ACR Digital Mammography
QC Manual

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University of Colorado Hospital
Denver Health Medical Center
Member, NMQAAC
Chair, ACR Subcommittee on Quality Assurance in Mammography and lead author of the ACR Digital Mammography QC Manual

Overview
• Welcome
• Introductions
• Phantom
• QC Program and Manual
• What’s Next for the ACR
ACR DM QC Manual – Status

- February 17, 2016 - FDA approved ACR's alternative standard allowing facilities to use new manual under MQSA
  - Only applies to FFDM systems without advanced imaging capabilities (i.e., tomosynthesis, contrast enhancement, etc.)
Strengths & Take Home Points

• QC Manual is comprehensive
• Phantom is of major importance
  • Most failures are artifacts
• Includes most “legacy” tests
• Includes most “current” Mfr Tests
• Accomodates Mfr specific test (where app)
• Accomodates growth of QC program
• Manual can realistically be implemented

ACR DM QC Manual

Published
July 29, 2016
ACR DM QC Manual Project

Subcommittee on Quality Assurance in Mammography of the Committee on Mammography Accreditation

- Eric Berra, PhD (chair)
- Jay Baker, MD
- Lora Ilarka, DO
- Lawrence Bassett, MD, FACR
- R. Edward Hendrick, PhD, FACR
- Debra Montisciulo, MD, FACR
- Doug Ptichter, MS, FACR
- Margaria Zuley, MD
- Christine Aden, RT(R)
- Shelli Dixon, RT(R)
- John Sandrick, PhD (MITA, retired)
- Robert Lizaonff, BS (MITA)
- Mouattafi Zehrouni (MITA)
- Priscilla Butler, MS, FACR (ACR Staff Member)
- Marion Boccon, RT(R) (ACR Staff Member)
- Pamela Platt, BSRT(R) (ACR Staff Member)

Digital Mammography in the US (as of 9/1/2016)

- 16,560 units at 8,748 facilities
- 12,601 FFDM units
- 3,703 DBT units
Quality Control: What It and Why Is It Important?

Primary Purpose

- Reduce exposure to patients and personnel
- Ensure adequate and consistent patient image quality
- Detect and correct for potential problems, before they impact patient image quality and care

- What it’s not:
  - Not a detailed technical evaluation of a unit
  - Not a detailed measure of a limits of a unit
  - Not the optimization of a unit
ACR DM QC Manual Project

- Subcommittee Goals:
  - Standardize all QC tests for all digital Mfr’s
  - Standardize test frequencies
  - Standardize performance criteria

ACR DM QC Manual Project

- QC Tests:
  - Tests come from a review of a variety of sources (MQSA, SFM, ACRIN DMIST, Manufacturer’s QC programs, MITA, European and other Int’l QC programs, subcommittee clinical experience, etc.)
  - Clinically relevant
  - User/operator friendly
  - Eliminate non-productive testing

- Just because you can test something, doesn’t mean you should!
ACR Digital QC Manual - Structure

- Radiologist’s Section
- Radiologic Technologist’s Section
- Medical Physicist’s Section
- Appendices
- **Clinical Image Quality Section (w/Patient Positioning and Compression and Clinical Image Quality Evaluation) will be revised at a later date and posted on ACR website**

The ACR DM Phantom Prototype
Phantom Prototype Design Principles

- Based on existing ACR Accreditation Phantom
- Similar imaging and scoring to current phantom
- Build on experience of QC techs and physicists at ~8,700 US facilities who already know how to use and score the existing phantom (~25,000+ techs)

Phantom Prototype Design Principles

- Can be used on both SFM & FFDM
- Total attenuation matched to current SFM phantom
  - Similar thickness
  - Similar total dose
- Permits testing of the MQSA 3.0 mGy dose limit (single CC view)
Proposed Scoring Changes

- Eliminate subtraction for artifacts
- Added a “Fail” for artifacts
- New pass/fail criteria
  - From: 4,3,3
  - To: 2,3,2
  - **But, objects are the same (effective) size as SFM Phantom

The ACR DM Phantom Prototype
Image of Entire Phantom

*Note: Gray dot in lower left corner of wax insert is an artifact due to a bubble in wax insert.

Wax Insert
Expanded View of Wax Insert

Pass Criteria: 2 Fibers, 3 Specks, 2 Masses
Equivalent to SFM Phantom: 4 Fibers, 3 Specks, 3 Masses
• New FFDM phantom equalizes attenuation inside and outside wax insert.
• This permits evaluation of artifacts over entire phantom area with same WW and WL used to score test objects.

**ACR Phantom Prototype**

- **Test object distance from base of box**: 0.35 ± 0.10 cm
- **Milled out wax insert area**: 7.6 cm  
  (+0.04, -0.00 cm)
- **CNR Cavity**: 0.1 ± 0.005 cm Deep
- **Compensator**: 0.023 cm

**Tolerances (Insert Well & CNR Cavity)**

- Wax insert well depth: ± 0.04 cm
- Wax insert well width and length: ± 0.04 cm
- CNR cavity depth: ± 0.005 cm
- CNR diameter: ± 0.05 cm
Wax Insert Specifications with Virtual “Placement Grid”

Notes:
1. Test objects to be centered on their respective “placement grid” locations.
2. 0.49 cm perimeter around test object “placement grid”.
3. 0.635 cm (1/4 inch) radius on corners of wax insert.

Fiber Placement & Specs:
1. Fiber Length = 1.0 cm ± 0.1 cm
2. Fiber Diameter = See Table

Speck Placement & Specs:
1. Specks to be placed at points onstar and middle of star
2. Speck Size (spherical) = See Table
3. Center speck placement to be within ± 0.1 cm of center of virtual grid
4. Distance from center speck to center of speck on perimeter = 0.5 cm ± 0.1 cm

Mass Placement & Specs:
1. Mass pre-cut sphere diameter = 5/8 inch
2. Mass placement to be within ± 0.1 cm of center of virtual grid

Wax Insert Test Object Specifications

<table>
<thead>
<tr>
<th>Test Object</th>
<th>Fiber Diameter</th>
<th>Speck Diameter (Glass Spheres)</th>
<th>Mass Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm</td>
<td>mm</td>
<td>mm</td>
</tr>
<tr>
<td>1</td>
<td>0.89 ± 0.05</td>
<td>0.33 ± 0.0100</td>
<td>1.00 ± 0.05</td>
</tr>
<tr>
<td>2</td>
<td>0.75 ± 0.03</td>
<td>0.28 ± 0.0083</td>
<td>0.75 ± 0.05</td>
</tr>
<tr>
<td>3</td>
<td>0.61 ± 0.03</td>
<td>0.23 ± 0.0069</td>
<td>0.50 ± 0.05</td>
</tr>
<tr>
<td>4</td>
<td>0.54 ± 0.03</td>
<td>0.20 ± 0.0059</td>
<td>0.38 ± 0.04</td>
</tr>
<tr>
<td>5</td>
<td>0.40 ± 0.03</td>
<td>0.17 ± 0.0084</td>
<td>0.25 ± 0.03</td>
</tr>
<tr>
<td>6</td>
<td>0.30 ± 0.03</td>
<td>0.14 ± 0.0070</td>
<td>0.20 ± 0.02</td>
</tr>
</tbody>
</table>
### Summary of Test Object “Visual Equivalency”

<table>
<thead>
<tr>
<th>Test Object</th>
<th>Fibers (mm)</th>
<th>Specks (mm)</th>
<th>Masses (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACR 156 FFDM</td>
<td>ACR 156 FFDM</td>
<td>ACR 156 FFDM</td>
<td></td>
</tr>
<tr>
<td>1.56</td>
<td>1.12</td>
<td>0.89</td>
<td>0.75</td>
</tr>
<tr>
<td>1.12</td>
<td>0.89</td>
<td>0.40</td>
<td>0.32</td>
</tr>
<tr>
<td>0.89</td>
<td>0.54</td>
<td>0.40</td>
<td>0.23</td>
</tr>
<tr>
<td>0.75</td>
<td>0.54</td>
<td>0.33</td>
<td>0.33</td>
</tr>
</tbody>
</table>

### Pass/Fail Criteria

<table>
<thead>
<tr>
<th>Test Object</th>
<th>Fibers (mm)</th>
<th>Specks (mm)</th>
<th>Masses (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACR 156 FFDM</td>
<td>ACR 156 FFDM</td>
<td>ACR 156 FFDM</td>
<td></td>
</tr>
<tr>
<td>1.56 Fail</td>
<td>1.12 Fail</td>
<td>0.89 Fail</td>
<td>0.75 Fail</td>
</tr>
<tr>
<td>1.12 Pass</td>
<td>0.89 Pass</td>
<td>0.40 Pass</td>
<td>0.32 Pass</td>
</tr>
<tr>
<td>0.89 Pass</td>
<td>0.54 Pass</td>
<td>0.24 Pass</td>
<td>0.23 Pass</td>
</tr>
<tr>
<td>0.75 Pass</td>
<td>0.54 Pass</td>
<td>0.33 Pass</td>
<td>0.33 Pass</td>
</tr>
</tbody>
</table>
Benefits of Prototype Phantom Design

- Provides view of entire detector – artifact evaluation
- W/L optimized for test objects optimizes for artifact evaluation
- Finer gradations and smaller sizes of test objects
- AGD measurement & limit same as SFM – Meets MQSA
- Provides single image/exposure for evaluation(s)
- Minimal training
- Provides basis for monitor and printer QC
- ACR Physics Reviewers
  - Can see scores and artifacts on single submitted film (or image)
  - Do not need different WW/WL settings

ACR Digital Mammography Phantom Approval

- Open to all manufacturers – specifications, tolerances and performance criteria provided
- Approval process
  - Ensures uniformity of construction and performance
  - Mfr submits 2 samples to ACR
  - ACR medical physicist tests against tolerances and performance criteria
  - Approval or feedback for improvement
- Two manufacturers approved to date
  - CIRS
  - Gammex (Sun Nuclear)
# Digital Mammography Quality Control Tests

## Radiologic Technologist’s Tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Minimum Frequency**</th>
<th>Corrective Action Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ACR Digital Mammography Phantom Image Quality</td>
<td>Weekly</td>
<td>Before decision</td>
</tr>
<tr>
<td>2. CR Cassette Ensure (Applicable)</td>
<td>Weekly</td>
<td>Before decision</td>
</tr>
<tr>
<td>3. Compression Thickness Indicator</td>
<td>Monthly</td>
<td>Critical before decision, less critical with 30 days</td>
</tr>
<tr>
<td>4. Visual Checklist</td>
<td>Monthly</td>
<td>Win 30 days, before clinical use for severe defects</td>
</tr>
<tr>
<td>5. Acquisition Workstation (WP) Monitor QC</td>
<td>Monthly</td>
<td>Win 30 days, before clinical use for severe defects</td>
</tr>
<tr>
<td>6. Film-Print QC (CPD Applicable)</td>
<td>Monthly</td>
<td>Before decision</td>
</tr>
<tr>
<td>8. Facility QC Report</td>
<td>Quarterly</td>
<td>Not applicable</td>
</tr>
<tr>
<td>9. Compression Force</td>
<td>Seasonal</td>
<td>Before decision</td>
</tr>
<tr>
<td>10. Manufacturer Detector Calibration (Applicable)</td>
<td>Monthly, if recommended</td>
<td>Before decision</td>
</tr>
<tr>
<td>Optional - Rodent Analysis</td>
<td>As needed</td>
<td>Within 30 days after analysis</td>
</tr>
<tr>
<td>Optional - Rodent QC for Fluoroscopy</td>
<td>As needed</td>
<td>Win 30 days, before clinical use for severe artifacts</td>
</tr>
<tr>
<td>Optional - Rodent Quality Feedback</td>
<td>As needed</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

* All required tests except Facility QC Report must be performed upon installation of new equipment and before decision use.

** This is a minimum frequency, tests may be performed more often if problems are noted. Also, weekly tests do not need to be performed if mammography is not performed during the week. However, the test must be performed prior to examining patients once mammography resumes. In those cases, be sure to note in the QC charts that mammography was not performed during the time period.

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American College of Radiology
Management Forms
ACR Technique and Procedure Summaries
Corrective Action Log
Facility Ortho Quality Checklist
Digital Radiography Unit QC Summary Checklist
Film/View Box QC Summary Checklist

Mobile Systems
In addition to meeting the minimum frequencies outlined in the table above, the following tests must be performed, evaluated, and entered into the form of the mobile system in a new location:
- ACR Digital Radiography Phantom Image Quality - after each move and prior to exposing patients
- Radiological Workstation (RX) Monitor QC (inside RX only) - after each move and prior to interpretation
- Film Printer QC (inside film printers only) - after each move and prior to printing patient images

QC Equipment List • Technologist
ACR Digital Radiography Phantom

Characteristics:
Scale
Troubleshooting

ACR phantom image must be free of clinically significant artifacts. Fiber score must be ≥ 2.0, speck group score must be ≥ 3.0, and mass score must be ≥ 2.0.

Required items must be corrected before clinical use.

- ≥ 5% and < 8% mm long: 2
- ≥ ½% and < ¾% border: 3
- ≥ ¾% border: 4
- ≥ 8% mm long: 4
- ≥ 10% mm long: 5

American College of Radiology
Expanded View of Wax Insert

Fleck calibrated into cal file. Detector and unit need to be cleaned and re-calibrated.
Detector saturation due to high exposure for dense breasts.
Detector saturation due to high exposure for dense breasts.
7. Facility QC Review (continued)

- Model flaws during QC testing

- Items for quality improvement from QC meeting

- Other QC issues

Facility ODF Display Locations

- Detergent, disinfectant, and any other materials used for cleaning or disinfecting equipment.
### Facility Display Device QC Summary Checklist

**Facility**

**Name**

**Address**

**Stengel**

**Stengel**

**Stengel**

**Stengel**

<table>
<thead>
<tr>
<th>Test Description</th>
<th>Minimum Frequency</th>
<th>Corrective Action/Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>2. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>3. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>4. Special Resolution</td>
<td>MEE and Annual</td>
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<td>MEE and Annual</td>
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<tr>
<td>6. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>7. Special Resolution</td>
<td>MEE and Annual</td>
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<td>8. Special Resolution</td>
<td>MEE and Annual</td>
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<td>9. Special Resolution</td>
<td>MEE and Annual</td>
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</tr>
<tr>
<td>10. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
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<tr>
<td>11. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>12. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
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<tr>
<td>13. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
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<tr>
<td>14. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>15. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
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<tr>
<td>16. Special Resolution</td>
<td>MEE and Annual</td>
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<td>17. Special Resolution</td>
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<td>18. Special Resolution</td>
<td>MEE and Annual</td>
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<td>19. Special Resolution</td>
<td>MEE and Annual</td>
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<td>20. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
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<tr>
<td>21. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
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<td>22. Special Resolution</td>
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</tr>
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</tr>
<tr>
<td>26. Special Resolution</td>
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</tr>
<tr>
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</tr>
<tr>
<td>28. Special Resolution</td>
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</tr>
<tr>
<td>29. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>30. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
</tbody>
</table>

**Digital Mammography Quality Control Tests**

#### Medical Physicist's Tests

<table>
<thead>
<tr>
<th>Test Description</th>
<th>Minimum Frequency</th>
<th>Corrective Action/Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mammography Equipment Evaluation - MQSA Requirements</td>
<td>MEE</td>
<td>Before initial use</td>
</tr>
<tr>
<td>2. ACR DM Phantom Image Quality</td>
<td>MEE and Annual</td>
<td>Before initial use</td>
</tr>
<tr>
<td>3. Special Resolution</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>4. Automatic Exposure Control System Performance</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>5. Average Dose</td>
<td>MEE and Annual</td>
<td>Before initial use</td>
</tr>
<tr>
<td>6. Unit Check</td>
<td>MEE and Annual</td>
<td>Critical before December; Leave clinical until 30 days</td>
</tr>
<tr>
<td>7. Computed Tomography (CT)</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>8. Acquisition Workstation (AW) Monitor QC</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>9. Radiologic Workstation (RW) Monitor QC</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>10. Film Viewer QC</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>11. Evaluation of Manufacturer QC Program</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>12. Evaluation of Display Device Technology QC Program</td>
<td>MEE and Annual</td>
<td>Within 30 days</td>
</tr>
<tr>
<td>13. MEE or Troubleshooting - Beam Quality ( kilovolt peak) Assessment</td>
<td>MEE or Troubleshooting</td>
<td>Before initial use; Troubleshooting within 30 days</td>
</tr>
<tr>
<td>14. MEE or Troubleshooting - High Accuracy and Reproducibility</td>
<td>MEE or Troubleshooting</td>
<td>Before initial use; Troubleshooting within 30 days</td>
</tr>
<tr>
<td>15. MEE or Troubleshooting - Calibration Assessment</td>
<td>MEE or Troubleshooting</td>
<td>Before initial use; Troubleshooting within 30 days</td>
</tr>
<tr>
<td>16. MEE or Troubleshooting - Ghost Image Evaluation</td>
<td>MEE or Troubleshooting</td>
<td>Before initial use; Troubleshooting within 30 days</td>
</tr>
<tr>
<td>17. MEE or Troubleshooting - Questionnaire</td>
<td>MEE or Troubleshooting</td>
<td>Before initial use; Troubleshooting within 30 days</td>
</tr>
<tr>
<td>18. MEE or Troubleshooting - Image Quality</td>
<td>MEE or Troubleshooting</td>
<td>Before initial use; Troubleshooting within 30 days</td>
</tr>
<tr>
<td>19. MEE or Troubleshooting - Image Quality</td>
<td>MEE or Troubleshooting</td>
<td>Before initial use; Troubleshooting within 30 days</td>
</tr>
<tr>
<td>20. MEE or Troubleshooting - Image Quality</td>
<td>MEE or Troubleshooting</td>
<td>Before initial use; Troubleshooting within 30 days</td>
</tr>
<tr>
<td>21. MEE or Troubleshooting - Image Quality</td>
<td>MEE or Troubleshooting</td>
<td>Before initial use; Troubleshooting within 30 days</td>
</tr>
<tr>
<td>22. MEE or Troubleshooting - Image Quality</td>
<td>MEE or Troubleshooting</td>
<td>Before initial use; Troubleshooting within 30 days</td>
</tr>
<tr>
<td>23. MEE or Troubleshooting - Image Quality</td>
<td>MEE or Troubleshooting</td>
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</tr>
<tr>
<td>24. MEE or Troubleshooting - Image Quality</td>
<td>MEE or Troubleshooting</td>
<td>Before initial use; Troubleshooting within 30 days</td>
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<tr>
<td>25. MEE or Troubleshooting - Image Quality</td>
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<td>MEE or Troubleshooting</td>
<td>Before initial use; Troubleshooting within 30 days</td>
</tr>
</tbody>
</table>

**Summary Report Forms**

- Medical Physicist's OM QC Test Summary
- Mammography Technique Chart
- Medical Physicist QC Letter for the Radiologist
CNR

Mean = 542.3
Mean = 498.5
St. Dev = 7.8

Distance = 70.0 mm
$D = Kgcs$

$D =$ Mean Glandular Dose  
$K =$ Entrance surface air kerma  
$g =$ glandularity of 50%  
$c =$ corrects for difference in composition (age dependent)  
$s =$ X-ray spectrum correction (Target/Filter)

**Note:** $g$ and $c$ depend on thickness, glandularity, and HVL.

11. Evaluation of Site's Technologist QC Program

12. Evaluation of Display Device Technologist QC Program

Additional Comments: ____________________________
Medical Physicist QC Letter for the Radiologist

December 3, 2015
John Doe, MD
Radiology Section
Dept. of Radiology
Boston Children's Hospital
Boston, MA 02115

Re: Medical Physicist Survey

Dear [Radiologist's Name]:

The above is a summary of your facility's recent evaluation by the Medical Physicist survey. Below is the address and medical information as noted in the survey. Please note that your facility may be following on the advice given.

Quality

AQA Medical Physics Institute
123 Main St.
New York, NY 10001

Surveyed Date: December 3, 2015

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Comments on selection:

Radiation Dose

AQA Medical Physics Institute
123 Main St.
New York, NY 10001

Surveyed Date: December 3, 2015

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Comments on radiation dose:

Medical Physicist QC Summary Letter for the Radiologist, Cont'd

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Comments on Monitors, Monitor QC & Viewing Conditions

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Comments on Pinch QC

If you have any questions, please do not hesitate to ask.

Sincerely,

John Doe, MD

[Signature]

[Date]
The following combination of testing must be performed:

**Figure 1 – MEE – All New Digital Mammography Units and Display Devices.**

2. **Mammography Equipment Evaluation (MEE) – New Digital Mammography Units (with Existing Display Devices)**

   In this scenario, only the digital mammography unit is new (including the acquisition workstation). The display devices (review workstations and film printers) are pre-existing as is digital mammography unit. The new digital mammography unit may be new, previously owned or relocated from another facility under the same ownership.

The following combination of testing must be performed:

**Figure 2 – MEE – New Digital Mammography Units (with Existing Display Devices).**

3. **Mammography Equipment Evaluation (MEE) – New Display Devices (with Existing Digital Mammography Units)**

   In this scenario, only display devices (an acquisition workstation, review workstation and 1 printer) are new. The digital mammography unit is pre-existing. Digital mammography unit 1 and all the display devices are also pre-existing. The display devices may be new, previously owned or relocated from another facility under the same ownership. The phantom images used for evaluation should have been acquired from any of the facility’s digital mammography units within the past month.
The following combination of testing must be performed:

Figure x - MEE - New Display Devices (with Existing Digital Mammography Units).
ACR DM QC Manual – What’s Next

- ACR developing training for techs, physicists, reviewers, inspectors and manufacturers
  - Webinars
  - In-person
- ACR revising accreditation process and software to incorporate new manual and phantom

ACR Website & FAQs – Updated 8/22/16
(www.acraccreditation.org/Modalities/Mammography)

**Our facility would like to begin using the new ACR Digital Mammography QC Manual. Can we do so as soon as we receive our new manual?**

Before the facility QC technologist may start using the new DMQC Manual on a particular unit, the medical physicist must first conduct an **annual survey** of the digital mammography unit and display devices using the new manual and phantom. This is important to provide testing techniques and procedures for the QC technologist to use during routine QC. After this is done, the QC technologist may start performing routine QC using the new manual.

**May I use our old ACR phantom to perform the tests in the new ACR Digital Mammography QC Manual instead of obtaining the new ACR Digital Mammography Phantom?**

No. The new ACR Digital Mammography QC Manual procedures were designed around the new ACR Digital Mammography Phantom. The old ACR phantom cannot be used to conduct the tests in the new manual.
End of Presentation

Questions?