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First edition
2014-03-01

Tissue-engineered medical products — Evaluation of anisotropic structure of articular cartilage using DT (Diffusion Tensor)-MR Imaging

Produits médicaux à base de tissus — Évaluation de la structure anisotrope du cartilage articulaire en utilisant l'imagerie en tenseur de diffusion (IRM-TD)



Reference number
ISO/TR 16379:2014(E)

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Published in Switzerland

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Foreword

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The committee responsible for this document is ISO/TC 150, *Implants for Surgery*, Subcommittee SC 7, *Tissue-engineered Medical Products*.

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Introduction

Structural evaluation of articular cartilage with conventional diagnostic technologies is challenging, and Nihon University has developed technologies (see Reference [1]) and collected relevant data for *in vivo* evaluation of articular cartilage structure by means of diffusion tensor magnetic resonance imaging (DT-MRI) using 1,5 Tesla or 3 Tesla MRI equipment employed for treatment in hospital settings. These data are released in this Technical Report prepared for reference in treatment settings.

This work is part of “Development of Cartilage Observation and Evaluation Technologies for Regenerative Medicine Processes”, an activity managed by the University under “Development of Evaluation Technology for Early Introduction of Regenerative Medicine”, a project contracted by the New Energy and Industrial Technology Development Organization (NEDO) to the National Institute of Advanced Industrial Science and Technology (AIST) and its Technology Research Association of Medical Welfare Apparatus.