Assessment forms are determined within the IQ Script.

“The underlying technology of MOSAIQ IQ Scripts enables us to customize MOSAIQ to suit our needs and create and add protocols to support the complete treatment workflow.”

Baz Rodger
Deputy Head of Radiotherapy
Next Steps

Staff maintain that IQ Scripts has huge potential to automate tasks and provides an ideal tool to help St. James’s achieve its radiotherapy service strategy and the associated radiation oncology management system development goals.

Bob Wheller, Head of Radiotherapy Technology Services, explains. “A key use of IQ Scripts moving forward will be to reduce waste through resource allocation and utilizing better staff/skill mix—as well as using scripting to provide intelligent booking to further reduce patient wait times.”
For almost five decades, Elekta has been a leader in precision radiation medicine.

Our nearly 4,000 employees worldwide are committed to ensuring everyone in the world with cancer has access to—and benefits from—more precise, personalized radiotherapy treatments.