UTC Imaging
UTC Imaging is a diagnostic ultrasound company that exploits the information present in ultrasound signals to the extent that it sets new standards in imaging and diagnosis of tendons, ligaments and cartilage.

UTC Imaging was incorporated in July 2009 as a passionate team that has a whole arsenal of knowledge, expertise and facilities on board, ranging from fundamental and clinical orthopedic research, computer science, musculoskeletal imaging, image processing, electronics, engineering, fine mechanics and ultrasound technology.

It is the vision of UTC Imaging that for the benefit of a better performance, the early detection, targeted treatment and objective monitoring of tendinopathy is vital. The novel UTC technique facilitates it all.

Keeping you in the lead

Typical features of UTC imaging
- Portable
- Standardized & highly reproducible
- Easy to perform: scan plus analysis takes only minutes
- 3-D visualization & tissue characterization
- Early detection overstrain & degeneration
- Precise diagnosis & prognostication
- Targeted & minimally invasive treatment
- Objective evaluation & monitoring of therapy
- Guided rehabilitation

Interested?
Please visit our website www.UTCimaging.com and feel free to subscribe to our newsletter for updates and posts from UTC-pioneers.

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UTC imaging is an innovative technique that adds new dimensions to diagnostic ultrasound, namely unique 3-D imaging capabilities next to the novel Tissue Characterization properties.

**Diagnose**
The 3-D tomographic visualization of the region of interest and the ability to characterize the tissue at hand offers far greater diagnostic capabilities than regular ultrasound imaging ever can.

**Treat**
Insight in the architecture and integrity of the collagenous matrix offered through UTC tissue characterization, allows better choices of really fine-tuned treatment options.

**Monitor**
Being very sensitive, UTC will already detect minimal effects of exercise or interventions, even within days after changing exercise-level or interventions like regenerative medicines.

**Perform**
Using UTC for the detection of exercise effects and early diagnosis of developing tendon pathology, it is extremely helpful for injury-prevention and guided rehabilitation.

**Tomographic visualization.**
The 3-D ultrasound data-block can be scrolled-through and regions of interest can be visualized instantaneously in 3 planes of view, transverse, sagittal and coronal plus a 3-D rendered view over a length of 12-20 cm.

**Tissue characterization.**
Dedicated UTC-Algorithms can quantify the dynamics of echo-patterns in contiguous images and these features can be related to architecture and integrity of the collagenous matrix with histo-morphology of tissue specimen as reference test. For instance, in tendon tissue 4 different echo-types can be discriminated.

“This ultra-structural information is visualized tomographically in 3 planes of view and quantified by means of the calculation of respective percentages of echo-types. The ratios of these 4 echo-types are highly correlated with histo-morphological characteristics of tendon tissue, showing the discriminative power of UTC for tissue characterization.”

“Note the innovation of ‘Ultrasound Tissue Characterization’ - a novel way of quantifying ultrasound images. An innovation from the thoroughbred racing industry and possibly the next big thing in imaging - this is a ‘giant leap’ rather than a small step.”


Computerized “Ultrasound Tissue Characterization” (UTC) consists of both hard- and soft-ware. A pivotal role in the configuration plays the UTC-Tracker, a precision instrument that moves the ultrasound probe automatically across the region of interest, e.g. along a tendon’s long axis, collecting transverse images at even distances of 0.2 mm over a length of 12-20 cm. These images are stored real-time in a high-capacity laptop computer and by compounding contiguous transverse images, a 3-D ultrasound data-block is created that can be used for tomographic visualization and tissue characterization and quantification of architecture and integrity of the collagenous matrix.