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Value of impact microindentation in the evaluation of bone fragility in clinical practice

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A scenic sunset over a beach with mountains in the background and a large crater in the foreground. The sky is filled with colorful clouds in shades of purple, pink, and orange. The sun is low on the horizon, casting a bright glow over the water and sand. The beach is sandy with some small rocks, and a large, dark, circular crater is visible in the foreground. The mountains in the background are rugged and covered in green vegetation.

APPENDICES

Portfolio

Curriculum Vitae

Acknowledgements

Portfolio

Publications within this thesis

Schoeb M, Hamdy NAT, Malgo F, Winter EM, Appelman-Dijkstra NM. Added Value of Impact Microindentation in the Evaluation of Bone Fragility: A Systematic Review of the Literature. *Frontiers in Endocrinology* 2020;11:15. DOI: 10.3389/fendo.2020.00015.

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Schoeb M, Winter EM, Sleddering MA, Lips MA, Schepers A, Snel M, Appelman-Dijkstra NM. Bone Material Strength Index as Measured by Impact Microindentation is Low in Patients with Primary Hyperparathyroidism. *The Journal of Clinical Endocrinology & Metabolism* 2021;106(7):e2527-e2534. DOI: 10.1210/clinem/dgab207.

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A Prospective Cohort Study. *Obesity Surgery* 2020;30(7):2659-2666. DOI: 10.1007/s11695-020-04544-x.

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Wertli MM, **Schöb M**, Brunner F, Steurer J. Incomplete reporting of baseline characteristics in clinical trials: an analysis of randomized controlled trials and systematic reviews involving patients with chronic low back pain. *PLoS One* 2013;8(3):e58512. DOI: 10.1371/journal.pone.0058512.

Presentations

Oral presentations

Schoeb M, Sintenie PJC, van Haalen F, Nijhoff M, de Fries F, Biermasz N, Winter EM, Pereira AM, Appelman-Dijkstra NM. Bone Material Strength index is altered in patients with Cushing's syndrome even after long-term remission. *European Congress of Endocrinology*, 2021.

Schoeb M, Winter EM, Schepers A, Snel M, Appelman-Dijkstra NM. Bone Material Strength index as measured by Impact Microindentation in vivo is altered in patients with Primary Hyperparathyroidism. *Annual Meeting of the European Calcified Tissue Society*, 2020.

Schoeb M, Malgo F, Peeters JM, Winter EM, Papapoulos SE, Appelman-Dijkstra NM. Treatments of Osteoporosis Increase Bone Material Strength index in patients with low Bone Mass. *Annual Meeting of the European Calcified Tissue Society*, 2020.

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Schöb M, Malgo F, Winter EM, Papapoulos SE, Appelman-Dijkstra NAT. Bone Material Strength index increases with antiresorptive treatments in subjects with low bone mass. NVCB Annual Meeting, 2018.

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Curriculum vitae

Manuela Schoeb was born on 14 November 1984 in Niederuzwil, Switzerland. After graduating from high school in Wattwil, Switzerland, she studied Medicine at the University of Zurich, obtaining her Swiss Federal Medical Diploma in 2010 and her Doctor of Medicine (MD) degree in 2011.

Between 2011 and 2017, she completed her postgraduate training in General Internal Medicine at Kantonsspital St. Gallen and Spital Flawil, Switzerland. During this period, she also worked as an attending physician in Internal Medicine and at the Obesity Center of Kantonsspital St. Gallen. She obtained the Swiss Board Certification in General Internal Medicine in 2015 and the FMH specialist title in 2017.

From 2018 to 2020, she conducted the clinical and translational research that forms the basis of this thesis as a Clinical and Research Fellow in the Division of Endocrinology and the Center for Bone Quality, Department of Medicine, Leiden University Medical Center (LUMC), the Netherlands, under the supervision of Prof. dr. N.M. Appelman-Dijkstra and Dr. N.A.T. Hamdy. She was awarded the competitive European Calcified Tissue Society (ECTS) Clinical Research Fellowship and the European Union of Medical Specialists (UEMS) Exchange in Endocrinology Expertise (EEE) Grant, which supported the research presented in this thesis.

After returning to Switzerland in 2020, she completed her specialist training in the Division of Endocrinology, Diabetology, Osteology and Metabolic Diseases at HOCH Kantonsspital St. Gallen, obtaining her FMH specialist title in Endocrinology/Diabetology in 2023. Since 2023, she has been an attending endocrinologist in the Division of Endocrinology, Diabetology, Osteology and Metabolic Diseases at HOCH Kantonsspital St. Gallen, with a clinical and academic focus on osteoporosis and rare bone diseases. She currently leads the Center for Rare Bone Diseases of Eastern Switzerland and the Fracture Liaison Service at HOCH Kantonsspital St. Gallen.

She married Nicola Frei in 2020, and together they have a daughter.

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