

The background features abstract, overlapping geometric shapes in various shades of blue, ranging from light sky blue to deep navy blue. These shapes are primarily located on the right side of the frame, creating a modern, layered effect.

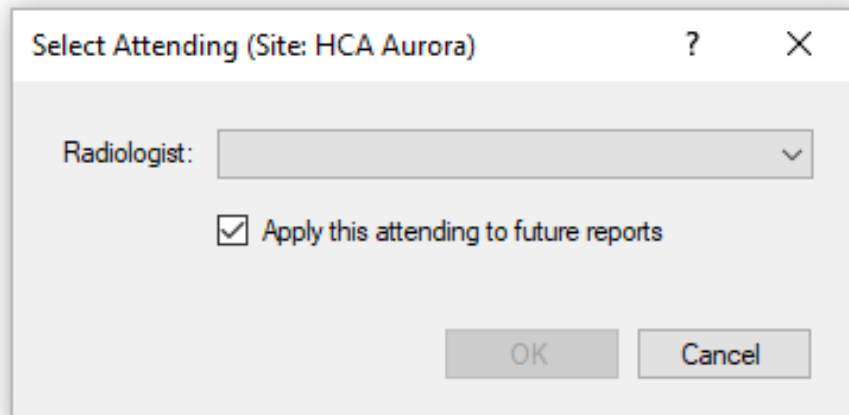
Beginners Guide to Hospital DXAS

Differences between ISJ & Hospital DXAS

- ▶ The HL7 does not auto populate for hospital DXAs
- ▶ Results table must be filled out manually
- ▶ FRAX or No FRAX- must be determined by the DXA drafter and reported appropriately (calculation of FRAX is often necessary)
- ▶ Comparison information is manually entered for hospital DXAs

SELECT ATTENDING:

This box will pop up for each new hospital system you draft exams for (DAILY). If you are not seeing a normal dictation screen, this box is probably hidden on your desktop! Minimize windows to find this box. Select UNASSIGNED and OK

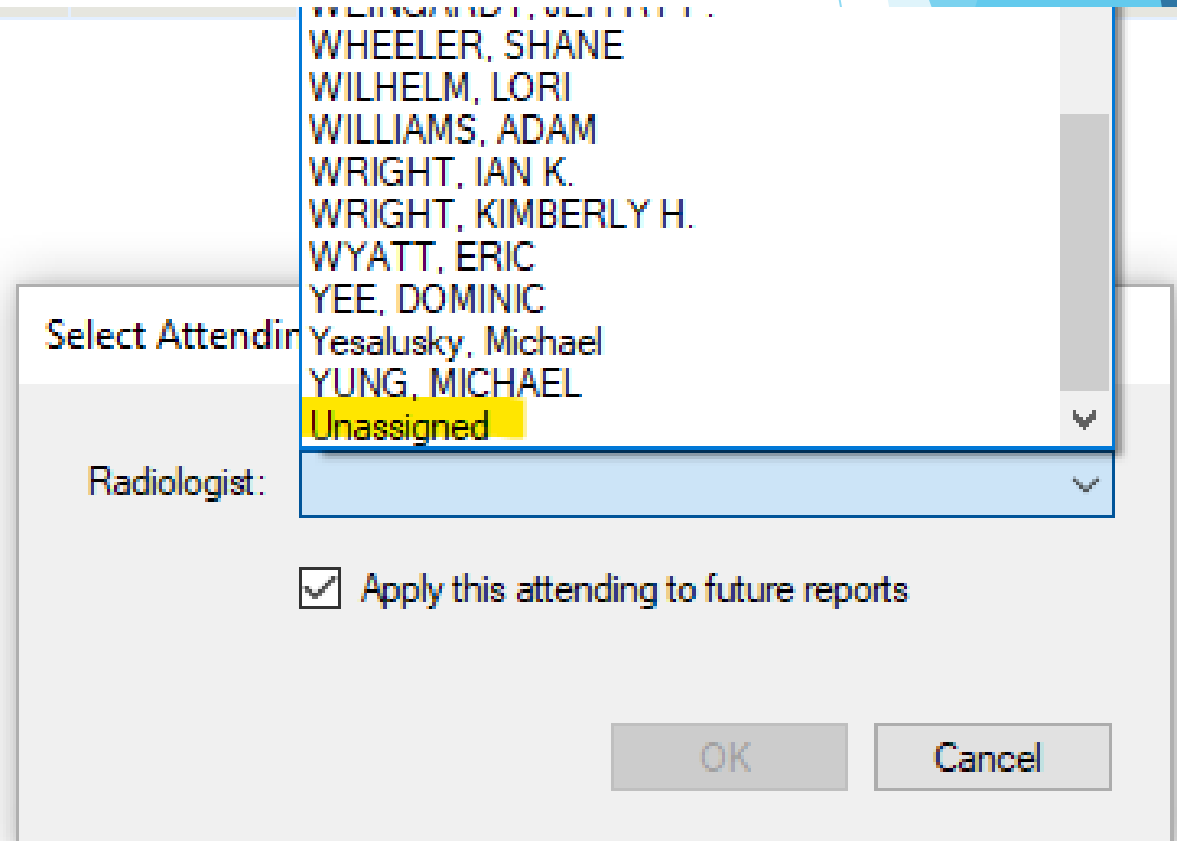


Select Attending (Site: HCA Aurora) ? X

Radiologist:

Apply this attending to future reports

OK Cancel



Select Attending

Radiologist:

Apply this attending to future reports

OK Cancel

- WHEELER, SHANE
- WILHELM, LORI
- WILLIAMS, ADAM
- WRIGHT, IAN K.
- WRIGHT, KIMBERLY H.
- WYATT, ERIC
- YEE, DOMINIC
- Yesalusky, Michael
- YUNG, MICHAEL
- Unassigned

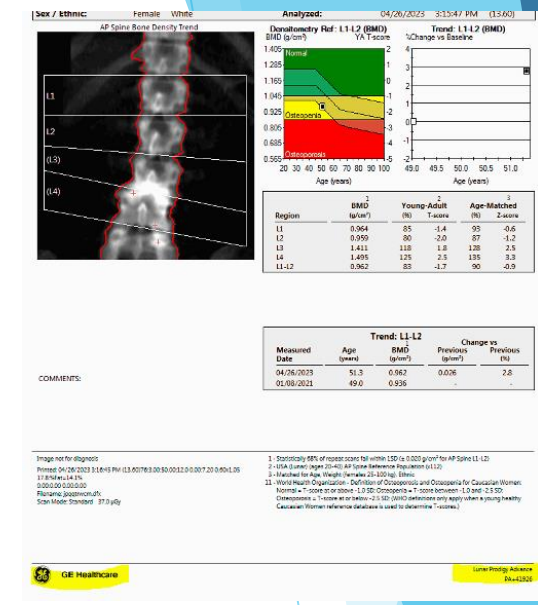
HL7 Table does not AUTO POPULATE!

Manually fill in each box using the information provided on DXA IMAGES: (The next few slides will walk you through the process)

RESULTS: <input type="checkbox"/>				
Anatomic Site		BMD(g/cm ²)	T-score	Z-score
AP spine <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Left Femoral neck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Left Total hip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Right Femoral neck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Right Total hip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Forearm-Radius 1/3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

RESULTS : []

In the red results bracket- enter the device information: Found at the bottom of the page for GE and under scan information for Hologic (see pick list options)



- Fields (35)
- Reason
 - Indications
 - Clinical risks
 - Family History
 - Parental Hip Fracture
 - Medications
 - Scanner name
 - Lumbar levels
 - Pick List Choices
 - GE Lunar Prodigy
 - GE Lunar Prodigy Primo
 - GE Lunar Prodigy Advance
 - Hologic Discovery C
 - Hologic Discovery W
 - Hologic Horizon C
- Enter Findings Mode
- Properties

Report - JOHNSON, KELLY SUE - E4186797

CURRENT MEDICATIONS: []

TECHNICAL QUALITY: The images were reviewed, applying and analysis.

RESULTS: GE Lunar Prodigy Advance

Anatomic Site	BMD(g/cm ²)	T-score	Z-score
AP spine []	[]	[]	[]
Left Femoral neck []	[]	[]	[]
Left Total hip []	[]	[]	[]
Right Femoral neck []	[]	[]	[]
Right Total hip []	[]	[]	[]
Forearm-Radius 1/3 []	[]	[]	[]



Model: Horizon W (S/N300452M)

Identifiers: []

Sex: []

Height: 71.0 in

Weight: 185.3 lb

DOB: []

Age: []

Referring Physician: LOUGHNER, MICHAEL

Scan Information:

Scan Date: April 26, 2023 - A0426230C

Scan Type: x Left Hip

Analysis Date: 04/26/2023 11:44

Report Date: 04/27/2023 09:09

Operator: SLG

Model: Horizon W (S/N300452M)

Software version: 13.6.0.4

Results Summary:

Region	Area[cm ²]	BMC[g]	BMD[g/cm ³]	T-score	PR (Peak Reference)
Neck	6.39	5.35	0.837		
Total	49.63	47.79	0.963		

Total BMD CV: 1.0%, ACF = 1.027, BCF = 1.018, TH = 5.981

Results History:

Scan Date	Age	BMD	T-score	BMD Change (g/cm ³) vs Baseline	BMD C
04/26/2023	41	0.963		0.010 (1.1%)	
04/19/2021	39	0.952			

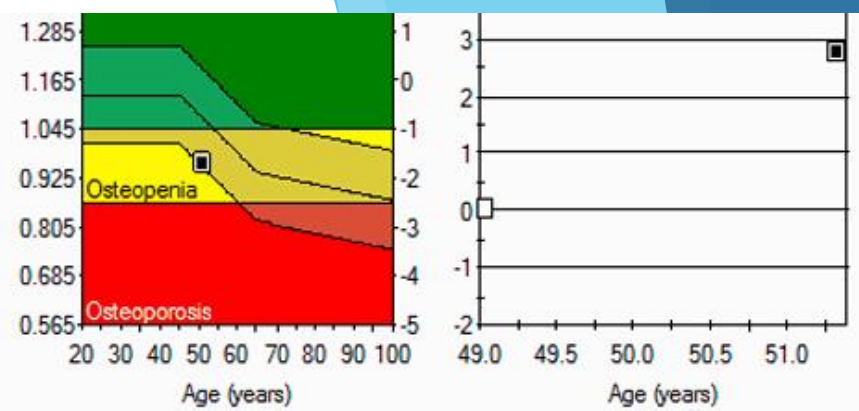
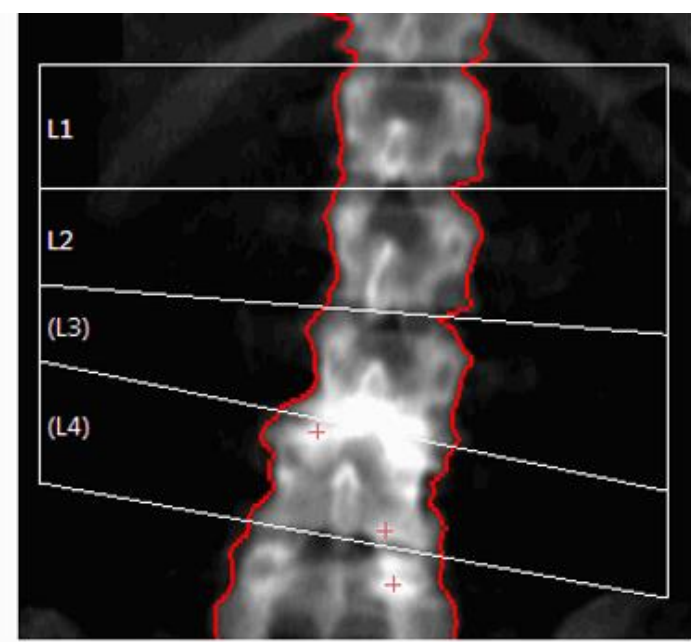
18 year Fracture Risk: []

ROI Data: SPINE

Notice the 1st AP spine fill in field has a pick list with scroll bar for additional choices: (select the levels)

Pick List Choices	Anatomic Site	BMD(g/cm ²)
(L1-L4)	AP spine	
(L1-L3)	Left Femoral neck	
(L1-L2)	Left Total hip	
(L2-L4)	Right Femoral neck	
(L2-L3)	Right Total hip	
(L3-L4)	Forearm-Radius 1/3	

Enter Findings Mode



Region	1 BMD (g/cm ²)	2 Young-Adult (%) T-score	3 Age-Matched (%) Z-score
L1	0.964	85 -1.4	93 -0.6
L2	0.959	80 -2.0	87 -1.2
L3	1.411	118 1.8	128 2.5
L4	1.495	125 2.5	135 3.3
L1-L2	0.962	83 -1.7	90 -0.9

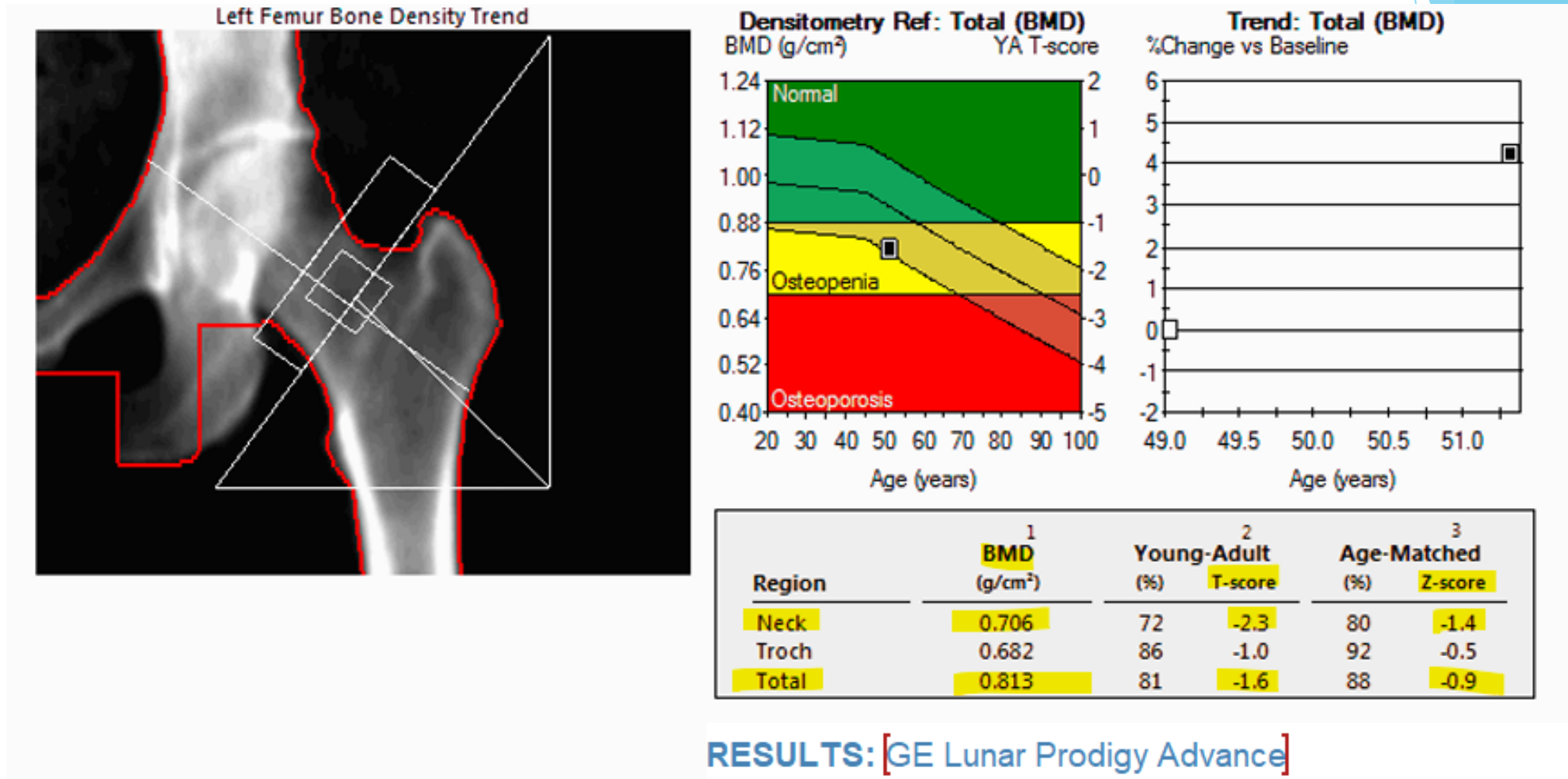
Use DXA images and HL7 table to fill in RESULTS

When entering -1.7 say "MINUS 1.7"

RESULTS: [GE Lunar Prodigy Advance]

Anatomic Site	BMD(g/cm ²)	T-score	Z-score
AP spine [L1-L2]	0.962	-1.7	-0.9
Left Femoral neck			
Left Total hip			
Right Femoral neck			
Right Total hip			

ROI Data: HIP



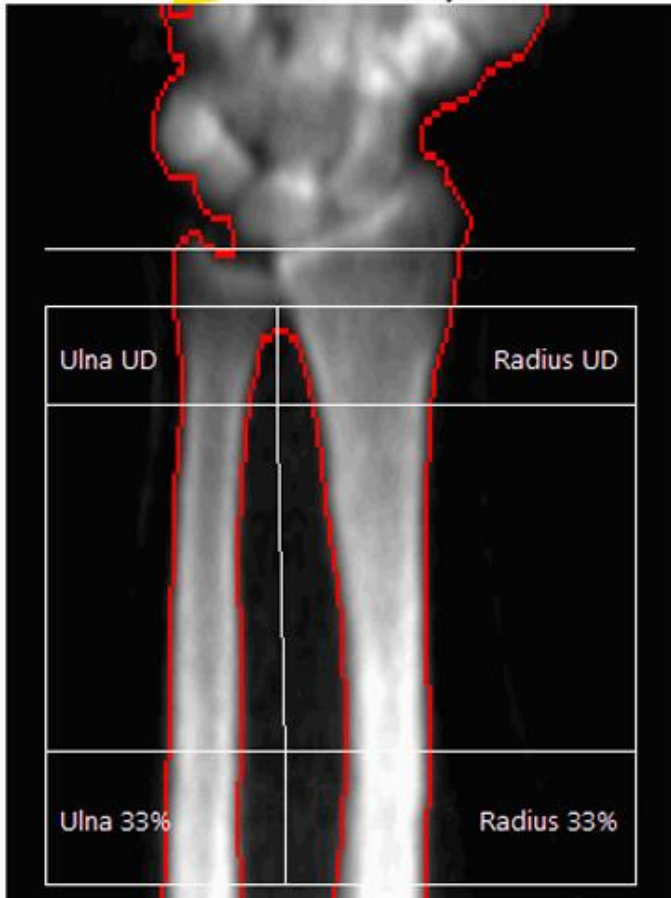
Delete unused result boxes if only one hip is imaged (notice right hip boxes have been eliminated)

RESULTS: [GE Lunar Prodigy Advance]

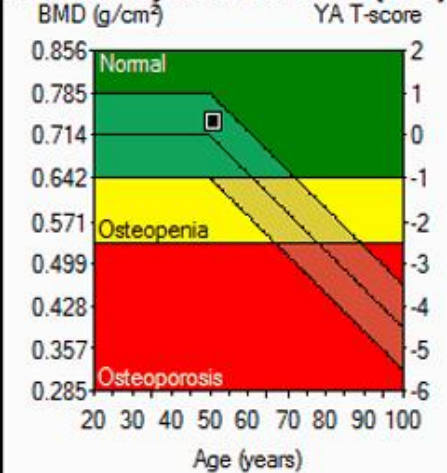
Anatomic Site	BMD(g/cm ²)	T-score	Z-score
AP spine [L1-L2]	[0.962]	[-1.7]	[-0.9]
Left Femoral neck	[0.706]	[-2.3]	[-1.4]
Left Total hip	[0.813]	[-1.6]	[-0.9]
[] Forearm-Radius 1/3	[]	[]	[]

ROI Data: Forearm

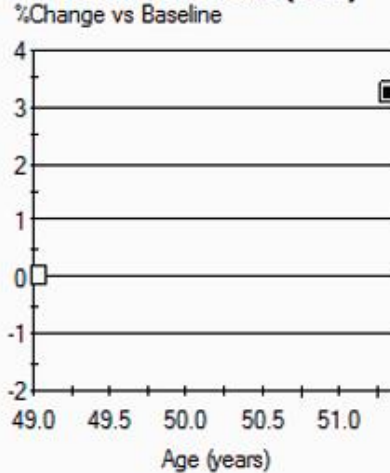
Left Forearm Bone Density Trend



Densitometry Ref: Radius 33% (BMD)



Trend: Radius 33% (BMD)



Region	1 ⁹		2		3	
	BMD (g/cm ²)	Young-Adult (%)	T-score	Age-Matched (%)	Z-score	
Radius UD	0.378	100	0.0	101	0.1	
Ulna UD	0.263	-	-	-	-	
Radius 33%	0.737	103	0.3	104	0.4	
Ulna 33%	0.682	-	-	-	-	
Both UD	0.336	-	-	-	-	
Both 33%	0.711	-	-	-	-	
Radius Total	0.576	105	0.6	106	0.7	
Ulna Total	0.507	-	-	-	-	
Both Total	0.547	-	-	-	-	

Radius 33% is the only set of numbers reported for forearm

Specify Left or Right in the fill in field in front of forearm

TECHNICAL QUALITY: The images were reviewed, apply and analysis.

RESULTS: [GE Lunar Prodigy Advance]

Anatomic Site	BMD(g/cm ²)	T-score	Z-score
AP spine [L1-L2]	[0.962]	[-1.7]	[-0.9]
Left Femoral neck	[0.706]	[-2.3]	[-1.4]
Left Total hip	[0.813]	[-1.6]	[-0.9]
Left Forearm-Radius 1/3	[0.737]	[0.3]	[0.4]

FRAX (10-year Probability of Fracture):

GE studies- FRAX is a separate image:

Left Femur FRAX*

Risk Factors:

None

Alcohol (3 or more units per day)

Family Hist. (Parent hip fracture)

Glucocorticoids (Chronic)

History of Fracture (Adult)

Secondary Osteoporosis

Rheumatoid Arthritis

Tobacco User (Current Smoker)

NOF/ISCD Filters:

On Treatment

Previous Fracture (Hip or Spine)

FRAX (10-year Probability of Fracture):

Major Osteoporotic Fracture: **[6.5%]**

Hip Fracture: **[1.3%]**

10-year Probability of Fracture:¹⁷

Major Osteoporotic ¹⁸	6.5%
Hip	1.3%
Population	USA (Caucasian)
Based on Femur (Left) Neck BMD	

Hologic studies- FRAX appears on the page with hip image

FRAX® WHO Fracture Risk Assessment Tool

10-year Fracture Risk¹	
Major Osteoporotic Fracture	12%
Hip Fracture	2.5%
Reported Risk Factors: US (Caucasian), Neck BMD=0.639, BMI=28.2	



Image not for diagnostic use

101 x 99

73cm vs. White Female, Score: 2013

2.6cm vs. White Female, Score: 2012

1000: 48 x 15

1.341, 40 = 51.1

DAP: 1.44dy/cm²

Results Summary:

Region	Area[cm ²]	BMC[g]	BMD[g/cm ³]	T-score	PR (Peak)
Neck	4.58	2.93	0.639	-1.9	
Total	36.39	27.44	0.754	-1.5	

Total BMD CV: 1.0%, ACF = 1.031, BCF = 1.007, TH = 6.430

Results History:

Scan Date	Age	BMD	T-score	BMD Change (g/cm ³) vs Base
04/27/2023	73	0.754	-1.5	-0.128 (-14.5%)
07/08/2015	65	0.882	-0.5	

WHO Classification: Osteopenia

* Denotes significance at 95% confidence level, LSC is 0.027 g/cm³

Denotes dissimilar scan types or analysis methods.

FRAX (10-year Probability of Fracture):

Major Osteoporotic Fracture: **[12%]**

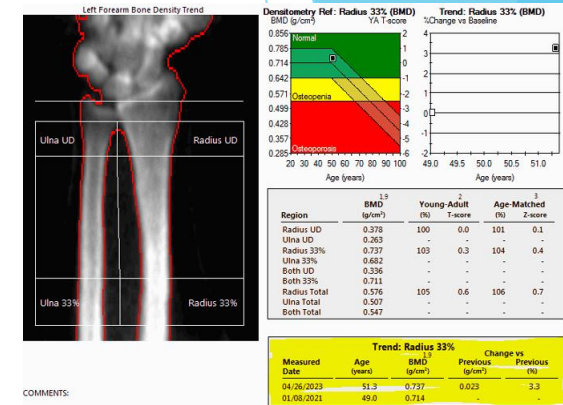
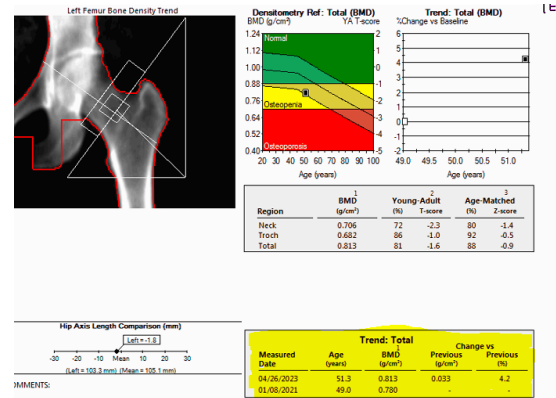
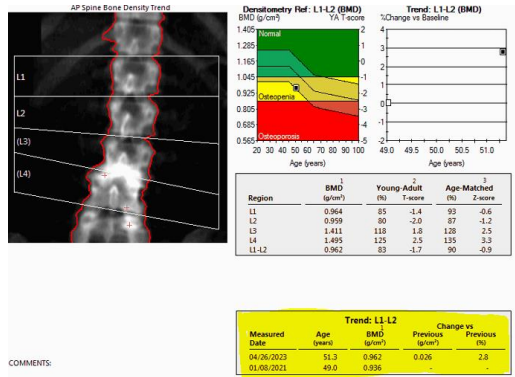
Hip Fracture: **[2.5%]**

- FRAX information can be found on slides 59-65 in DXA Drafting PPT
- Use macro ELIMINATE FRAX when FRAX is not appropriate
- If FRAX is not calculated or incorrectly calculated, use <https://frax.shef.ac.uk/FRAX/tool.aspx?country=9>

Macro Compare Hospital:

Comparison information is located in the TREND TABLE (Highlighted in yellow on thumbnails and magnified below each thumbnail)

EXAMPLE:



Trend: L1-L2				
Measured Date	Age (years)	BMD (g/cm ³)	Change vs Previous (g/cm ³)	Change vs Previous (%)
04/26/2023	51.3	0.962	0.026	2.8
01/08/2021	49.0	0.936	-	-

Trend: Total				
Measured Date	Age (years)	BMD (g/cm ³)	Change vs Previous (g/cm ³)	Change vs Previous (%)
04/26/2023	51.3	0.813	0.033	4.2
01/08/2021	49.0	0.780	-	-

Trend: Radius 33%				
Measured Date	Age (years)	BMD (g/cm ³)	Change vs Previous (g/cm ³)	Change vs Previous (%)
04/26/2023	51.3	0.737	0.023	3.3
01/08/2021	49.0	0.714	-	-

COMPARISON: 1/8/2021. Compared with the previous exam, the lumbar spine bone density has increased by 0.026 g/cm² (2.8%), which is not statistically significant. The left total hip bone density has increased by 0.033 g/cm² (4.2%), which is statistically significant. The left forearm bone density has increased by 0.023 g/cm² (3.3%), which is not statistically significant.

Hospital Macro Summary

Macro List by Category	Notes
Technical Quality Macros	
609	Previous images reanalyzed
No Spine on f/u	Spine found to be unreliable on prior exam and not imaged on current exam
Sclerosis	Spine unreliable (severe sclerososis or degenerative changes), T & Z elevated compared to hip and forearm, forearm not imaged, but should have been
Spine Unreliable but Imaged	Delete all spine info in HL7 table if using this macro
Combo	Use if all vertebral bodies are not included
Hypercalcemia	Forearm should be imaged
Hyperparathyroidism	Forearm should be imaged
REVIEW Slide 55 (MISC. Approved Verbiage)	
FRAX Macros	
FRAX	Major \geq 20 % and Hip \geq 3 %
Eliminate FRAX	HRT, OP meds, review slides 59-65 (DXA Drafting)
Comparison Macros	
ROC Unreliable	Spine increase is abnormal compared to other sites, copy and paste the last senetence to add
Compare Hospital	Basic template for entering comparison results
Outside Comparison Hospital	Template for exams with outside priors (similar to isj vs different isj macro)
Summit View Compare	Prior exam performed using GE lunar technology
RWMC Compare Discrepancy	Lumbar spine labeling changed and the trending values are not accurate. (New baseline spine)
Impression Macros	
Don't forget rate of change statement when using unique impression macros	
Osteopenia Elevated Risk	Frax indicates elevated risk (\geq 3% \geq 20%)
Low Trauma FX	Use when the pt has a fragility fx (humerus, forearm, femur, tib-fib, spine, ribs, pelvis) but diagnosis is (LBD or Normal)
Impression Prior Hip or Vertebral FX	Pt has normal or LBD and reported spine or hip fx (resulting from trauma)
Established Osteoporosis	T scores @ or below -2.5 and 1 or more fx reported (regardless of trauma/no trauma)
Osteoporosis Elevated Risk	(1st OP diagnosis) or (previously diagnosed with OP but not treated and bmd decreasing)
Supra Normal	All Z-scores are @ or above 2.5
Z-Score Impression	Males younger than 50, premeno females younger than 45 (@ 45 all females get T & Z-scores regardless of menopausal state)
Macro 605	Treatment macros should be used in the impression for all pts on OP meds and Synthetic HRT Do not include fx risk statement in impression for pts on treatment Macro 605- Sig. increase in BMD , Macro Stabilization- No sig. change in BMD, Macro 606- Sig. decrease in BMD
Macro Stabilization	
Macro 606	

Assigning Hospital Exams to Radiologists:

- ▶ Dr. Yung - Do not reserve ISJ or Banner DXAS (Site codes BNIS), he will sign off on all other hospital DXAS
- ▶ Lampert, Barke, and Hsieh- Can usually sign off on all DXAs
- ▶ Obregon will email when he is available
- ▶ Brenneman- ISJ dxas only