

Curriculum Vitae

Hagay Shemesh, DMD, PhD
Associate Professor, Dep. Of Endodontology, ACTA

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Personal details

Date of birth: 8.9.1966 Citizenship: Dutch

Current Academic appointment: Associate professor (U.H.D) 2014-now

Employ at the Academic Center for Dentistry Amsterdam since 2002 (22 years)

Academic interest:

My academic focus lies in the examination of the procedures and indications associated with root canal treatments and their impact on the management of periapical periodontitis. I have dedicated my efforts to research, administrative tasks, and clinical work, particularly at the intersection of diagnosis, treatment, and the outcomes of root canal procedures. My emphasis has been on discerning the disparities between long-term treatment outcomes and alternative approaches with a recent focus on prevention of overtreatment.

Education & work

- 1989: DMD degree (Doctor of Dental Medicine) – Hebrew University, Jerusalem, Israel
- 1990-1995: Army service- Israeli Airforce, Dental unit management
- 1996-1999: Post-graduate program in Endodontology, Hebrew University Jerusalem
- 2000: Israeli boards / specialist certificate endodontology, ministry of health
- 2000-2002: Work in private practice limited to endodontology in Tel Aviv
- 2002: Immigration to the Netherlands
- 2002-2006: Staff of the department of endodontology in ACTA- Undergraduate teaching
- 2006-2009: PhD thesis: “new insights into the root canal wall” (www.shemesh.nl)
- 2009: graduate PhD thesis cum laude, University of Amsterdam
- 2010-2019: Post-graduate endodontology program director, ACTA
- 2013-2016: coordinator of the endodontology division at ACTA
- 2016-2019 Chair of the department of Endodontology
- 2019-now Associate professor, Department of endodontology
- 2023- now acting chairman of the department of Endodontology
- 2023- now post graduate program director, Endodontology

Courses and trainings

- 2006: apical surgery, Zurich, Switzerland
- 2007: BKO didactic training for dental faculty teachers, Egmond
- 2012: BROK cursus – Basiscursus Regelgeving & organisatie voor klinisch onderzoek
- 2013: Management in scientific institutions, Sint-Michielshestel (one year module)

- 2014: Radiation safety , Amsterdam
- 2015: Radiation safety for synchrotron users, Hamburg Germany
- 2022 :Radiation safety

Academic Appointments

- 2011-2019 & 2023- now : Program director, post-graduate endodontology, ACTA
- 2012-2019: Department head, Endodontology, ACTA
- 2023- now : Acting chair, Department of Endodontology, ACTA
- 2018: PhD Promotion rights (able to independently supervise a PhD as promotor)

Professional Society Memberships

- European Society of Endodontology
- Nederlandse Vereniging voor Endodontologie (NVvE)
- Dutch Dental Association (NMT)
- American Association of Endodontics (AAE)

Honors & Awards and grants

- Best teacher nomination 2011 Vrije Universiteit Amsterdam
- Luis Grossman award- given by the French Endodontic Association 2016
- Best article of the year award, Journal of Endodontics 2021 . AAE best article price 2021
Diagnosis of Vertical Root Fractures by Cone-beam Computed Tomography in Root-filled Teeth with Confirmation by Direct Visualization: A Systematic Review and Meta-Analysis
- NWVT master thesis prize 2018-2019: 2e prize: Are the quality of root canal filling & marginal bone level correlated with the presence of apical periodontitis? A retrospective cohort studyMilou Snijders
- NWVT Master thesis prize 2020 : 3e prize: Z. Arslan Apexification vs. regeneration in necrotic teeth with open apex: healing and root development. A systematic review and meta-analysis

Grants

- Scientific research prize- European Society of Endodontology 2009- 20,000€
- ESE annual research grant- 20,000€ 2010
- Interdent research project group – Mercator PI : Charite, Berlin 2020-2022.
- AMS-VUmc investment call granted 2022 (€ 40.216 incl. VAT)
- DFG : Deutsche Forschungsgemeinschaft Bonn : Interdent project, granted (Mercator researcher position)

Clinical Activities

- Clinical practice limited to endodontics, Amsterdam : Verwijspraktijk voor Tandheelkunde www.verwijspraktijk.nl

Institutional Service

- Israeli Airforce, Captain
- Dutch representative to the European Society of Endodontology (2010-now)
- Scientific committee, Dutch Association of Endodontics (NVvE) (2011-now)
- Scientific advisory board to Editorial board of the Journal of Endodontics (2010-now)

- Scientific advisory board International Endodontic Journal (2013-now)

Teaching

- BKO (Basis Kwalificatie Onderwijs) diploma – 2012
- Organization of clinical courses for dentists in ACTA (“ACTA Quality Practice” and ACTA Endoleergang)
- Nominated: “best University teacher of the year” 2011

PhD students supervision:

As co-promotor

- Yu Hong Liang (Phd defense September 2013)
- Amir Moinzadeh (PhD defense May 2016)
- Prasanna Neelakantan (PhD defense June 2016)
- PradeepKumar (PhD defense October 2021)

As Promotor:

- Shlomo Elbahary (Phd defense 26 October 2022),
- Davide Musu (PhD defense Sept 2021)
- Puck van der Wouden (PhD defense 26 June 2022) – **2023 Hamer Duyvensz prize for the best PhD thesis 2023 prijs 2023**

As Promotor- ongoing :

- Joao Brochado Martins :Outcome of root canal treatments
- Tasos Retsas : root canal irrigation protocols

PhD committee member

- Annemarie Baaij- chairmen of the committee

Bachelor theses supervision (selection)

- Diagnosticeren van perforaties bij endodontisch behandelde molaren middels CBCT en conventionele röntgenfoto's R. Autar & Z.A Ronkes Agerbeek 2010
- Dentine Schade na gebruik van warme pluggers tijdens wortelkanaalbehandeling D Hanenberg en S Tjin Kiem Jien 2014
- De uitkomsten van de behandelingen van externe cervicale resorptie: een systematische review Z. Faik en P Lieuw 2023
- Het gebruik van Cone Beam Computerized Tomography (CBCT) door endodontologen in Nederland van Mierlo, C.M.A & Vergouwen, R.W.J. 2022

Master theses supervision (selection)

- Association between periodontal status and the incidence of apical periodontitis. A retrospective cohort study L. Elenbaas 2018
- Effect of canal preparation and potential laboratory problems on the observation of dentinal microcracks C. Aznar-Portoles 2015
- Cleaning of endodontic instruments in the dental practice, comparison between two methods D Hanenberg 2022
- Is a post always needed for the restoration of endodontically treated teeth?
- A systematic review N. Isa 2021
- Long-term survival of teeth after endodontic surgery – a review of the literature M. Shamoon 2021
- Apexification vs. regeneration in necrotic teeth with open apex: healing and root development. A systematic review and meta-analysis - is gehonoreerd met de 3e prijs voor de NWVT Masterscriptie prijs 2020 Z. Arslan

Teaching activities

- Blok coordinator Master1 : Pijn & trauma 2020-2024
- Blok coordinatie OHS : Joint Case & research presentations post-graduate programs ACTA
- Program director, OHS endodontologie 2013-2020
- **Nominated best teacher of the year, 2018**

Scientific activities

International Cooperation and mutual research projects:

- Zurich University, Switzerland
- Max Planck Institute, Berlin, Germany
- Hebrew University, Israel
- University of Toronto, Canada
- University of Peking, Beijing, China
- University of Cagliari, Italy
- Diderot University, Paris, France
- Saveetha University, Chennai, India
- NYU dental faculty, New York, USA

- Organization of the 1st European research meeting of the European Society of Endodontology
October 2014

Presentations lectures and international exam boards (as invited speaker) 2014-2024. Many more lectures were given in the period before 2014.

2014

International:

Sonjiang Stomatology hospital, Shanghai, China- February

American Endodontic Association annual session, Washington DC April

International Dental school , Barcelona Spain- July

American Board of Diplomates of the American Endodontic Association, Denver USA-August

Swiss Endodontic Society, Zurich- October

European Society of Endodontology (ESE) , Moderator and organizer of the first international research meeting of the ESE - October Amsterdam

Baltic Endodontics congress, Vilnius Lithuania- November

Other activities:

Paris France: External examiner, Post-graduate endodontics

2015

International:

Sardegna Endodontic Society and department - Cagliari dental school, Italy- January

Chennai school of dental medicine, visit and lectures, January

Dentsply Opinion leaders meeting, Innsbruck Austria- February

Spanish Endodontic Society, Madrid, Spain - March

Canadian Endodontic Association, Banff- august

European Society of Endodontics (ESE) Barcelona Spain- September

British Endodontic Study club, London , UK - November

National:

Nederlandse Vereinigung voor Endodontologie (NVvE), Amsterdam

2016

International:

Sao Paulo dental conference CIOSP January 2016

American Endodontic Association annual session, San Francisco April 2016

Sao Paulo Brasil Endo July 2016

2017

National:

Leergang endodontologie, University of Dusseldorf, Germany 22 June 2017

International:

Asian-Pacific Endodontics conference of the Indian association, Delhi, India 6-7 April 2017

endosophie course , Bellaluges, Switzerland 22-23 May 2017

Coltene opinion leaders conference 16-17 June 2017 : moderator

European Association of Endodontology ESE biannual session : symposium on root fractures. 14 september 2017

Danish dental association : Lecture on root canal fillings. 2-4 November 2017

German Endo Society, Berlin. 2-3 December 2017. Topic : root fractures

2018

American Association of Endodontics , Denver , USA, 25 April – 28 April, 2018

International Federation of Endodontic Associations , Seoul , Korea 3-6 October 2018.

Department of Endodontology, Cagliari school of dentistry, Italy 20-22 October 2018

Department of Conservative Dentistry , Charite dental school, Berlin , Germany 2 July 2018

2019

European Endodontic Society (ESE) , Vienna , Austria 13-15 September 2019

2020

Swiss Endodontic Society (SES) , Zurich, Switzerland 17-18 January 2020

British Endodontic Society , ONLINE 20 Nov 2020

2021

Düsseldorf Dental Academy : Master endodontology 29 May 2021

2022

Leuven afscheid- Prof. Lambrechts – Leuven, Belgium 10 March 2022

German Endodontic Association (DGET) Cologne, Germany 25 November 2022

Dutch Endodontic Society (NVvE) Amsterdam, the Netherlands 5 November 2022

2023

European Society of Endodontics (ESE) congress in Helsinki, Finland 8 September 2023

Dutch Endodontic Society (NVvE) Amsterdam 11 March 2023

NTvT webinar on CBCT 19 Seotember 2023

2024

Dutch association of Radiology, Almere 4 April 2024

Mexican Endodontic Association Monterrey Mexico 31 May 2024

German certified endodontists annual meeting (VDZE) , Palma de Mallorca 9 March 2024

Other international scientific functions

- H. Shemesh Evaluation committee (visitatie)- post graduate programmes , Ghent, Belgium, 23 October 2018
- H. Shemesh Post graduate final exam committee, Lisbon, Portugal , 12 November 2018
- H. Shemesh Opponent, PhD defense, University of Aarhus , Denmark, 6 November 2018
- H. Shemesh, Opponent, PhD defense, University of Oslo, Norway, 15 September 2019
- H. Shemesh Opponent, PhD defense, University of Helsinki, Finland 31 June 2020
- H. Shemesh Opponent, PhD defense, University of Copenhagen, Denmark 28 October 2022

Publications in Peer reviewed international journals

1. Brochado Martins JF, Guerreiro Viegas O, Cristescu R, Diogo P, Shemesh H. Outcome of selective root canal retreatment-A retrospective study. Int Endod J. 2023 Mar;56(3):345-355.
2. Sturm R, Reeb A, Wolf-Yamamura O, Neumann K, Shemesh H, Bitter K. Teaching rotary root canal instrumentation using a Peyton teaching approach. Eur J Dent Educ. 2023 Nov;27(4):879-887.
3. Duncan HF, Kirkevang LL, Peters OA, El-Karim I, Krastl G, Del Fabbro M, Chong BS, Galler KM, Segura-Egea JJ, Kebschull M; ESE Workshop Participants and Methodological Consultant. Treatment of pulpal and apical disease: The European Society of Endodontontology (ESE) S3-level clinical practice guideline. Int Endod J. 2023 Oct;56 Suppl 3:238-295
4. Alves-Silva EG, Arruda-Vasconcelos R, Louzada LM, de-Jesus-Soares A, Ferraz CCR, Almeida JFA, Marciano MA, Steiner-Oliveira C, Bello-Silva MS, Shemesh H, Gomes BPFA. The effect of photodynamic therapy on postoperative pain in teeth with primary endodontic infection. Photodiagnosis Photodyn Ther. 2022 Mar;37:102700.

5. van der Wouden P, Hilverda F, van der Heijden G, Shemesh H, Pittens C. Establishing the research agenda for oral healthcare using the Dialogue Model-patient involvement in a joint research agenda with practitioners. *Eur J Oral Sci.* **2022** Feb;130(1):e12842.
6. van der Wouden P, van der Heijden G, Shemesh H, van den Besselaar P. Evidence and consequences of academic drift in the field of dental research: A bibliometric analysis 2000-2015. *BDJ Open.* **2022** Jan 17;8(1):3.
7. PradeepKumar AR, Shemesh H, Nivedhitha MS, Hashir MMJ, Arockiam S, Uma Maheswari TN, Natanasabapathy V. Diagnosis of Vertical Root Fractures by Cone-beam Computed Tomography in Root-filled Teeth with Confirmation by Direct Visualization: A Systematic Review and Meta-Analysis. *J Endod.* **2021** Aug;47(8):1198-1214.
8. Drukteinis S, Bilvinaite G, Tusas P, Shemesh H, Peciuliene V. Porosity Distribution in Single Cone Root Canal Fillings Performed by Operators with Different Clinical Experience: A microCT Assessment. *J Clin Med.* **2021** Jun 10;10(12):2569.
9. van der Wouden P, Shemesh H, van der Heijden GJMG. Research priorities for oral healthcare: agenda setting from the practitioners' perspective. *Acta Odontol Scand.* **2021** Aug;79(6):451-457.
10. Drukteinis S, Bilvinaite G, Shemesh H, Tusas P, Peciuliene V. The Effect of Ultrasonic Agitation on the Porosity Distribution in Apically Perforated Root Canals Filled with Different Bioceramic Materials and Techniques: A Micro-CT Assessment. *J Clin Med.* **2021** Oct 27;10(21):4977.
11. Hoedke D, Kaulika N, Dommisch H, Schlafer S, Shemesh H, Bitter K. Reduction of dual-species biofilm after sonic- or ultrasonic-activated irrigation protocols: A laboratory study. *Int Endod J.* **2021** Dec;54(12):2219-2228.
12. Drukteinis S, Bilvinaite G, Tusas P, Shemesh H, Peciuliene V. Microcomputed Tomographic Assessment of the Single Cone Root Canal Fillings Performed by Undergraduate Student, Postgraduate Student and Specialist Endodontist. *J Clin Med.* **2021** Mar 5;10(5):1080.
13. Zaslansky P, Prates Soares A, Shemesh H. Root dentinal microcracks - absence of evidence is not evidence of absence. *Int Endod J.* **2020** Jan;53(1):135-136.
14. Musu D, Bardini G, Shemesh H, Dettori C, Cotti E. Multimodal Assessment of a Traumatic Bone Cyst Overlapped with Apical Periodontitis. *Case Rep Dent.* **2020** Nov 25;2020:8829305.
15. Musu D, Shemesh H, Bocuzzi M, Dettori C, Cotti E. Correction to: The effectiveness of ultrasound examination to assess the healing process of bone lesions of the jaws: a systematic review. *Clin Oral Investig.* **2020** Dec;24(12):4663.
16. Musu D, Cadeddu Dessalvi C, Shemesh H, Frenda MG, Mercuro G, Cotti E. Ultrasound examination for the detection of simulated periapical bone lesions in bovine mandibles: an ex vivo study. *Int Endod J.* **2020** Sep;53(9):1289-1298.
17. Elbahary S, Bercovich R, Azzam NA, Haj-Yahya S, Shemesh H, Tsesis I, Rosen E. The Effect of Pulpotomy Base Material on Bacterial Penetration and Proliferation for Pulpotomized Primary Molar Teeth: A Confocal Laser Scanning Microscopy Study. *J Clin Pediatr Dent.* **2020**;44(2):84-89.

18. Soares AP, Bitter K, Lagrange A, Rack A, Shemesh H, Zaslansky P. Gaps at the interface between dentine and self-adhesive resin cement in post-endodontic restorations quantified in 3D by phase contrast-enhanced micro-CT. *Int Endod J.* 2020 Mar;53(3):392-402.
19. PradeepKumar AR, Shemesh H, Archana D, Versiani MA, Sousa-Neto MD, Leoni GB, Silva-Sousa YTC, Kishen A. Root Canal Preparation Does Not Induce Dentinal Microcracks In Vivo. *J Endod.* 2019 Oct;45(10):1258-1264.
20. Cotti E, Musu D, Goddi A, Dettori C, Campisi G, Shemesh H. Ultrasound Examination to Visualize and Trace Sinus Tracts of Endodontic Origin. *J Endod.* 2019 Oct;45(10):1184-1191.
21. Drukteinis S, Peciuliene V, Shemesh H, Tusas P, Bendinskaite R. Porosity Distribution in Apically Perforated Curved Root Canals Filled with Two Different Calcium Silicate Based Materials and Techniques: A Micro-Computed Tomography Study. *Materials (Basel).* 2019 May 28;12(11).
22. PradeepKumar AR, Shemesh H, van Loveren C, JothiLatha S, Shireen F, VijayaBharathi R, Kishen A. Impact of apical extent of root canal filling on vertical root fracture: a case-control study. *Int Endod J.* 2019 Sep;52(9):1283-1289.
23. van der Wouden P, van der Heijden GJMG, Shemesh H, van den Besselaar PAA. Ned Tijdschr Tandheelkd. 2019 Feb;126(2):91-100
24. Neelakantan P, Berger T, Primus C, Shemesh H, Wesselink PR. J Biomed Mater Res B Appl Biomater. Acidic and alkaline chemicals' influence on a tricalcium silicate-based dental biomaterial. 2019 Feb;107(2):377-387.
25. van der Wouden P, van der Heijden GJMG, Shemesh H, van den Besselaar PAA. [The content of publications in the Netherlands Journal of Dentistry - an analysis of patterns over time]. Ned Tijdschr Tandheelkd. 2019 Feb;126(2):91-100.
26. Patel S, Lambrechts P, Shemesh H, Mavridou A. European Society of Endodontontology position statement: External Cervical Resorption. European Society of Endodontontology (ESE) developed by;. *Int Endod J.* 2018 Dec;51(12):1323-1326.
27. Mirmohammadi H, Sitarz M, Shemesh H. Intra-manufacture Diameter Variability of Rotary Files and Their Corresponding Gutta-Percha Cones Using Laser Scan Micrometre. *Iran Endod J.* 2018 Spring;13(2):159-162.
28. Warnsinck CJ, Shemesh H [External cervical root resorption]. . Ned Tijdschr Tandheelkd. 2018 Feb;125(2):109-115.
29. Shemesh H, Lindtner T, Portoles CA, Zaslansky P. Dehydration Induces Cracking in Root Dentin Irrespective of Instrumentation: A Two-dimensional and Three-dimensional Study. *J Endod.* 2018 Jan;44(1):120-125.
30. Cotti E, Esposito SA, Musu D, Campisi G, Shemesh H. Ultrasound examination with color power Doppler to assess the early response of apical periodontitis to the endodontic treatment. *Clin Oral Investig.* 2018 Jan;22(1):131-140.

31. European Society of Endodontontology (ESE) developed by:, Patel S, Lambrechts P, Shemesh H, Mavridou A. European Society of Endodontontology position statement: External Cervical Resorption. *Int Endod J.* 2018 Dec;51(12):1323-1326. 26.
32. Pirani C, Iacono F, Gatto MR, Fitzgibbon RM, Chersoni S, Shemesh H, Prati C. Outcome of secondary root canal treatment filled with Thermafil: a 5-year follow-up of retrospective cohort study. *Clin Oral Investig.* 2018 Apr;22(3):1363-1373.
33. Tzanetakis GN, Tzimpoulas N, Floratos S, Agrafioti A, Kontakiotis EG, Shemesh H. Full text publication rates of research abstracts presented at the European Society of Endodontontology (ESE) Congresses in the last 20 years. *Int Endod J.* 2017 Jun 26;215-222.
34. Ruiz XF, Duran-Sindreu F, Shemesh H, García Font M, Vallés M, Roig Cayón M, Olivieri JG. Development of Periapical Lesions in Endodontically Treated Teeth with and without Periodontal Involvement: A Retrospective Cohort Study. *J Endod.* 2017 Aug;43(8):1246-1249.
35. PradeepKumar AR, Shemesh H, Chang JW, Bhowmik A, Sibi S, Gopikrishna V, Lakshmi-Narayanan L, Kishen A. Preexisting Dentinal Microcracks in Nonendodontically Treated Teeth: An Ex Vivo Micro-computed Tomographic Analysis.. *J Endod.* 2017 Jun;43(6):896-900.
36. Sousa TO, Hassan B, Mirmohammadi H, Shemesh H, Haite-Neto F. Feasibility of Cone-beam Computed Tomography in Detecting Lateral Canals before and after Root Canal Treatment: An Ex Vivo Study. *J Endod.* 2017 Jun;43(6):1014-1017.
37. C.J. Warnsinck & H. Shemesh. The dynamics of the periapical lesion. *Endodontic Practice Today* 2017, 11, 3, 167-172
38. Persistent dentoalveolar Pain -PDAP . C.J. Warnsinck, M. Koutris, H. Shemesh, F. Lobbezoo *Endodontic Practice Today* 2017, 11, 4, 239-242
39. PradeepKumar AR, Shemesh H, Jothilatha S, Vijayabharathi R, Jayalakshmi S, Kishen A. Diagnosis of Vertical Root Fractures in Restored Endodontically Treated Teeth: A Time-dependent Retrospective Cohort Study. *J Endod.* 2016 Aug;42(8):1175-80.
40. Moinzadeh AT, Farack L, Wilde F, Shemesh H, Zaslansky P. Synchrotron-based Phase Contrast-enhanced Micro-Computed Tomography Reveals Delaminations and Material Tearing in Water-expandable Root Fillings Ex Vivo. *J Endod.* 2016 May;42(5):776-81.
41. Warnsinck CJ, Shemesh H. [Endodontics in motion: new concepts, materials and techniques 5. The dynamics of the periapical lesion]. *Ned Tijdschr Tandheelkd.* 2016 Jan;123(1):44-8. Dutch.
42. Aznar Portoles C, Moinzadeh AT, Shemesh H. A Central Incisor with 4 Independent Root Canals: A Case Report. *J Endod.* 2015 Nov;41(11):1903-6.
43. Mirmohammadi H, Mahdi L, Partovi P, Khademi A, Shemesh H, Hassan B. Accuracy of Cone-beam Computed Tomography in the Detection of a Second Mesiobuccal Root Canal in Endodontically Treated Teeth: An Ex Vivo Study. *J Endod.* 2015 Oct;41(10):1678-81.
44. Moinzadeh AT, Zerbst W, Boutsikis C, Shemesh H, Zaslansky P. Porosity distribution in root canals filled with gutta percha and calcium silicate cement. *Dent Mater.* 2015 Sep;31(9):1100-8.

45. Warnsinck CJ, Koutris M, Shemesh H, Lobbezoo F. [Persistent dento-alveolar pain disorder (PDAP)]. Ned Tijdschr Tandheelkd. 2015 Feb;122(2):95-100. Dutch.
46. Cohenca N, Shemesh H. Clinical applications of cone beam computed tomography in endodontics: A comprehensive review Part 2. Quintessence Int. 2015 Sep;46(8):657-68.
47. Cohenca N, Shemesh H. Clinical applications of cone beam computed tomography in endodontics: A comprehensive review Part 1 .Quintessence Int. 2015 Jun;46(6):465-80.
48. Marques MS, Wesselink PR, Shemesh H. Outcome of Direct Pulp Capping with Mineral Trioxide Aggregate: A Prospective Study. J Endod. 2015 Apr 1.
49. Moinzadeh AT, Mirmohammadi H, Veenema T, Kleverlaan CJ, Wesselink PR, Wu MK, Shemesh H. Effect of a two-step placement procedure on the dislocation resistance of a methacrylate resin-based root canal sealer: a proof of concept. J Adhes Dent. 2014 Dec;16(6):567-74.
50. S Patel, C Durack, F Abella, H Shemesh, M Roig and K Lemberg Cone Beam Computed Tomography in Endodontics- A review. Int Endod J. 2015 Jan;48(1):3-15
51. Neelakantan P, Sharma S, Shemesh H, Wesselink PR. Influence of Irrigation Sequence on the Adhesion of Root Canal Sealers to Dentin: A Fourier Transform Infrared Spectroscopy and Push-out Bond Strength Analysis.J Endod. 2015 Jul;41(7):1108-11.
52. Moinzadeh AT, Mirmohammadi H, Hensbergen IA, Wesselink PR, Shemesh H. The correlation between fluid transport and push-out strength in root canals filled with a methacrylate-based filling material. Int Endod J. 2015 Feb;48(2):193-8.
53. European Society of Endodontology, Patel S, Durack C, Abella F, Roig M, Shemesh H, Lambrechts P, Lemberg K. European Society of Endodontology position statement: the use of CBCT in endodontics. Int Endod J. 2014 Jun;47(6):502-4.
54. Idzahi K, de Cock CC, Shemesh H, Brand HS. Interference of electronic apex locators with implantable cardioverter defibrillators. J Endod. 2014 Feb;40(2):277-80.
55. Y.-H. Liang, L. Jiang, X.-J. Gao, H. Shemesh, P. R. Wesselink and M.-K. Wu. Detection and measurement of artificial periapical lesions by cone-beam computed tomography . Int Endod J. 2014 Apr;47(4):332-8.
56. Moinzadeh AT, Mirmohammadi H, Veenema T, Kleverlaan CJ, Wesselink PR, Wu MK, Shemesh H. Effect of a two-step placement procedure on the dislocation resistance of a methacrylate resin-based root canal sealer: a proof of concept.
57. J Adhes Dent. 2014 Dec;16(6):567-74.
58. van der Borden WG, Wang X, Wu MK, Shemesh H. Area and 3-dimensional volumetric changes of periapical lesions after root canal treatments. J Endod. 2013 Oct;39(10):1245-9
59. Warnsinck CJ, Shemesh H, Lobbezoo F [Persistent pain following endodontic treatment]. Ned Tijdschr Tandheelkd. 2013 Oct;120(10):530-6. Review. Dutch..
60. Liang YH, Jiang L, Chen C, Gao XJ, Wesselink PR, Wu MK, Shemesh H. The validity of cone-beam computed tomography in measuring root canal length using a gold standard. J Endod. 2013 Dec;39(12):1607-10.

61. van der Borden WG, Wang X, Wu MK, Shemesh H. Area and 3-dimensional volumetric changes of periapical lesions after root canal treatments. *J Endod.* 2013 Oct;39(10):1245-9.
62. Liu R, Hou BX, Wesselink PR, Wu MK, Shemesh H. The incidence of root microcracks caused by 3 different single-file systems versus the ProTaper system. *J Endod.* 2013 Aug;39(8):1054-6.
63. Hin ES, Wu MK, Wesselink PR, Shemesh H. Effects of self-adjusting file, Mtwo, and ProTaper on the root canal wall. *J Endod.* 2013 Feb;39(2):262-4.
64. Liu R, Kaiwar A, Shemesh H, Wesselink PR, Hou B, Wu MK. Incidence of apical root cracks and apical dentinal detachments after canal preparation with hand and rotary files at different instrumentation lengths. *J Endod.* 2013 Jan;39(1):129-32.
65. Moinzadeh AT, Shemesh H, Neirynck NA, Aubert C, Wesselink PR. Bisphosphonates and their clinical implications in endodontic therapy. *Int Endod J.* 2013 May;46(5):391-8.
66. Voet KC, Wu MK, Wesselink PR, Shemesh H. Removal of gutta-percha from root canals using the self-adjusting file. *J Endod.* 2012 Jul;38(7):1004-6.
67. Liang YH, Yuan M, Li G, Shemesh H, Wesselink PR, Wu MK. The ability of cone-beam computed tomography to detect simulated buccal and lingual recesses in root canals. *Int Endod J.* 2012 Aug;45(8):724-9.
68. Liang YH, Li G, Shemesh H, Wesselink PR, Wu MK. The association between complete absence of post-treatment periapical lesion and quality of root canal filling. *Clin Oral Investig.* 2012 Dec;16(6):1619-26.
69. Wu MK, Wesselink P, Shemesh H. New terms for categorizing the outcome of root canal treatment. *Int Endod J.* 2011 Nov;44(11):1079-80.
70. Patel S, Mannocci F, Shemesh H, Wu MK, Wesselink P, Lambrechts P. Radiographs and CBCT--time for a reassessment? *Int Endod J.* 2011 Oct;44(10):887-8.
71. Shemesh H, Cristescu RC, Wesselink PR, Wu MK. The use of cone-beam computed tomography and digital periapical radiographs to diagnose root perforations. *J Endod.* 2011 Apr;37(4):513-6.
72. Zaslansky P, Fratzl P, Rack A, Wu MK, Wesselink PR, Shemesh H. Identification of root filling interfaces by microscopy and tomography methods. *Int Endod J.* 2011 May;44(5):395-401.
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