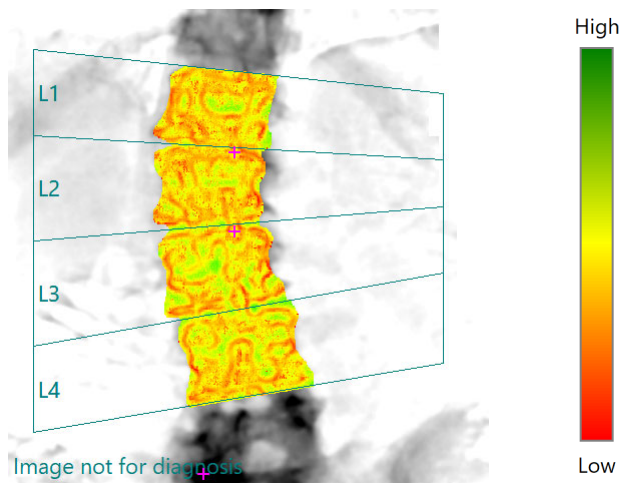


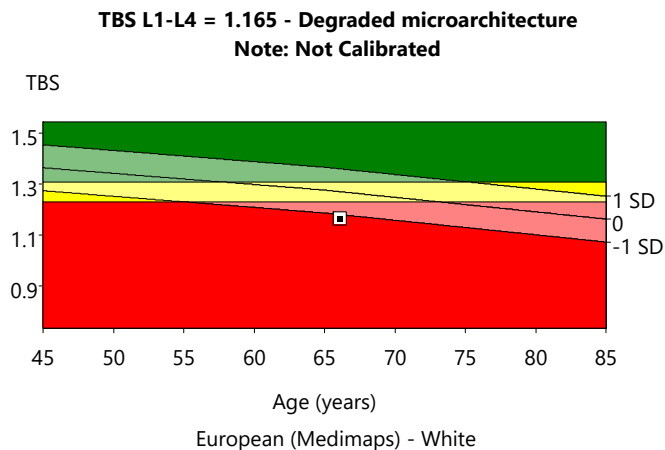
Patient:	BMD_Med_TBS_Low,	Referring Physician:	(not specified)
Birth Date:	2/4/1951	Age:	66.1 years
Height:	62.2 in.	Weight:	112.9 lbs.
Sex:	Female	Ethnicity:	White
		Patient ID:	(not specified)
		Measured:	3/13/2017 3:21:31 PM (16)
		Analyzed:	1/8/2023 9:11:05 PM (18 [SP 5])

BONE HEALTH REPORT

1 TBS Mapping



2 TBS Spine Results



3 Skeletal Status Assessment

Osteoporosis is a systemic skeletal disease characterized by low bone mass and microarchitectural deterioration of bone tissue, with a consequent increase in bone fragility and susceptibility to fracture.¹

The TBS is derived from the texture of the DXA image and has been shown to be related to bone microarchitecture and fracture risk. It provides information independent of BMD.

For purpose of clarity, "Bone resilience index" is defined as the combination of BMD T-score and TBS categories. The zones of Bone Resilience are established based upon level of fracture risk.²

		BMD T-score*		
		Normal	Osteopenia	Osteoporosis
TBS**	Normal	Green	Yellow	Orange
	Partially Degraded	Yellow	Yellow	Orange
	Degraded	Yellow	Orange (with black square)	Red

* BMD T-score is the min value of spine, total hip, and femoral neck.

** Spine TBS L1-L4 Normal microarchitecture > 1.310; Degraded <= 1.230

Normal	Moderate	Low	Severely Low
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Color coded bone resilience zones based on Fracture Risk²

4 Therapeutic Decision Tools

The FRAX 10-year probability of fracture:

Type of Fracture	Risk	Risk Adjusted for TBS*
Major Osteoporotic	16.7 %	19.3 %
Hip	3.6 %	4.5 %

* Validated only for Caucasian and Asian women and men.⁴ Refer to local guidelines before using these values.

Reported Risk Factors besides BMD: Family Hist. (Parent hip fracture), History of Fracture (Adult)

⁴ Calcif Tissue Int. 96, 500-509 (2015)

The BMD T-score:

Bone Site	BMD T-score	BMD T-score adjusted for TBS*
AP Spine: L1-L4	-2.2	-3.2
Left Femur: Neck	-2.3	-2.7
Left Femur: Total	-2.2	-2.6

* Validated for Caucasian women only.³

The grayed cell is the minimum value.

Patient:	BMD_Med_TBS_Low,		Referring Physician:	(not specified)	
Birth Date:	2/4/1951	Age:	66.1 years	Patient ID:	(not specified)
Height:	62.2 in.	Weight:	112.9 lbs.	Measured:	3/13/2017 3:21:31 PM (16)
Sex:	Female	Ethnicity:	White	Analyzed:	1/8/2023 9:11:05 PM (18 [SP 5])

BONE HEALTH REPORT

5 Detailed Spine Results

Region	TBS		BMD	
	TBS	Z-score	BMD (g/cm2)	T-score
L1	1.084	-	0.876	-2.1
L2	1.083	-	0.916	-2.4
L3	1.259	-	0.940	-2.2
L4	1.236	-	0.927	-2.3
L1-L2	1.083	-1.4	0.896	-2.2
L1-L3	1.142	-1.1	0.912	-2.1
L1-L4	1.165	-1.2	0.917	-2.2
L2-L3	1.171	-1.4	0.929	-2.3
L2-L4	1.193	-1.1	0.928	-2.3
L3-L4	1.248	-0.8	0.934	-2.2
L1-L3 (L2)	1.171	-0.7	0.911	-2.1
L1-L4 (L2)	1.193	-0.8	0.917	-2.1
L1-L4 (L2,L3)	1.160	-0.8	0.905	-2.2
L1-L4 (L3)	1.134	-1.3	0.908	-2.2
L2-L4 (L3)	1.159	-1.3	0.922	-2.3

6 Conclusion

The Lumbar spine TBS is 1.165 which suggests a degraded microarchitecture compared to reference population.

The patient's associated BMD and TBS values suggest a Low resilience to fracture.

Furthermore, the minimum BMD T-Score (either adjusted or not for TBS), positions the patient in the Osteoporosis category equivalent.

The patient's FRAX results should be interpreted in regard to the intervention thresholds provided by national medical guidelines.

Final decision regarding diagnostic or therapeutic recommendations should include BMD, TBS, additional clinical risk factors as well as the clinical context of the patient.

7 Notes & References

TBS Version: 3.1.0

- ¹ Consensus Development Conference, Am J Med 94, 646-650 (1994)
- ² Adapted from J. Bone Miner. Res. 26, 2762-2769 (2011)
- ³ Adapted from Osteoporosis Int. 29, 751-758 (2018)

Statistically 68% of repeat scans fall within 1SD (± 0.010 g/cm2 for AP Spine L1-L4 BMD); T-score: USA (Combined NHANES (ages 20-30) / Lunar (ages 20-40)) AP Spine, Female, White Reference Population (v113); T-score: USA (Combined NHANES (ages 20-30) / Lunar (ages 20-40)) Femur, Female, White Reference Population (v113); World Health Organization - Definition of Osteoporosis and Osteopenia for Caucasian Women: Normal = T-score at or above -1.0 SD; Osteopenia = T-score between -1.0 and -2.5 SD; Osteoporosis = T-score at or below -2.5 SD; (WHO definitions only apply when a young healthy Caucasian Women reference database is used to determine T-scores.); FRAX Version 4.1; The 10-year probability of fracture may be lower than reported if the patient has received treatment; Major Osteoporotic Fracture: Clinical Spine, Forearm, Hip or Shoulder; The TBS is derived from the texture of the DXA image and has been shown to be related to bone microarchitecture and fracture risk; This data provides information independent of BMD value; it is used as a complement to the data obtained from the DXA analysis and the clinical examination; TBS Z-score Reference Population: European (Medimaps) - White; The TBS score can assist the health care professional in assessment of fracture risk and in monitoring the effect of treatments on patients across time; Overall fracture risk will depend on many additional factors that should be considered before making diagnostic or therapeutic recommendations; The software does not diagnose disease or recommend treatment regimens. Only the health care professional can make these judgments; TBS version 3.1.0: Before accepting this report, the user is held accountable for ensuring that the DXA examination has been carried out: 1) by the osteodensitometer GE Lunar iDXA (ME+210430); 2) after the latest TBS calibration: Not Calibrated; Since the system has not been calibrated using TBS Phantom, the results must not be used for diagnostic purpose

Date created: 1/11/2023 12:40:14 PM 18 [SP 5]; Filename: bmd_med_tbs_low.mex; AP Spine; 100,2.50:50.00:6.0 0.00:7.62 0.30x0.25 18.6:%Fat=13.7%; 0.00:0.00 0.00:0.00; Scan Mode: Standard; 146.0 μ Gy; 4.57 cGy*cm2; Left Femur; 100,2.50:50.00:6.0 0.00:11.82 0.30x0.25 16.6:%Fat=24.1%; 0.00:0.00 0.00:0.00; Neck Angle (deg)= 50; Scan Mode: Standard; 146.0 μ Gy; 4.50 cGy*cm2;