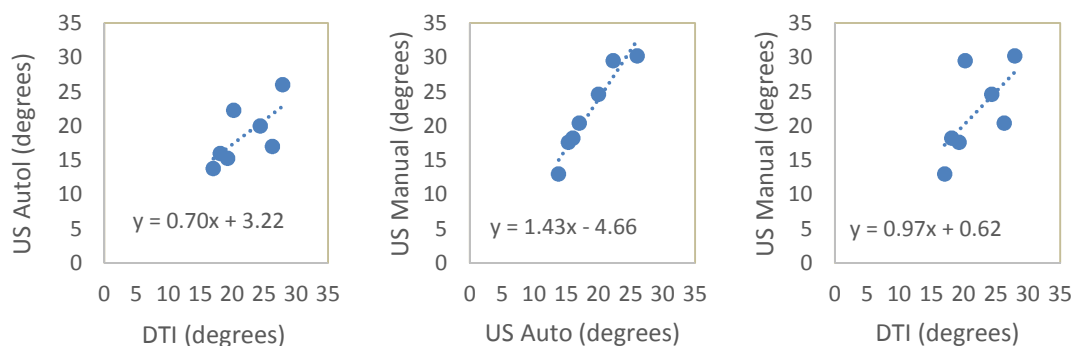


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Muscle biomechanists and imaging scientists interested in quantitative muscle MRI or post-processing of diffusion tensor imaging data.

The angle at which pennate muscle fibers insert into an aponeurosis is known as the pennation angle (θ). Pennation naturally corresponds to a decrease in muscle fiber length and an oblique arrangement of these shorter length fibers with respect to the muscle's mechanical line of action.¹ Recent developed methods for non-invasively studying muscle architecture in humans in vivo include Ultrasonography (US) and Diffusion Tensor Imaging (DTI). Many studies have used either US or DTI, but there has been little or no research comparing the two techniques. The goal of this study was to compare the results of US and DTI for measuring human muscle fiber orientation in vivo.



1. Maganaris CN, et al.: *J Physiol* 1998, **512** (Pt 2):603-614.
2. Rana M, et al.: *J Biomech* 2009, **42**(13):2068-2073.

