Bone Densitometry

ARRT requires that ~~C~~candidates applying for certification and registration ~~are required to~~ meet the Professional Requirements specified in the *ARRT Rules and Regulations*. ARRT's *Bone Densitometry Clinical Experience Requirements* describe the specific eligibility requirements that candidates must ~~be~~ document~~ed~~ as part of the application for certification and registration process.

The purpose of the clinical experience requirements is to document that candidates have performed a subset of the clinical procedures within a ~~modality~~discipline. Successful performance of these fundamental procedures, in combination with mastery of the cognitive knowledge and skills ~~as documented~~ covered by the examination ~~requirement~~, provides the basis for the acquisition of the full range of clinical skills required in a variety of settings.

ARRT periodically updates ~~T~~the requirements ~~are periodically updated~~ based ~~up~~on a practice analysis which is a systematic process to delineate the job responsibilities typically required of bone densitometry (BD) technologists. The result of this process is a task inventory. An advisory committee then determines the number of clinical procedures required to demonstrate adequate candidate experience in performing the tasks on the inventory.

Candidates for ~~bone densitometry~~ BD certification and registration must document performance of a minimum of 125 mandatory procedures and ~~three~~ 3 ~~additional~~ elective procedures according to the ~~criteria~~ requirements noted below. No more than 2 elective procedures will be accepted per patient per day. Candidates document, verify, and submit completed ~~P~~procedures ~~are documented, verified, and submitted when complete~~ via an online ~~tool~~ worksheet accessible through ~~My ARRT Info~~the candidate's ARRT account on www.arrt.org. ARRT encourages ~~individuals~~ technologists to obtain education and experience beyond these minimum requirements.
~~Completion of each procedure must be verified by a~~An ARRT certified and registered technologist (postprimary certification not required), supervisor, or licensed physician must verify completion of each procedure at the facility where the patient and equipment are located. The verification process is described within the online ~~tool~~worksheet.
Remote scanning is not acceptable for completion of ARRT Clinical Experience Requirements. The candidate must complete the examination at the facility where the patient and equipment are located. The candidate must be physically present during the examination or procedure.
The candidate can document ~~A~~up to ~~maximum of~~ 15 ~~mandatory and elective~~ procedures ~~may be logged for~~ each day in the online worksheet.

Specific ~~Procedural~~ Requirements for BD Procedures

Mandatory and elective procedures cannot be counted on the same patient on the same day. Scans must be performed on humans; scans of phantoms and other types of simulated tissue cannot be counted as scans.

A. Mandatory Procedures

- Daily Quality Control (QC) ~~Procedures~~

Candidates must perform and interpret results of the required ~~daily~~ QC tests on Dual Energy X-Ray Absorptiometry (DXA) scanning equipment, according to manufacturer guidelines, at least 25 times.

- ~~Patient~~ Scan~~ning~~ Patient Using~~Utilizing~~ ~~Dual Energy X-Ray Absorptiometry (~~DXA~~)~~ Equipment
  - Spine
  - Femur

Candidates must perform 50 scans of both the lumbar spine and proximal femur. If a patient is scanned at two or more anatomical sites, each scan can be counted as a separate occurrence. Dual proximal femur scans are considered one site. ~~However~~Also, scanning the same site two or more times on a single patient the same day counts only as one scan. Candidates must incorporate the following clinical activities into each DXA examination~~:~~

~~Patient Preparation/Education~~

Prepare the Patient and Explain the P~~p~~rocedure

- ~~-~~Obtain relevant patient history (including screening for possible pregnancy)
- ~~; as~~Ensure ~~that~~ all artifact-producing objects have been removed~~; and~~
- ~~v~~Verify ~~that~~ the patient has not ~~been subjected to medical~~ had procedures or medications that may invalidate the scan results (*e.g., received contrast, prosthetic devices).

Acquisition and Analysis

- Enter patient data required to use~~utilize~~ reference data~~;~~
- ~~s~~Select positioning aids and position patient~~;~~
- ~~r~~Record unusual positioning details~~; and~~
- ~~p~~Perform DXA scan~~.~~

Evaluation of Results

- Verify regions of interest~~;~~
- ~~e~~Evaluate quality of measurements for problems (e.g., ~~due to~~ artifacts, pathology, motion)~~, etc~~.~~;~~
- ~~r~~Recommend additional scans as necessary~~;~~
- ~~f~~Flag values that require physician's attention (e.g., low T-score,~~;~~ unreliable results~~, etc~~.)~~;~~ ~~and~~
- ~~a~~Archive results~~.~~

*e.g., is used to indicate examples of the topics covered, but not a complete list

B. Elective Procedures

Candidates must complete at least ~~three~~ 3 of the following activities the number of times specified. A maximum of 2 elective procedures may be counted per patient per day. *Mandatory and elective procedures cannot be counted on the same patient on the same day.*

• Perform and analyze a DXA scan of the forearm	10
• Perform and analyze a DXA scan of the whole body	3
• Perform and analyze a VFA scan using DXA equipment	2~~5~~
• Perform postprocessing analysis to create a TBS	1
• Perform and analyze scans for in vivo precision study	1
• Perform and analyze a DXA scan on pediatric patients (age 5-19 years)	2
• Perform a FRAX® assessment using an online FRAX® calculation too	10
• Perform follow-up scan for rate of change ~~and compare bone density~~ measurements from two occasions (for the same patient) to assess changes over time (performance of initial scan on same site is not necessary)	10
• Answer basic questions ~~from~~ the patient~~s or~~, the patient's family, ~~members~~ or authorized representative asks about radiation dose/effects, ~~-~~lifestyle choices related to bone health, fall prevention, and/or drug therapies	20
• Give lecture to other health care professionals, or provide community education workshop, related to bone health and bone densitometry	1