



Provincial Health Services Authority

HOME REPORTING PROCEDURE: BREAST SCREENING

(QUALITY MANAGEMENT – SG DG 210)

Summary of Changes

	NEW	Previous
BC Cancer	December 2023	

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1. Introduction

Breast Screening Program screening radiologists (Screeners) may choose to report screening studies from a [Home Review Workstation](#). [Home Reporting Settings](#) operate within the same oversight and responsibilities of the respective Centre Chief Screener and Centre Manager, as with conventional centre-based reporting.

1.1. Focus

The focus of this procedure is to provide guidance in set-up for [Home Review Workstations](#) for [Home Reporting](#) performed by Program Screeners.

1.2. Health Organization Site Applicability

All BC Cancer Breast Screening Centres with home reporting settings

1.3. Practice Level

- Breast Screening Program Chief Radiologists
- Breast Screening Centre Managers
- Breast Screening Program Screening Radiologists
- Breast Screening Quality Assurance Support Group
- All Breast Screening Centre Staff

1.4. Definitions

Centre-Based Reporting – Reporting participant studies with the use of a review workstation (RWS) through PACS/RIS and MagView systems, established in a fixed reading centre, at a health authority or community-imaging clinic (CIC).

Home Reporting – Reporting participant studies with the use of a home review workstation through PACS/RIS and MagView systems, established in a home reporting setting.

Home Reporting Setting – a personal environment (i.e. Radiologist's home office) located outside of the conventional centre-based reporting environment.

Home Review Workstations – a RWS used for reporting participant studies through PACS/RIS and MagView systems, established in a home reporting setting.

Virtual Private Network (VPN) – is an encrypted connection over the internet from a device to a network. The encrypted connection helps ensure that sensitive data is safely

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transmitted. It prevents unauthorized people from eavesdropping on the traffic and allows the user to conduct work remotely.

1.5. Need to Know

Privacy and Security considerations are subject to regulations of the source screening centre. Regional Health Authority and Community Imaging Clinic policies and procedures relating to privacy and security should be followed. Patient imaging and other information should not be stored in [Home Reporting Settings](#), as outlined in [PHSA Information Security Policy](#).

Screeners who report from home office settings must be mindful that there are inherent risks with accessing sensitive data in a home reporting setting such as unauthorized access, physical security, unsecure workspace etc. Physical measures and safeguards to protect privacy include (but are not limited to):

1. Protecting electronic devices and storage media containing Personal Information or Confidential Information against theft, loss, or unauthorized access,
2. Using available security systems (e.g. locking offices when not in use, activating alarm systems etc.),
3. Window coverings that prevent others from viewing computer screens.

IMIT Policies, Standards, and Guidelines must be abided by. Privacy & Security information for use of workstations, including consequences if there are breaches can be found in [VPP Information Security Policy](#).

The screener, chief screener and centre clerical staff must agree to an effective and secure means of communication to facilitate the following:

- Case worklist/collection(s) to be reported,
- Appropriate expectation of reporting deadlines, and
- Resolution of issues, such as incomplete patient details, exams & reporting amendments/addendums, which may be required.

The screener must maintain best practices of screening, such as appropriate reporting environment, availability of prior imaging, and batch reporting, as outlined in [SD 010 - Screener Interpretation of Mammogram Procedure](#).

Financial costs associated with [Home Reporting](#) are the responsibility of the screener and include but are not limited to:

- Requisite networking
- Software

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- Hardware
- Physicist calibration of monitors initially and annually
- Licensing and ongoing annual maintenance costs for MagView and PACS Integration
- CAR Mammography Accreditation Program (CAR-MAP)

1.6. Equipment and Supplies

In accordance with existing program accreditation by CAR-MAP, screeners must indicate the use of [Home Reporting](#) in their CAR-MAP profiles. This registration with CAR-MAP will then lead to further instructions on maintaining home RWS accreditation, including the following, and subject to revision:

- Home RWS performance standards ^{1, 2, 3}
 - i. Compliance with Canadian IHE standards
 - ii. Minimum of two 5 MP LCD monitors, or one LCD monitor of at least 10 MP
 - iii. Pixel pitch: Approx. 0.2 mm (>0.15) – as specified by manufacturer
 - iv. Bit depth: ≥ 12 bits (minimum display of 4096 levels of grey)
 - v. Ambient room illuminance: 25 – 75 lux
 - vi. Ambient room luminance: $\leq 0.25 L_{\min}$
 - vii. Luminance ratio: 250 - 450
 - viii. Luminance response (including screen reflection contribution): DICOM GSDF deviation $\leq 10\%$ (grey scale calibration)
 - ix. Min luminance (including screen reflection contribution): $\geq 1.2 \text{ cd/m}^2$
 - x. Max luminance (including screen reflection contribution): 450 cd/m^2 (must be $\geq 350 \text{ cd/m}^2$)
 - xi. Uniformity: <30% difference in luminance between display centre and corners
 - xii. Artifact free.
- Initial and annual medical physicist calibration
 - xiii. Qualified medical physicists may be identified by consulting:
 - **Website:** <https://ccpm.ca/uploads/60c771a26d56b.pdf>
 - **E-mail:** screeningadmin@bccancer.bc.ca
- Routine monitor Quality Control (QC) measures^{2,4}, such as TG18 test pattern confirmation, uniformity, and routine cleaning
- Additional requirement details of the CAR-MAP accreditation are available at: https://car.ca/wp-content/uploads/2021/12/RR-Position-Statement_forPDF-1.pdf

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2. Procedure

2.1. Steps and Rationale

Once a Screener has determined [Home Reporting](#) is their preferred method for reporting screening studies and it is agreed upon by their Reading Centre Chief Screener and Centre Management, then the procedure below must be followed.

Workflow Step	#	Procedure	Role
Develop home-reporting workflows	1.	Establish with their respective Reading Centre Chief Screener & Centre Manager: <ul style="list-style-type: none"> • The Reading Centre individual responsible for PACS worklist creation and management of screening cases to be read on the home RWS. • A secure communications process with centre clerks/centre management for any reporting related items or issues. • IMIT support contacts for PACS integration support of MagView issues/failures. • Quality Assurance and Quality Control checks and if required, consult with the Program Provincial Practice Leader and Client Service Manager. 	Screener
Notify Program	2.	Provide written documentation to the Screening Operations Director, prior to setting up or using a home reporting RWS, clearly stating the decision and acceptance of responsibilities listed in this procedure document.	Screener, Chief Screener & Reading Centre Management
	2.1	Request further details for clarity regarding security and privacy.	Operations Director or Delegate
Establish Home RWS	3.	Arrange for initial and annual testing of the home RWS by a qualified medical physicist, for maintaining CAR-MAP accreditation. Qualified medical physicists may be identified by consulting: <ul style="list-style-type: none"> ○ Website: https://ccpm.ca/uploads/60c771a26d56b.pdf ○ E-mail: screeningadmin@bccancer.bc.ca 	Screener

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	3.1	<p>Establish technical requirements including but not limited to:</p> <ul style="list-style-type: none"> • VPN supported by high-bandwidth internet connection. • Connections to PACS system at the corresponding Reading Centre in collaboration with local PACS admin • RWS PACS Hanging Protocols <p>Please refer to SG-DG 600 - Digital Mammography Display, Management and Archive for Image Interpretation Guidelines.</p> <ul style="list-style-type: none"> • Recommended PACS integration with MagView, in collaboration with local PACS admin from the respective screening centre. <p>For changes to software upgrades or changes to RWS equipment, refer to SG-DG 700 - Software Upgrades to Breast Imaging Systems Procedure.</p>	Screener
	3.2	Arrange and complete User Acceptance Testing (UAT) for the new workstation, including sign-off of PACS integration with MagView once functionality is complete with MagView set-up.	Screener
Quality Control (QC)	4.	Schedule and perform routine weekly, monthly, semi-annual, and annual Quality Control (QC) tests on RWS monitors for CAR-MAP Accreditation, which must include routine RWS monitor QC measures ^{2,4} , such as TG18 test pattern confirmation, uniformity, and routine cleaning.	Screener
Notify CAR-MAP	5.	<p>Indicate the use of home reporting in CAR-MAP online profiles.</p> <p>Additional requirement details of the CAR-MAP accreditation are available at: https://car.ca/wp-content/uploads/2021/12/RR-Position-Statement_forPDF-1.pdf</p>	Screener & Reading Centre Management

3. Related Documents and References

3.1. Related Documents

[SD 010 – Screener Interpretation of Mammogram Procedure SG 200 – Breast Screening Chief Screener Roles](#)

[SG-DG 400 – Breast Screening Standards for Review Workstations](#)

[SG-DG 600 – Digital Mammography Display, Management and Archive for Image Interpretation Guidelines](#)

[SG-DG 700 – Software Upgrades to Breast Imaging Systems Procedure](#)

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[PHSA Information Security Policy](#)

3.2. References

1. Integrating the Healthcare Enterprise, IHA Technical Framework Volume I, 2007.
https://www-pub.iaea.org/MTCD/publications/PDF/Pub1482Files/Annex_3_IHE_MammoExtract.pdf
2. Berns EA, Pfeiffer DE, Butler PF, et al. Digital Mammography Quality Control Manual. Reston, Va: American College of Radiology; 2018. https://www.acr.org/-/media/ACR/Files/Clinical-Resources/QC-Manuals/Mammo_QCManual.pdf
3. AAPM Report 270: Display Quality Assurance. American Association of Physicists in Medicine; 2019. https://www.aapm.org/pubs/reports/RPT_270.pdf
4. Martin J. Yaffe, Aili K. Bloomquist, and Gordon E. Mawdsley et al. "Quality control for digital mammography: Part II recommendations from the ACRIN DMIST trial", Medical Physics 33:737-752 2006.

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