# OSTEO STRONG®

Emerging Bone Health Testing Technologies

There are a few emerging technologies that are intended to be an **additive, or "in addition" to DXA** to an effort to address some of the challenges with DXA. Here are a few.

- **3D Sharper Software**: creates a 3-dimensional image of your femurs, looking at the cortical bone and tracking degradation of cortical bone, along with information on trabecular bone.
  For more information visit https://www.3d-shaper.com/en/technology.html
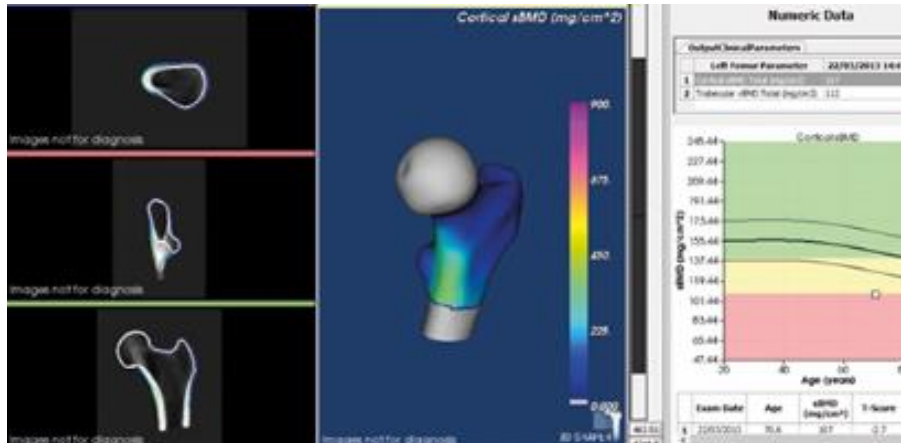
- **TBS (Trabecular Bone Score)** is another tool that looks at the microarchitecture of the bone (quality/strength), providing 30% more information than a DXA however can only be performed on the spine. It also provides a TBS T-score and the TBS FRAX, which combines bone density and quality for a more comprehensive picture of your bone health.
  For more information: https://www.medimapsgroup.com
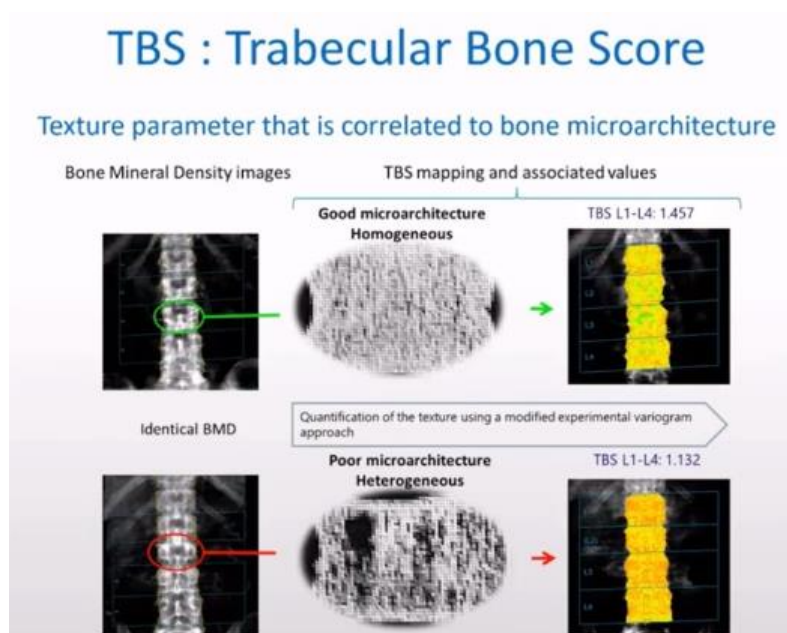
QCT (Qualitative Computed Tomography) is another emerging test that is not an additive to DXA but uses a standard X-ray computed tomography scanner with a calibration standard to convert Hounsfield units of the CT image to bone mineral density values. This produces a 3D image. It is very expensive, not covered by insurance and much higher exposure to radiation.

In summary, **3D-Sharper Software** offers a novel technique for estimating changes in cortical and trabecular bone parameters from standard hip DXA images, while **QCT** provides true volumetric analysis. **TBS** complements BMD measurements by evaluating bone texture. Each method has its strengths and limitations.

REMS (Radiofrequency Echographic Multi Spectrometry) is a radiation-free ultrasound-based technology developed in Italy to measure BMD, bone quality and strength. Read more about Echolight REMS coming to Missoula OsteoStrong on our blog here.

Lastly, if you are interested in learning your genetic predisposition, you can do **Axgen Genetic Testing** that uses your DNA to identify if you're susceptible to low bone density. Learn more at www.axgen.us