## DXA Acquisition/Analysis – Baseline and Serial Scanning Procedures

1. Does your DXA facility have its own procedures manual for documenting your routine DXA activities?  
   - Y  
   - N

2. Do you consistently use the same positioning devices for spine and femur scans?  
   - Y  
   - N

3. Do you have a protocol for excluding vertebrae due to fracture, hardware, or artifact?  
   - Y  
   - N

4. Do you use the lesser trochanter as a guide to determine sufficient and consistent internal rotation of the femur?  
   - Y  
   - N

5. a. Whenever possible, do you use the same DXA machine used for patient’s baseline to acquire his/her follow-up scans?  
   - Y  
   - N
   b. If you answered “no” to question 5 above, did your facility perform a cross-calibration between scanners? If so, submit cross-calibration.
      - Y  
      - N

6. Are you careful to reproduce the same positioning and ROI placement for a patient’s baseline and follow-up scans?  
   - Y  
   - N

### Do you obtain and record the following patient history information?

7. Current height measurement…………………………………  
   - Y  
   - N

8. Current weight measurement…………………………………..  
   - Y  
   - N

9. Menopausal status for women…………………………………  
   - Y  
   - N

10. Personal fracture after age 50…………………………………  
    - Y  
    - N

11. Hip fracture in mother or father……………………………...  
    - Y  
    - N

12. Osteoporosis medication history……………………………..  
    - Y  
    - N

13. Current smoking history……………………………………….  
    - Y  
    - N

14. Glucocorticoid exposure history……………………………..  
    - Y  
    - N

15. Diagnosed rheumatoid arthritis……………………………..  
    - Y  
    - N

16. Primary hyperparathyroidism………………………………….  
    - Y  
    - N

17. Other secondary osteoporosis………………………………….  
    - Y  
    - N

18. Alcohol use (3 or more units* per day)……………………..  
    - Y  
    - N

*one unit of alcohol is 13 gm ethanol, 5 oz wine, 12 oz beer, 1.5 oz spirits

## DXA Facility in-vivo Precision Assessment Procedures

19. For Precision Assessment procedures at your facility, are the individuals being scanned representative of your facility’s patient population (i.e. similar ages, gender, and health status)?  
   - Y  
   - N

20. Are the individuals in your precision assessment(s) repositioned after each scan?  
    - Y  
    - N

21. Do you require retraining of technologists whose precision values are not within the acceptable range according to the ISCD Official Positions?  
    - Y  
    - N

22. Do you require individual’s to sign a consent form to participate in in-vivo precision assessment at your facility?  
    - Y  
    - N

23. Do you perform a short-term in-vivo precision assessment on every DXA machine?  
    - Y  
    - N

24. Do all of your DXA technologists perform short-term in-vivo precision assessments?  
    - Y  
    - N

25. Do you calculate your LSC values using information from only one technologist?  
    - Y  
    - N

26. Do you calculate your LSC values using information from the precision assessments of multiple technologists?  
    - Y  
    - N
For DXA Scanner: ______________ (scanner serial number)

For EACH DXA Scanner submit:

- One worksheet
- One Spine Phantom Scan
- One Spine Phantom Plot Graph

**Spine Phantom(s) Inventory:**

Complete information for the primary Spine Phantom* assigned to this scanner

Do you use more than one Spine Phantom with this DXA scanner?  □YES  □NO

<table>
<thead>
<tr>
<th>Spine Phantom Type</th>
<th>Serial Number</th>
<th>Date Placed into Service</th>
<th>Total $^2$ phantom BMD (gm/cm$^2$)</th>
<th>Upper Limit (gm/cm$^2$)</th>
<th>Lower Limit (gm/cm$^2$)</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

*This is NOT the calibration block phantom

$^1$See glossary for types of Spine Phantoms

$^2$Total BMD established by the manufacturer or it is determined at the time the spine phantom placed into service or as of most recent system calibration (as the average value of a series of spine phantom scans).

$^3$Upper Limit should be +1.5% of the Total Spine Phantom BMD

$^4$Lower Limit should be -1.5% of the Total Spine Phantom BMD

**Spine Phantom Plot Graph (control chart):**

- Graph trends Spine Phantom BMD over Time for the purpose of monitoring the stability of the DXA scanner
- Show approximately 50 recent Spine Phantom BMD values (or all since the scanner was put into service or recalibrated, whichever is less)
- Total Spine Phantom BMD should be the center horizontal line on the graph (GE users must set this by opening a spine scan, select trend tab, scroll down to a value equal to the Total BMD, right click to select it as baseline)
- Upper and Lower Limits of the acceptable range should visible on the graph (center line = 0%; upper = +1.5; lower = -1.5%)
Spine Phantom Evaluation: Rules/Procedures used to determine machine failure

Please indicate any additional QA/QC analyses you perform on a regular basis on your primary spine phantom. Check all that apply.

<table>
<thead>
<tr>
<th>QC/QA Rule or Process Applied to Phantom Results</th>
<th>Each Day</th>
<th>Every Week</th>
<th>Every Month</th>
<th>Before Service</th>
<th>After Service</th>
<th>Other Freq.</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Visual Inspection of BMD plots for Drifts/Shifts</td>
<td>☐</td>
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<td>2. One value exceeds upper or lower limits of 1.5% (3 SD) from the mean verified by a second phantom scan on the same day</td>
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<tr>
<td>3. Plots of Total Spine Phantom BMC and/or AREA are evaluated for Drifts/Shifts</td>
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<tr>
<td>4. We contract with outside QA Service (attach supporting document)</td>
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</tbody>
</table>

Describe any additional or alternative procedures or rules that your facility used to evaluate your Spine Phantom results:

Which, if any, of the above QC/QA rules or processes (which you indicated above that you routinely performed) would independently be sufficient to remove a scanner from service until repaired or recalibrated at your facility. Check all that apply:

1. ☐ 2. ☐ 3. ☐ 4. ☐ N/A ☐

Comments