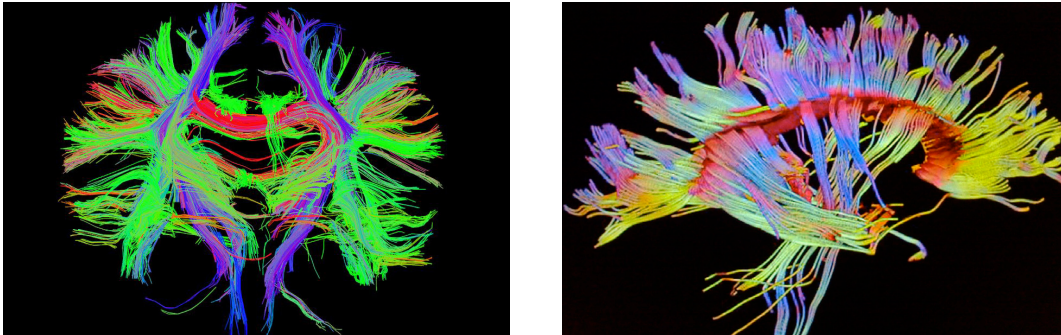


# Neuro Degenerative Diagnostic Centers

## Quantitative Diffusion Tensor Imaging (DTI) and Fiber Tract Mapping



SimonMed Imaging's new Neuro Degenerative Diagnostic Centers are now offering DTI with fiber tract mapping which is an advanced MRI technique that enables the measurement of diffusion of water along axonal fiber tracts within the brain in all three dimensions. The principal application of DTI is in the functional imaging of white matter axonal fiber tracts where the location, orientation and anisotropy (which is the preferential directional flow of water molecules) can be visually mapped in a 3D color-coded image and quantitatively measured in all three dimensions. The architecture of brain axons are oriented in parallel bundles and their myelin sheaths facilitate the diffusion of water molecules preferentially along their main direction which can be visualized and quantitatively measured on high-resolution 3T MRI imaging.

SimonMed's team of experienced Neuroradiologists are using quantitative DTI and fiber tract mapping to evaluate patients with traumatic brain injury (TBI) which can qualitatively and quantitatively demonstrate brain pathology that is often not detected by other imaging modalities such as CT and routine MRI imaging.

Quantitative DTI and fiber tract mapping can also be used in multiple sclerosis (MS) patients to initially diagnose damage to axonal fiber tracts and in the monitoring and objective longitudinal tracking of disease progression. DTI can also be used in preoperative neurosurgical planning for resection of brain tumors or other masses located in fluent areas of the brain.

**The new SimonMed Neuro Degenerative Diagnostic Centers are one of the few outpatient diagnostic imaging sites technologically advanced enough to provide this breakthrough testing.**

*\*A prescription from a physician is needed.*



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