

# Markus Haapasalo / Denmark 2014

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## **Practical implications of new knowledge of endodontic biofilms**

This presentation is about the new developments in research on endodontic biofilms and how our growing understanding of these biofilms should reflect on clinical practice. The talk focuses on biofilm characteristics, the different locations of biofilms within the root canal/root system, and how effective/ineffective different treatment procedures (instrumentation, disinfecting solutions, root filling materials) are in attacking the biofilm and biofilm bacteria. The rationale for the choice between conservative and surgical treatment approaches is also viewed from the point of view of biofilms.

## **Update on new instruments and instrument materials**

Several new developments have occurred during the last few years in the area of instrument design and instrument materials. In addition to "classical" superelastic NiTi files, we now have files made of M-wire, NiTi in R-phase, CM wire, and some not yet completely classified. This presentation summarizes the metallurgical and "clinical" properties of the different NiTi instruments, the impact of thermomechanical treatment on instrument flexibility, and the resistance to cyclic fatigue and torsion.

## **Cleaning of root canals with a novel multisonic technology**

Throughout the history of modern endodontics, one of the distant dreams has been cleaning of the root canals "without going there". A novel technology based on sound in a wide spectrum of wavelengths and sodium hypochlorite is a completely new type of approach to clean root canals after no or minimal instrumentation. The new technology will be presented and discussed in terms of safety, cleaning effectiveness, time effectiveness and patient experience. The potential benefits of the technology to patients, endodontists, and the discipline of endodontics will be discussed.