

What is TBS

TBS is an **advanced imaging software** provided for use as a **complement to BMD measurement**. TBS stands for **Trabecular Bone Score** and is an indicator of bone microarchitecture's quality and an independent parameter for **fracture risk prediction**.

TBS scores are provided for all patients having an **AP spine scan**.

TBS algorithm analyses DXA images in two dimensions to evaluate a three-dimensional bone structure.

Why using it

Osteoporosis is characterized by **low bone mass and micro-architectural deterioration**.

BMD T-scores are the gold standard to diagnose osteoporosis but is related to bone mass only. 50% of fractured patients do not belong to "osteoporosis" category¹ because bone is complex, and BMD cannot explain all fractures.

A degraded bone structure (assessed by TBS) can explain some fractures, not identified by BMD. Conjunction of BMD and TBS helps identify more patients at risk of fracture.

Who will benefit the most

TBS has the following clinical benefits in:

Primary osteoporosis:

Patients in Osteopenia category with low TBS have a risk of fracture as high as osteoporotic patients.²

Secondary osteoporosis: TBS identifies patients at risk for fractures in Diabetes, Glucocorticoid induced osteoporosis, Kidney and Thyroid diseases...³

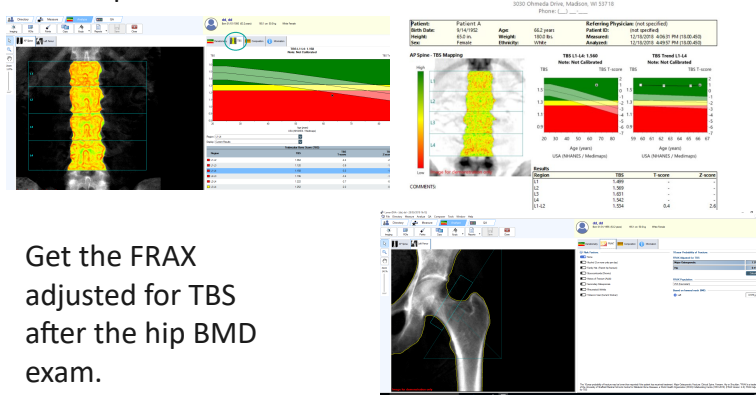
Treatment initiation and monitoring:

TBS, BMD and clinical risk factors, can be used to determine whether treatment should be initiated in untreated patients.

TBS is potentially useful for monitoring anabolic therapy.⁴

Where to find it

enCORE V18 has a new TBS tab to display the TBS score and mapping. And a new page is available in the DXA report for TBS.



Get the FRAX adjusted for TBS after the hip BMD exam.

How to interpret



If TBS is in **green zone**: Low risk of fracture, suggesting normal bone microarchitecture.

If TBS is in **yellow zone**: Medium risk of fracture, suggesting partially degraded bone microarchitecture.

If TBS is in **red zone**: High risk of fracture, suggesting degraded bone microarchitecture.⁵

NEW Adjusted FRAX

FRAX is now adjusted for TBS but used with the same intervention thresholds. Some patients will shift from the "Non-therapy" zone to the "Therapy" zone, and vice versa.

Conditions of use

Flex Trial: TBS option is activated for 2 months.

Lumbar spine scans only: Not available to compute hip or forearm scans.

Adults only: Not intended for patients under 20.

Obesity: not intended for patients with BMI outside [15 – 37 kg/m²].

Calibration: DXA systems must be calibrated with a specific TBS phantom to allow interpretation of results. Trials can be calibrated.

DXA replacement: a TBS license allows processing of scans from only one DXA device. The scans from the old DXA device cannot be processed.

References

1. Siris et al. Arch Intern Med. 2004
2. Hans, et. al. JBMR 26:11 2762-2769
3. Olivieri et al. Endocrine. 2014
4. www.iscd.org/official-positions/2019-iscd-official-positions-adult/
5. McCloskey, E. V. et al. J. Bone Miner. 2016

More information

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