



Quality Standard for Imaging

Version 1.0



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Contents

Background	3
QSI 2026 in more detail	3
XR Standards	4
Modality standards	5
Sustainability – Introduction	6
AI	7

Background

The Quality Standard for Imaging (QSI) has undergone a significant review in 2025. QSI 2026 has streamlined the standard, improved the structure, removed duplication and added new standards.

QSI 2026 in more detail

Some of the standard names have been changed to make them clearer. Several overlapped standards have been amalgamated to reduce duplication and crossover, and the modality standards have been standardised, where possible, to ensure equivalence. The language has also been reviewed to improve clarity, consistency and inclusivity. “Indicative inputs” have been renamed “Suggestions” to discourage checklist-style use, with suggestions and notes categorised as “Must” for regulatory requirements, “Should” for professional best-practice guidance and “Could” for quality-improvement considerations. Notes have also been reordered into information for services, information for reviewers, links to resources and guidance, and links to closely associated standards.

XR Standards

XR Standards

The standards have been restructured to provide a better flow to the document and to help streamline the assessment process.

The following standards have been merged:

- Imaging service information and procedure-specific information
- Health and safety and hazardous substances
- Moving and handling and equipment for patients with obesity
- Quantification and equipment QC and QA
- Service leadership and modality specific leadership
- Service improvement and development plan
- KPIs and data collection
- Communication aids and additional needs
- All medicines management from modalities were incorporated into the main XR standard
- All Pathway and protocols in the modalities were incorporated into the main XR standard

The following standards were divided:

- IR(ME)R and IRR
- PACS and IT

11 new XR standards were added:

- Service culture
- Staff development
- Outsourcing and insourcing
- Sustainability – energy efficiency
- Sustainability – equipment, procurement and waste management
- Sustainability and service design
- AI governance and safety systems
- AI training and education
- AI development, procurement and implementation
- AI post-implementation surveillance
- Emerging technology and innovation

Two standards had an additional element added:

- Recruitment
- Image Quality and Optimisation – this standard was expanded to include image quality.

All other XR standards were reviewed, updated and strengthened if required. Links to relevant guidance and supportive resources have been reviewed and checked for the latest versions.

Modality standards

Modality standards

- All modality standards were streamlined and aligned where appropriate.
- All Contrast Media and renal functions and pathway and protocols standards were merged into the corresponding XR standards.
- Common to all modalities are the following categories:
 - Governance and safety systems
 - Staffing and training
 - Paediatric imaging
- All modalities, except CT, have environment and equipment
- Additional standards unique to a specific modality are:
 - Trauma Management – CT
 - Access and Admissions – IR
 - Management of Radioactive Pharmaceuticals and Radioactive Materials – NM

Expert review groups were recruited to assist with development of the two major additional areas.

The sustainability expert group provided the following context to highlight the importance for inclusion in QSI.

Sustainability – Introduction

The multiple impacts of climate change are converging to create an unprecedented threat to the health and survival of people around the world. In 2024, global annual mean surface temperatures exceeded pre-industrial levels by over 1.5°C for the first time on record, and the past 10 years were the hottest ever recorded¹. Throughout 2024, 152 record-breaking extreme weather events were registered across 61 countries, and life-threatening, extreme heat events are becoming more intense than previously predicted². The economic conditions upon which health depends are being disrupted, with potentially catastrophic impacts^{3,4}.

Despite the striking and growing risks that climate change continues to pose to human health, greenhouse gas emissions continue to rise unabated. Since the 29th Conference of the Parties (COP29) in November 2024, implemented policies and actions put the world on track to a potentially devastating 2.7°C of heating or more by the end of the century². At the time of writing (August 2026) the impact of the climate crisis is keenly felt within the UK with repeated severe heatwaves, extensive wildfires and widespread drought. Maintaining normal radiology services is becoming increasingly challenging with IT systems and MRI cooling mechanisms failing in the context of intense heatwaves.

Medical Imaging is estimated to contribute up to 1% of total global carbon emissions. In view of the severe, and increasingly apparent threat to human health posed by the climate crisis, the QSI requires that imaging departments engage with sustainability work with a similar commitment to that expected of radiation protection or MRI safety⁵. However, the suggestions in XR-3 also promote efficient use of resources as a matter of good clinical practice, alongside the consideration of the environmental impact. These elements together with the incorporation of the NHS' Net Zero ambition into legislation are strong supporting factors for aligning our practice with these core sustainability principles.

1. *The 2025 report of the Lancet Countdown on health and climate change* Romanello, Marina et al. *The Lancet*, Volume 406, Issue 10521, Dec 13 2025

2. *Climate change in the critical decade: A summary of the IPCC Sixth Assessment Report and its implications for the UK*. The Royal Society Nov 2022

3. *August 2026 climate and health round up* by Greta H Aug 11 2026

4. *Understanding the health impacts of the climate crisis* – ScienceDirect

5. *Climate Change and Radiology: Impetus for Change and a Toolkit for Action*, Brown et al, *Radiology* vol 307, number 4



These quality standards apply to the development, procurement, implementation, use, and ongoing evaluation of Artificial Intelligence (AI) technologies within imaging services. They cover all AI-enabled tools and processes that support clinical, operational, or administrative functions across the imaging pathway. This includes, but is not limited to:

Clinical decision support, including AI tools that detect, classify, prioritise, or quantify imaging findings.

Imaging acquisition and optimisation, such as AI enabled reconstruction, MRI acceleration software, and automated quality checks.

Workflow and pathway management, such as intelligent booking systems, triage algorithms, and patient-tracking technologies.

Data handling and integration, including AI-supported access to patient records, natural language processing tools, and automated report generation.

Non-clinical applications that influence service delivery, including administrative task automation or speech-recognition systems.

These standards apply to all staff groups involved in the use of AI within imaging services, including radiologists, radiographers, clinical scientists, operational managers, informatics teams, support and administrative staff and encompass the following:

- **Design and procurement** – ensuring technologies meet regulatory, safety, ethical, and technical requirements.
- **Deployment and integration** – ensuring safe implementation within existing imaging workflows, including interoperability with clinical systems.
- **Validation and monitoring** – ensuring performance is continuously assessed, including accuracy, bias, reliability, and clinical relevance.
- **Governance and oversight** – ensuring clear accountability structures, documentation, risk assessment, and patient transparency.
- **Review and decommissioning** – ensuring AI systems are updated or retired in a controlled and safe manner.

The Royal College of Radiologists, 63 Lincoln's Inn Fields,
London, WC2A 3JW, UK.

The Royal College of Radiologists is a Charity registered with
the Charity Commission No 211540.

+44 020 7405 1282

qsi@rcr.ac.uk

rcr.ac.uk/qsi

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