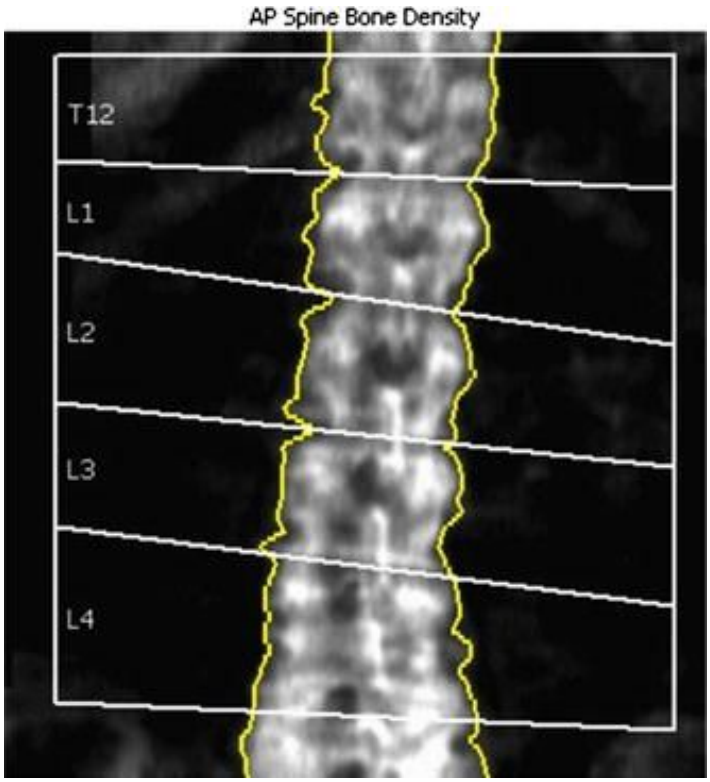
Dexa Sheet

Positioning:

Spine:

Image should include the lower half of T12 with ribs and top half of L5.
All of L1-L4 should be included.
Delete osteophytes from scan.
Spine must line up to the longitudinal axis as much as possible.



Hip:

Feet rotated inward to show little to no lesser trochanter on image.
ROI box must not include the greater trochanter.
ROI box must include soft tissue on either side of the femoral neck.
ROI box must be perpendicular to the femoral neck.
ROI box must contain little to no ischium.

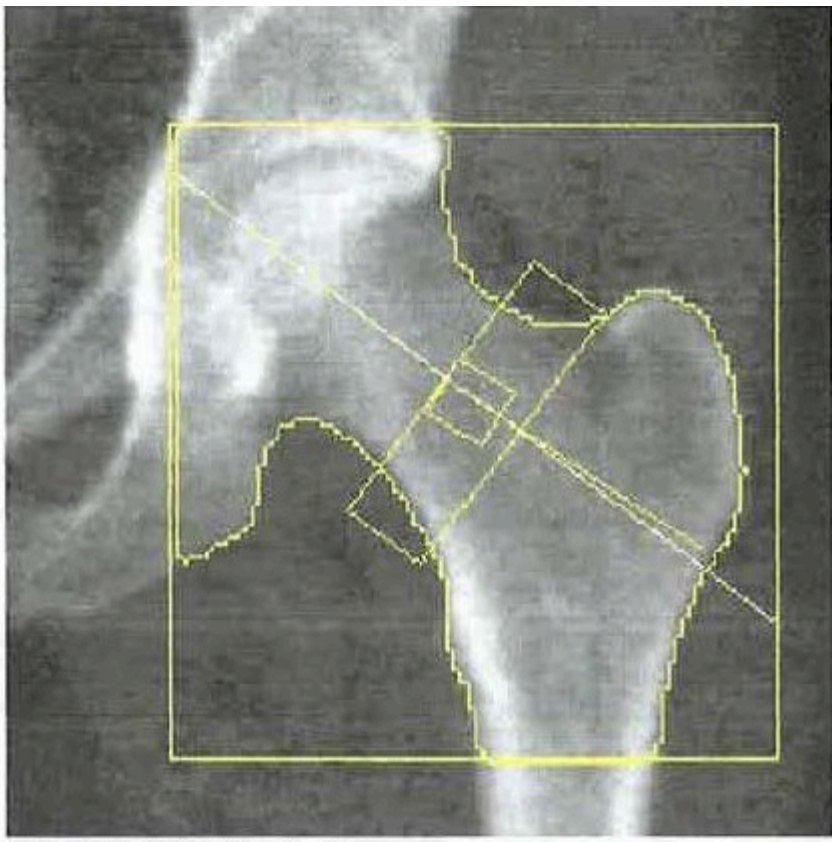


Image not for diagnostic use
k = 1.134, d0 = 48.8
93 x 97
NECK: 48 x 15

Region	Area (cm^2)	BMC (g)	BMD (g/cm^2)	T - score	PR (%)	Z - score	AM (%)
Neck	**5.05**	**3.01**	**0.596**	**-2.3**	**70**	**-2.0**	**73**
Total	27.97	21.47	0.768	-1.4	81	-1.3	83

Total BMD CV 1.0%, ACF = 1.013, BCF = 1.001, TH = 6.164

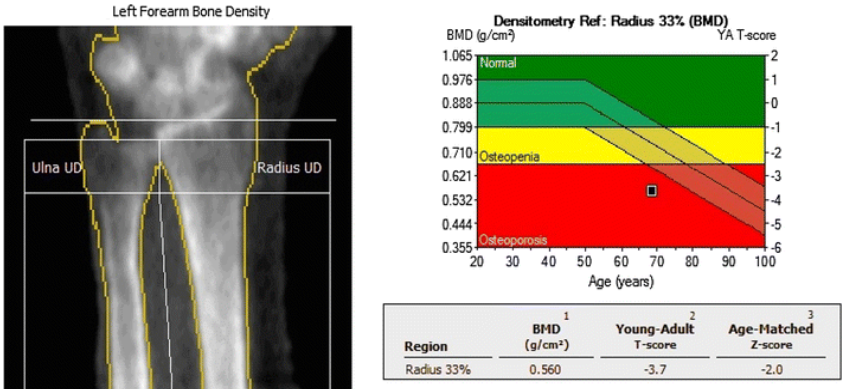
ISCD

Forearm:

Non-Dominant forearm is scanned along the long axis. (Typically Left)
Reference line is at the distal tip of the ulnar styloid process.
Vertical lines are between the Radius and Ulna.
Ultradistal ROI should not contain the endplate of the Radius.

Forearm Rules:

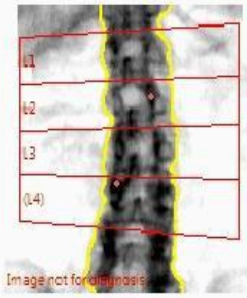
Add forearm to exam when spine/hips are unavailable for scan and/or when an additional scan site is needed.
Add forearm to all patients 65 and older
Add Forearm if the patient has Hyperparathyroidism

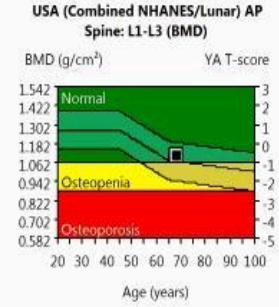


Comparisons:

- The measurements of the hip boxes must match the previous. For example, if the hip box was 100 x 102 in 2013 then it needs to be 100 x 102 going forward.
- If spine levels were removed on previous exams, then the new scan should match.
- When scanning the spine, if there is a level(s) that has a T-Score greater than 1.0 SD from adjacent vertebral levels, you remove the level(s). See the following examples:

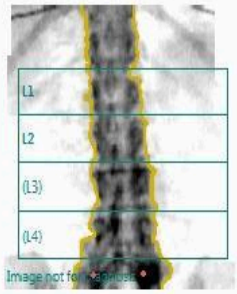
L4 greater than 1 SD in T score than L3 so L4 should be excluded. (T score -1.6 to -0.1)

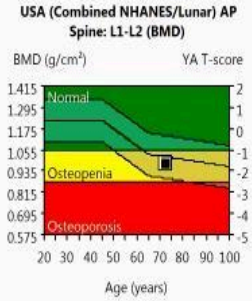




Region	BMD (g/cm²)	Young-Adult T-score	Age-Matched Z-score
L1	1.083	-0.5	0.5
L2	1.012	-1.6	-0.7
L3	1.208	-0.1	0.9
L4	1.372	1.2	2.1
L1-L3	1.105	-0.6	0.3

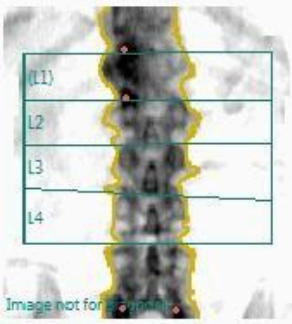
L3 & L4 are more sclerotic and T scores are more than 1 SD greater than L2. (T score -0.3 vs -1.4)

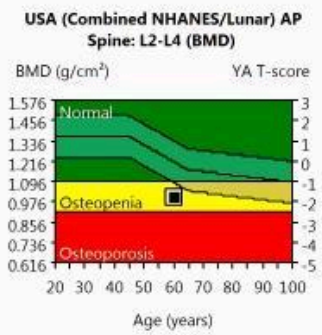




Region	BMD (g/cm²)	Young-Adult T-score	Age-Matched Z-score
L1	0.901	-2.0	-0.6
L2	1.038	-1.4	-0.1
L3	1.181	-0.3	1.0
L4	1.148	-0.5	0.8
L1-L2	0.974	-1.7	-0.3

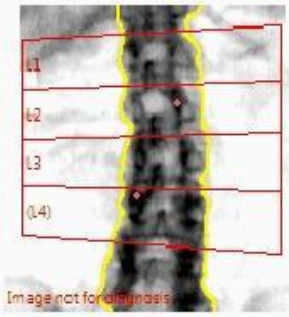
L1 is sclerotic and is 2 SD more than L2 so L1 is excluded. (T score 0.3 compared to -2.2)

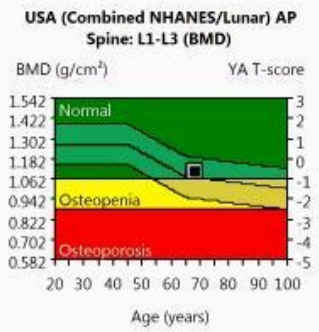




Region	BMD (g/cm²)	Young-Adult T-score	Age-Matched Z-score
L1	1.173	0.3	0.3
L2	0.943	-2.2	-2.1
L3	1.084	-1.1	-1.0
L4	0.974	-1.9	-1.8
L2-L4	1.002	-1.7	-1.7

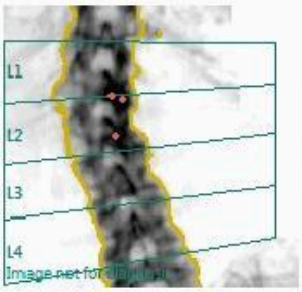
L4 is more than 1 SD greater than L3 so L4 should be excluded.

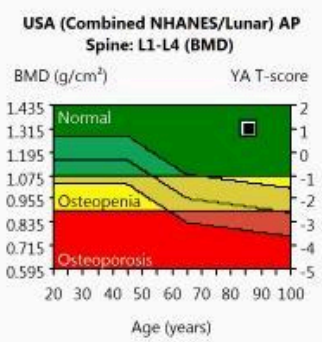




Region	BMD (g/cm²)	Young-Adult T-score	Age-Matched Z-score
L1	1.083	-0.5	0.5
L2	1.012	-1.6	-0.7
L3	1.208	-0.1	0.9
L4	1.372	1.2	2.1
L1-L3	1.105	-0.6	0.3

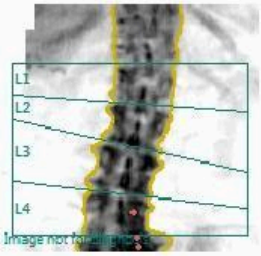
Below image: I could make a case to remove L1 & L2 or just leave it alone as there isn't a huge difference. When compared to the prior exam her spine had decreased in BMD.

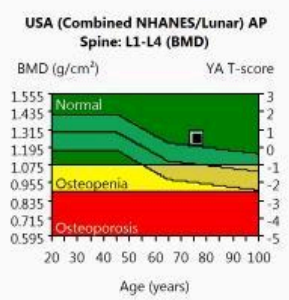




Region	BMD (g/cm²)	Young-Adult T-score	Age-Matched Z-score
L1	1.287	1.2	3.5
L2	1.398	1.6	3.8
L3	1.303	0.7	3.0
L4	1.272	0.4	2.7
L1-L4	1.314	1.0	3.2

T scores are all over the place in the example below. I would leave it alone but make sure you do a forearm on this patient.





Region	BMD (g/cm²)	Young-Adult T-score	Age-Matched Z-score
L1	1.027	-0.9	0.0
L2	1.298	0.7	1.7
L3	1.360	1.1	2.1
L4	1.309	0.7	1.7
L1-L4	1.258	0.5	1.5

When to include a FRAX score:

- Postmenopausal women
- Alcohol 3 or more units per day.
- Parental hip fracture: non trauma.
- Long term steroid usage
    - Not inhalers, not dose packs.
    - Must be 5mg 3 months or longer
- Previous hip or vertebral body fracture: non trauma
- Adult fracture---non trauma, ADULT (over 40).
    - Hands, feet, and skull don't count, stress fractures don't count.
- Rheumatoid arthritis
    - Must have diagnosis because patients often are confused between osteoarthritis and rheumatoid arthritis.
- Current smoker

When to exclude a FRAX score:

- Premenopausal women. **If they are over 50 but claim to be premenopausal please give them FRAX.**
- Men under the age of 50
- If the patient has osteoporosis. (T-score at -2.5 or less anywhere)
- If the patient has normal bone mineral density. (-1.0 or greater everywhere)
- History of previous fragility fracture of hip or lumbar spine.
- Patient is currently being treated or has been treated within drug associated timeframes.
    - Evista (Raloxifene) – within 1 year
    - Calcitonin – within 1 year
    - Fosamax (Alendronate) – orally – 2 months
    - Actonel, Atelvia (Risedronate) – orally – 2 months
    - Boniva (Ibandronate) – orally – 2 months, IV – 2 years
    - ReClast (Zoledronic Acid) – IV – within 2 years
    - Zometa – IV – within 1 year
    - Prolia (Denosumab) – within 1 year
    - Forteo (Teriparatide) – IV – 2 months
    - Hormone Replacement Therapy: Depends on the type - see below
        - **Topical HRT (FRAX)**
        - Vagifem/Yuvafem (Estradiol tablet)
        - Estring Vaginal Ring
        - Estradiol Cream
        - Premarin Cream
        - Imvexxy Capsule

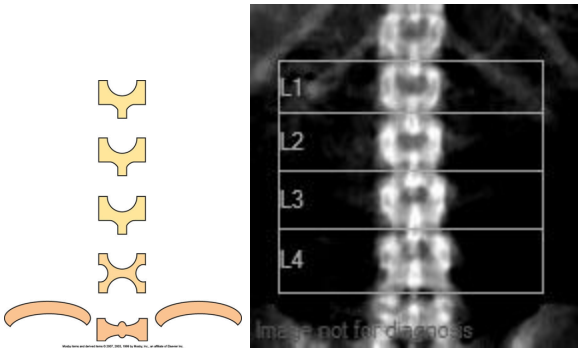
        - **Systemic HRT (NO FRAX)**
        - Femring
        - Climara (Transdermal Estradiol)

- Vivelle (Transdermal Estradiol)
- Minivelle (transdermal Estradiol)
- Divigel (Estradiol Gel)
-

***** THIS IS WHY YOUR DEXA MEDICAL HISTORY FORM IS VERY IMPORTANT*****

Things to Remember:

- If it is their first exam or their previous is at another facility, scan spine and BOTH hips.
- Forearms are scanned:
  - When the hip and/or spine cannot be measured or interpreted.
  - If the patient has hyperparathyroidism.
  - Very obese patients. (over the weight limit for DXA table)
- Comparisons cannot be made between two different scanning tables. If they have had them done here previously, but on the old table, treat it as if it was a new exam.
- There must be AT LEAST two lumbar levels with minimal disease and free of artifacts. If you feel that the spine MAY be thrown out, scan the forearm.
- Make sure that you count lumbar spine levels from the bottom up. This will ensure that you are labeling the spine levels correctly. (L5 looks like “dog bone”)



- Remove levels with documented that they have compression fractures and/or laminectomy.
- Foot, hand, and skull fractures don’t count in FRAX.
- Vaginal hormone replacement cream does not count in FRAX as treatment.
- The patient cannot have had recent oral contrast.
- Make sure scanning speeds are same as on prior exam (fast vs array)
- Forearm must be non-dominant unless it has a previous fracture. If that's the case, use dominant.
- If forearms are the only thing available to be scanned (pt too large or unable to be on the table or hips were replaced and the spine was unusable), scan both.