

DIGITAL ENDODONTICS

RELEVANT FOR CURRENT CLINICAL PRACTICE?

DR. OVE A. PETERS, DMD MS PHD



Lecture Synopsis

Digital technologies are increasingly shaping modern endodontic practice, offering enhanced diagnostic capabilities, procedural precision, and new opportunities for clinical efficiency. While tactile skill remains foundational, advancements such as cone beam computed tomography (CBCT) have redefined diagnostic imaging with regards to periapical pathosis and complex canal anatomies. Dental Magnetic resonance tomography (dMRI) has the potential for a relevant next step in diagnostics.

Other emerging tools include AI-driven decision-making enhancement, 3D printed guides for minimally invasive access, and dynamic navigation systems that integrate CBCT data into real-time visualisation during procedures. These innovations—though currently not fully implemented even specialist settings—signal a shift toward more predictable and streamlined treatment planning and treatment.

Digital enhancements in visualisation, such as microscope integration with heads-up displays, offer a futuristic glimpse of endodontics where data from multiple sources converge chairside. Additionally, digital peripherals such as connected motors, new anaesthesia delivery systems and potential digital pulp diagnostic tools aim to further improve patient care and clinical accuracy.

While many of these technologies remain in early adoption stages, their rapid development and integration potential highlight the relevance of digital endodontics today. Clinicians must stay informed and engaged with these trends to discern developments that may advance clinical practice and optimize outcomes in a digitally evolving landscape.



**National University
Centre for Oral Health
Singapore**
Auditorium L9

14th May 2025

7–8pm

*(light refreshments
available from 6:30pm)*

Scan to RSVP:



Enquiries – singaporeendodontists@gmail.com

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ABOUT THE SPEAKER

Ove A. Peters, DMD MS PhD, joined The University of Queensland School of Dentistry in 2020 and is now the professor of endodontics and Head of Clinical Dentistry there. Immediately, prior to this, Dr. Peters was a tenured professor and chair of the Department of Endodontics at University of the Pacific in San Francisco. He received his postgraduate education at the University of Zurich and at UCSF and is certified as a Diplomate of the American Board of Endodontics.

Dr. Peters has wide-ranging research expertise and has published more than 220 manuscripts in peer-reviewed journals, mainly related to endodontic technology and biology. He has further authored two books and contributed to several leading textbooks in his areas of expertise. Dr. Peters has received the Hans Genet Award of the European Society of Endodontology, the Louis I. Grossman Award of the AAE and the Alan Docking Award of the IADR ANZ.

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