

Medical Facility Name

Chief Name

Address line

City/Zip Code

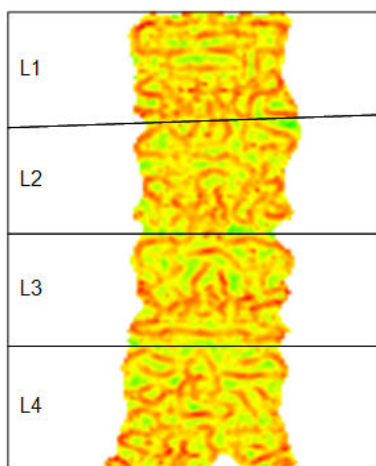
mail@mail.com

Phone Number

Patient:	Humphrey, Jenny	Patient ID:	752-99-6574
Sex - Ethnicity:	Female - White	Date of birth - Age:	12/10/1950 - 65 years
Height - Weight:	154,7 cm - 63,0 kg	BMI - Tissue Thickness (TT spine):	26,3 - 19,7 cm
Referring physician:	SG02		
DXA Acquisition date:	10/04/2016	TBS Report last modified date:	17/03/2025 11:38

BONE HEALTH REPORT

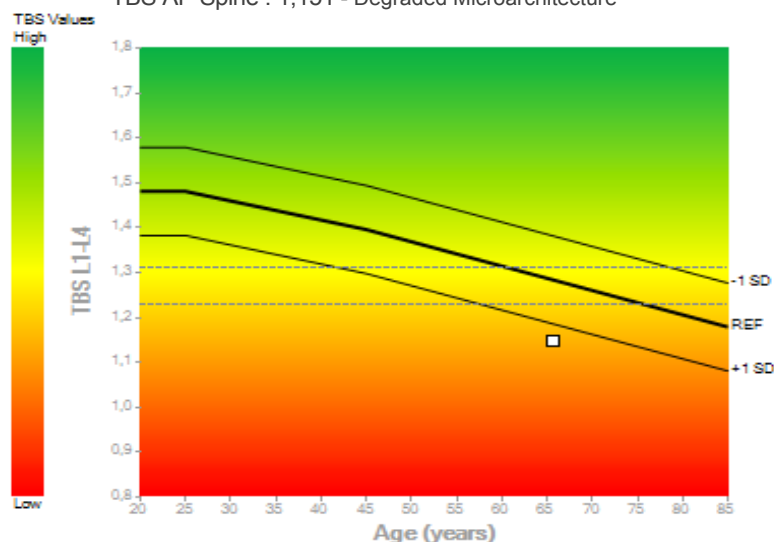
1 TBS Mapping



Non-diagnostic image

2 TBS AP Spine Results

TBS AP Spine : 1,151 - Degraded Microarchitecture



■ TBS of largest set of included vertebrae.
REF: Reference population - USA (NHANES / Medimaps) - white
Dotted lines indicate thresholds between AP Spine TBS tertiles for AP Spine:
Normal: >1,31, Partially degraded: 1,23 - 1,31, Degraded: <1,23 (cut-off values depend on included vertebrae)

3 Bone 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

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 complementary information about bone health, independent of BMD.

"Bone Fragility Index" is defined as the combination of BMD T-Score and absolute TBS tertile categories. Bone Fragility Index Zones are based upon fracture risk.²

		BMD T-score*		
		Normal	Osteopenia	Osteoporosis
TBS Tertile**	Normal	Low	Moderate	High
	Partially degraded	Moderate	High	Very High
	Degraded	Moderate	High	Very High

■ Current Bone Fragility Index Zone Bone Fragility Index Zones

* BMD T-score is the minimum value of spine, total hip, femoral neck or 1/3rd radius.

Normal $\geq -1,0$, Osteopenia: $-1,0$ to $-2,5$, Osteoporosis: $\leq -2,5$ ³

** AP Spine TBS tertiles for L1-L4: Normal $> 1,31$, Partially degraded: $1,23 - 1,31$, Degraded: $< 1,23$ (cut-off values depend on included vertebrae)⁴

4 Analytical Tools

FRAX® 10-year probability of fracture:

Type of Fracture	Fracture Risk	FRAX(R) adjusted for TBS*
Major Osteoporotic	17,0 %	20,1 %
Hip	1,9 %	2,6 %

Reported clinical risk factors: rheumatoid arthritis, glucocorticoids

Lowest Femoral Neck BMD: left

*Validated for Caucasian and Asian women and men.⁵ Refer to local guidelines before using these values.

BMD T-score:

Bone site	BMD T-Score	BMD T-Score adjusted for TBS*
AP Spine (L1-L4)	-1,9	-3,0
Femoral Neck left	-1,2	-1,8
Total Hip left	-0,5	-1,0

* Validated for Caucasian women ≥ 50 years⁴ Greyed cell represents minimum value.

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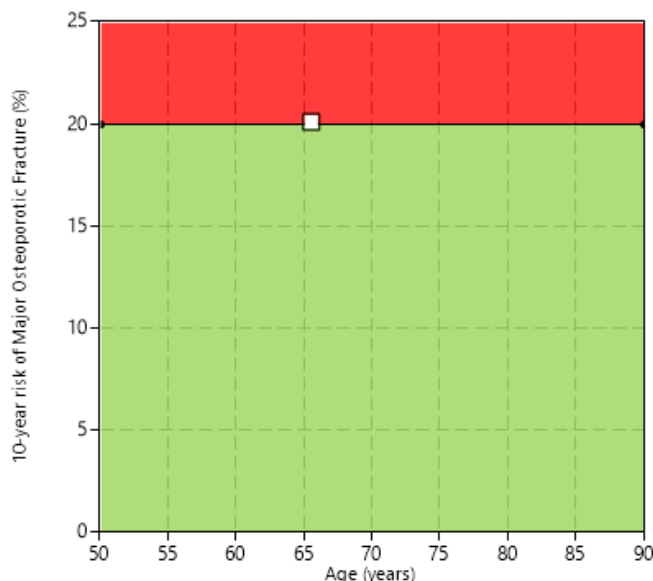
BONE HEALTH REPORT

5 Detailed AP Spine Results

Region	TBS	TBS Z-Score*	BMD (g/cm ²)	BMD T-Score
L1	1,059	n/a	0,807	-1,1
L2	1,205	n/a	0,796	-2,1
L3	1,168	n/a	0,841	-2,2
L4	1,171	n/a	0,912	-1,9
L1-L4	1,151	-1,4	0,842	-1,9
L1-L3	1,144	-1,5	0,815	-1,8
L1-L4(L3)	1,145	-1,3	0,843	-1,7
L1-L4(L2)	1,133	-1,5	0,857	-1,8
L2-L4	1,182	-1,1	0,853	-2,1
L1-L2	1,132	-1,5	0,801	-1,6
L1-L3(L2)	1,114	-1,7	0,824	-1,7
L1-L4(L2L3)	1,115	-1,5	0,864	-1,6
L2-L3	1,187	-1,2	0,819	-2,2
L2-L4(L3)	1,188	-1,0	0,859	-2,0
L3-L4	1,170	-1,2	0,879	-2,0

Detailed TBS and BMD results for individual vertebrae and combinations.
*TBS Z-Score compares the patients TBS to the average TBS of the same-age reference population in terms of standard deviations.

6 FRAX Curve



National recommendations for the treatment of postmenopausal osteoporosis

■ TBS-adjusted 10-year risk for MOF plotted on FRAX® reference curve

7 Conclusion

The patient's AP lumbar spine TBS is 1,151, which suggests a degraded microarchitecture compared to the reference population.

The lowest BMD T-Score (with or without TBS-adjustment) positions the patient in the category of Osteoporosis.

The patient's combined BMD T-Score categories and absolute TBS tertile categories suggest a High Bone Fragility Index.

The patient's highest FRAX® 10-year fracture risk (with or without TBS adjustment) for MOF is 20,1% and for hip is 2,6%. These results should be interpreted regarding the intervention thresholds provided by national medical guidelines.

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

8 Notes & References

TBS Report last modified date 17/03/2025 11:38
TBS Report template version used: 1.0.0.2
TBS iNsiGht™ version 4.0.1.3399
Soft-tissue correction based on Tissue Thickness at spine (TT spine).
BMD T-Score reference: White Gender Match
DXA Horizon #0 - File: PA07410A.p05

1. Consensus Dev. Conf., Am J Med (1993), vol 94, pp.646-650
2. Adapted from JBMR (2011), vol 26, pp.2762-2769
3. WHO (2003), ISBN 9241209216
4. JBMR (2016), vol 31(5), pp.940-948
5. Adapted from Osteoporos Int. (2018), vol 29, pp.751-758

Abbreviations: AP: anterior-posterior, BMD: Bone mineral density, BMI: Body mass index, DXA: dual-energy X-ray absorptiometry, L: lumbar vertebra, TBS: trabecular bone score, TT: tissue thickness

Learn more about TBS: www.medimaps.ai