

Breast Imaging Department

Ionising Radiation (Medical Exposure) Regulations 2017 Regulation 6 Schedule 2 Employer's Procedures

(f) Procedure for the use of diagnostic reference levels	
Responsibilities relating to IR(ME)R procedures:	
Ensuring the required IR(ME)R procedures are in place	Worcestershire Acute Hospitals NHS Trust (WAHT)
Authorisation of Breast Imaging IR(ME)R procedures	Clinical Director of Breast Imaging
Development, review and amendment to this document	Superintendent Radiographer
Assisting in development, review and amendment to this document	Radiation Protection Supervisors
Governance pathway:	
Medical Physics Expert review (IRS)	9.12.2022
Submission to Breast Directorate for approval	11.1.2023
Circulation to Women and Children Division for information	1.3.2023
Circulation to Radiation Protection Committee for information	28.4.2023
Authorised by Clinical Director of Breast Imaging	1.3.2023

Version No	Reviewed	Action	Next Review Date
1	9.12.22 IRS	Revision of format and IRMER audit	1.3.2026
2	12.7.2024 IRS JB 10.1.2025 JB	No changes Added process to update LDRL in mammo room and local rules	10.1.2026

Purpose

To review local Diagnostic Reference levels (DRL) and identify whether DRL have been consistently and significantly exceeded.

Scope

Medical exposures with locally or nationally established DRL.

Responsibility

Worcestershire Acute Hospitals NHS Trust are responsible for level at which DRL is set.

Doses will be reviewed by the RPS in conjunction with Medical Physics Expert and ratified at Radiation Safety Committee

Average results from dose audits will be compared to existing Local and National DRL to determine when action is required.

Practice

1. The DRL adopted are given in schedule 1 of this procedure Medical Physics Expert and relevant practitioners. The proposed DRLs should be ratified by the RPC.
2. Local DRL should be set (see e.g. IPEM Report 88- Guidance on the use of Diagnostic Reference Levels for Medical X ray examinations) and reviewed annually.
3. The person who approves a protocol for a particular examination should, propose an appropriate DRL in conjunction with the medical physics expert and relevant practitioners.
4. Local DRL are displayed above the console in all mammography rooms, in a position visible to the operator during exposure.
5. When LDRL are altered following MPE dose audit, RPS will ensure current LDRL is displayed in mammography rooms and update abridged local rules accordingly.

Periodic Monitoring

6. Dose monitoring will be carried out annually on each piece of equipment as per NHSBSP Dose Survey.
7. If periodic dose monitoring reveals doses that exceed DRL, these should also be investigated by the Superintendent Radiographer in collaboration with a Medical Physics Expert.

Corrective Action

8. The Superintendent Radiographer must implement appropriate corrective action where avoidable causes of excess doses are identified.

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Schedule 1 – Diagnostic reference Levels – Breast imaging

Examination: Mammogram

Valid reasons for justification

- Screening as part of NHSBSP
- Symptomatic, family history and Surveillance mammograms as per protocol
See appendix

Standard Projections

- Cranio-caudal
- Medio- lateral oblique

Additional Projections

- Cranio-caudal – magnification
- Medio-lateral oblique – magnification
- Lateral view - magnification
- Cranio – caudal – coned compression
- Medio – lateral oblique– coned compression
- Medio – lateral
- Latero – Medial
- Medially extended Cranio-caudal
- Laterally extended Cranio-caudal
- 3D Tomosynthesis Cranio-caudal
- 3D Tomosynthesis Medio-lateral oblique

National Diagnostic Reference Level (measured as mean glandular dose {mGy})

2.5 mGy per view for Breast Screening

Equipment	Local DRL mGy
GE Senographe Essential	1.70
GE Senographe Pristina	2.0

Appendix

Screening mammography and Assessment Imaging	M:\Acute\Radiology\BreastScreeningPOWCH\QMS\Core processes\12 General departmental procedures
<i>Symptomatic Imaging</i>	
<i>Surveillance Imaging</i>	
High Risk Surveillance Imaging	Protocols for surveillance of women at very high risk of developing breast cancer - GOV.UK (www.gov.uk) M:\Acute\Radiology\BreastScreeningPOWCH\QMS\Core processes\12 General departmental procedures