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FOR IMMEDIATE RELEASE:

Leading Imaging Research Group uses VivoSight OCT Scanner to Assess Nail Disease in Psoriasis

Recent studies by the Musculoskeletal Biomedical Research Unit at Leeds University NHS Trust, UK, indicate that Optical Coherence Tomography has considerable potential for the evaluation of psoriatic nail disease.

Nail disease, which occurs in 10-55% of patients with Psoriasis and in 53-86% of patients with Psoriatic Arthritis, is increasingly recognised to be of major clinical and research relevance. As yet there are no objective methods to diagnose and assess nail disease in these patients

An initial case study, published in Dermatology, compared nail bed images produced by the Michelson Diagnostics VivoSight OCT scanner with those produced using High Resolution Ultrasound[1].

The OCT images which showed much higher-resolution changes than Ultrasound, correlated with the clinical observation of subungual hyperkeratosis (Fig 1 & 2)

These preliminary findings, which were also presented at a recent GRAPPA meeting (Group for Research and Assessment of Psoriasis and Psoriatic Arthritis) show that OCT has great potential for the systematic characterisation of nail changes in psoriasis and this could have implications for diagnosis, prognosis and monitoring of therapies and for a better understanding of nail disease pathogenesis

The Leeds Psoriatic Arthritis Research Group, led by Prof Dennis McGonagle, is conducting further studies which will be published in the coming months.

Professor McGonagle stated, “VivoSight offers unparalleled nail imaging capabilities that appear to have the same potential as microscopy for elucidating the microanatomical basis for nail disease. This could be key for predicting arthritis development in psoriasis cases and helping with timely treatment strategies”

The VivoSight scanner uses OCT which provides images of sub-surface tissue similar to ultrasound, but at far higher resolution, enabling the clinician to see critical details in real time and without exposing the patient to ionising radiation. Michelson Diagnostics has already obtained CE mark and FDA clearance for clinical use of the scanner in Europe and USA, and it is being evaluated at leading research centres in Europe and USA.

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[1] Zehra, S. et al, "Optical Coherence Tomography: A New Tool to Assess Nail Disease in Psoriasis?" Dermatology (DOI: 10.1159/000329434), S. Karger AG, Basel.

Images:

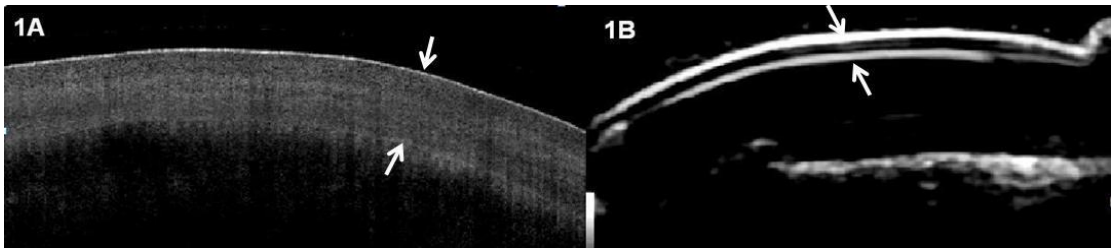
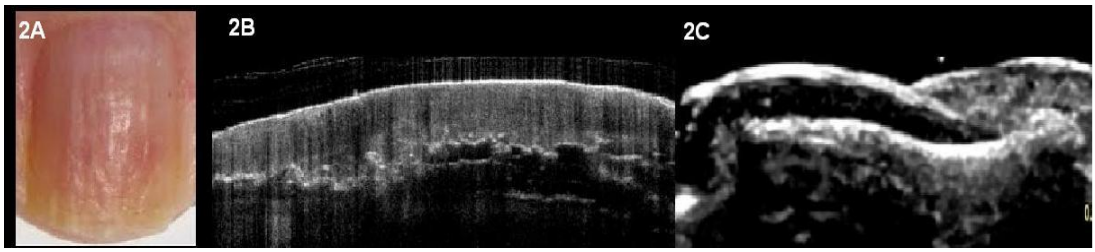


Fig 1: VivoSight OCT (1A) and ultrasound (1B) images of a healthy nail



Picture (2A), corresponding VivoSight OCT (2B) and US (2C) images of a psoriatic nail.

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Notes for editors

Link to article in Dermatology:

http://content.karger.com/produktedb/produkte.asp?doi=329434

Link to GRAPPA website:

http://www.grappanetwork.org/

About Michelson Diagnostics

Michelson Diagnostics was founded in 2006; it is privately owned and based in Kent, U.K. The company develops imaging products using a technology called Multi-Beam Optical Coherence Tomography. The technology provides real time images of up to 2 mm into tissue with a resolution of better than 10 microns. The company's VivoSight OCT scanner has CE and 510(k) clearance for use to aid clinical judgments in the field of dermatology including non-melanoma skin cancer assessment and guiding skin cancer surgery.

Further information about Michelson Diagnostics can be found on the Internet at http://www.michelsondiagnostics.com or by emailing enquiries@md-ltd.co.uk

For clinical use in the US FDA 510(k) K093520 applies:
- The VivoSight Topical OCT system is indicated for use in the two-dimensional, cross-sectional, real-time imaging of external tissues of the human body. This indicated use allows imaging of tissue microstructure, including skin, to aid trained and competent clinicians in their assessment of a patient's clinical conditions.
- US Federal law restricts this device to sale by or on the order of a physician.

The Michelson Diagnostics logo and the VivoSight name are the trademarks of Michelson Diagnostics Ltd and are registered in the UK, the US & throughout the European Union

Octopus Investments Ltd (www.octopusinvestments.com) is an investor in Michelson Diagnostics.

Octopus Investments, founded in 2000, is a leading investment specialist, offering a range of core and satellite investment solutions. It has grown its funds under management by almost 100% per annum since inception, and now employs over 170 people to manage almost £2 billion in funds under management.

Octopus has won a number of awards for its products and customer service. It has twice been voted one of the Best 100 SMEs to work for by the Sunday Times, and is one of only two fund management companies to be AAA rated by IFAs for customer service.

About NIHR Leeds Musculoskeletal Biomedical Research Unit, Leeds Teaching Hospitals Trust, Leeds, UK http://lmbru.leeds.ac.uk/

The NIHR Leeds Musculoskeletal Biomedical Research Unit (LMBRU) was created in 2008 as part of the NIHR's initiative to support translational clinical research in priority areas. Through this funding, the Leeds Teaching Hospitals Trust (LTHT) and was awarded £6.25 million and is based on the strong collaborative links and the foundations of excellence in musculoskeletal research activities between the LTHT and the University of Leeds.

The LMBRU brings together the two areas of academic strength at Leeds: Academic Section of Musculoskeletal Disease, recently rated as most highly cited rheumatology research unit in the UK and led by Professor Paul Emery as the most highly cited rheumatologist in Europe; and the Institute of Medical and Biological Engineering, led by Professor John Fisher, recently rated as one of the top 10 bioengineering research institutes.

The LMBRU is the first Biomedical Research Unit within Leeds and is a priority research area for both organisations.

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