Integrated Trabecular Bone Score: Introducing TBS 3.1

Osteoporosis is the most common chronic metabolic bone disease, characterized by low bone density. It is estimated that more than 200 million people are at higher risk of fracture due to this disease.1

Integrated TBS 3.1 provides:
• New clinical decision tools, especially helpful for patients with borderline BMD T-scores
• Visual assessment tools, including a new “Bone Resilience Index”
• Faster reporting workflow, with automated (and editable) conclusions

The value of TBS in evaluating fracture risk
An FDA cleared software with TBS functionality, Integrated TBS uses DXA scans to estimate bone texture and assess bone micro-architecture, providing additive information to bone mineral density (BMD). TBS is a separate risk factor from bone density that measures bone quality and research suggests that it adds to DXA in predicting patients whose bones are at risk of fracture due to diseases or medications they are taking.

Introducing Integrated TBS 3.1
TBS 3.1 has been updated with new tools and reporting added including:
• A skeletal status assessment table was added, providing a “Bone Resilience Index” that visually shows the combined BMD T-score and TBS categories.
• New therapeutic decision tools have been introduced, including TBS adjusted FRAX® and TBS adjusted BMD T-score. These tools can be helpful since different drugs may impact bone density and bone micro-architecture differently.
• For quicker workflow, automated conclusions are now included in the report, providing conclusions based on medical society guidelines. These have been developed by clinicians and key opinion leaders in the field and are easily editable.
NEW Bone Health Report

1 TBS Mapping: Visualizes local TBS values using a color scale; well-structured cancellous bone is in green and poorly structured is in red.

3 Skeletal Status Assessment: Overall fracture risk for patient is displayed on a color-coded grid.

5 Detailed Spine Results: Combining BMD and TBS for all ROI.

2 TBS Results for Selected Region: Graph comparing patient results to a normal population.

4 Therapeutic Decision Tools: Combining TBS with BMD for an adjusted T-score, and with FRAX for an adjusted risk of fracture.

6 Conclusion: Automatically populates patients results together with recommendations, which can be edited as needed.

**Notes & References**

- Based on TBS for all ROI.

**Ankylosing Spondylitis**

- See below as needed.
Studies have shown that the addition of TBS can help clinicians predict major osteoporotic fractures (MOF) of the hip, spine, upper arm and wrist, better than using DXA alone.3,4

“We have one osteoporotic fracture every three seconds.5 And more than 50 percent of major osteoporotic fractures occur in a non-osteoporotic zone.6 That’s why knowing both the bone density and structure—the quantity and the quality of the bone is important. Combining these, we more accurately predict fracture risk and can have the best outcomes for our patients.”

– Didier Hans, Professor and Co-Director of the Center of Bone Diseases, Bone and Joint Department at Lausanne University Hospital and University of Lausanne, Switzerland


To access online learning about Integrated TBS and how to use it, click here.

To learn more about GE Healthcare’s bone and metabolic health solutions, click here.