



ENDODONTICS: AI & ROBOTICS

Artificial intelligence-assisted periapical radiographic assessment: lesion detection, endodontic complication analysis, and review of clinical treatment recommendations [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2026; 52(7): 1194-1205
A comparison of endodontists and artificial intelligence chatbots in regenerative endodontic procedures: knowledge and preferences	J Oral Sci 2026; 68 (3): 140-6
Large language models and generative artificial intelligence in endodontics: a scoping review	Odontology 2026; online 10 June: doi.org/10.1007/s10266-026-01434-z
Evaluation of the performance of ChatGPT-4 and ChatGPT-4o as a learning tool in endodontics	Int Endod J 2026; 59(6): 1057-1069
Artificial intelligence chatbots in endodontic education—concepts and potential applications	Int Endod J 2026; 59(6): 999-1012
Explainable artificial intelligence in endodontics: Concepts, clinical applications, and future directions [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Dent 2026; 171: 106733
Diagnostic efficacy of artificial intelligence models for predicting endodontic outcome - a systematic review and meta-analysis	Indian J Dent Res 2026; 36(4): 465-470
Performance of artificial intelligence models designed as adjuncts for determining working length and apical landmark assessment in endodontic procedures: a systematic review	Frontiers Dent Med 2026; 7: 1783828
Clinical-imaging model for predicting prognosis in contemporary endodontic microsurgery: a retrospective machine learning-based study [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2026; online ahead of print 20 February
Effectiveness of artificial intelligence models for detection of vertical root fractures: a systematic review [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2026; online ahead of print 23 February
From evidence-based endodontics to generative AI: a comparative study of 11 large language models	J Endod 2026; online ahead of print 21 January
Artificial intelligence and its application in endodontics [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	Dent Clin N Amer 2026; 70(2): 417-429
Virtual reality haptic simulators and mobile applications—potential AI-enhanced tools for improving clinical endodontic training: a randomized controlled trial [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2026; 52(3): 337-344



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Comparative analysis of AI-generated and manually designed approaches in accuracy and design time for surgical path planning of dynamic navigation-aided endodontic microsurgery: a retrospective study [Accessible from the Wiley link on this page]	Int Endod J 2026; 59(2): 288-298
Artificial intelligence models for diagnosing pulpitis in adults using a modified Wolters classification: a diagnostic accuracy study [Accessible from the Wiley link on this page]	Int Endod J 2026; 59(2): 271-287
Restoration's longevity in endodontically treated teeth: a machine learning survival analysis from randomised clinical trials	Int Endod J 2026; 59(2): 251-261
Mapping the scientific landscape of artificial intelligence in endodontics: a bibliometric analysis	Int Endod J 2026; online 30 Jan doi.org/10.1111/iej.70107Digital
Artificial intelligence in the diagnosis, treatment, and prognostication in endodontics: a comprehensive literature review	Eur Endod J 2025; 10(6): 466-478
Endodontic microsurgery of mandibular molars with an autonomous robotic system [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2025; 51(12): 1830-1836
Shaping the clinician II: artificial intelligence–taught endodontic skills [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	Dent Clin N Amer 2025; 69(4): 585-602
Artificial intelligence and ethics in endodontics [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	Dent Clin N Amer 2025; 69(4): 555-562
Artificial intelligence and prognosis of treatment in endodontics [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	Dent Clin N Amer 2025; 69(4): 527-540
Artificial intelligence in endodontics/robotics- microrobotics in endodontics: a revolutionary approach to root canal treatment and nanozymes [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	Dent Clin N Amer 2025; 69(4): 515-526
Artificial intelligence in endo, an overview [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	Dent Clin N Amer 2025; 69(4): 473-477
Evaluating large language models in addressing patient questions on endodontic pain: a comparative analysis of accessible chatbots [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2025; 51(11): 1617-1624
Performance of advanced artificial intelligence models in pulp therapy for immature permanent teeth: a comparison of ChatGPT-4 Omni, DeepSeek, and Gemini Advanced in accuracy, completeness, response time, and readability [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2025; 51(11): 1675-1684



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Performance of 7 artificial intelligence chatbots on board-style endodontic questions	J Endod 2025; 51(10): 1413-1419
Performance of 4 artificial intelligence chatbots in answering endodontic questions [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2025; 51(5): 602-608
A review of ChatGPT as a reliable source of scientific information regarding endodontic local anesthesia [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2025; 51(5): 571-576
A novel artificial intelligence-powered tool for automated root canal segmentation in single-rooted teeth on cone-beam computed tomography	Int Endod J 2025; 58(4): 658-671
Unveiling the power of artificial intelligence for image-based diagnosis and treatment in endodontics: An ally or adversary?	Int Endod J 2025; 58(2): 155-170
AI-driven segmentation of the pulp cavity system in mandibular molars on CBCT images using convolutional neural networks	Clin Oral Investig 2024; 28: 650
Artificial intelligence in endodontics: data preparation, clinical applications, ethical considerations, limitations, and future directions	Int Endod J 2024; 57(11): 1566-95
Artificial intelligence in endodontics: fundamental principles, workflow, and tasks	Int Endod J 2024; 57(11): 1546-65
Artificial intelligence for detecting periapical radiolucencies: A systematic review and meta-analysis	J Dentistry 2024; 147: 105104
Microrobotics in endodontics: A perspective	Int Endod J 2024; 57(7): 861-871
The use of artificial intelligence in endodontics	J Dent Res 2024; 103 (9): 853-862
Progress of artificial intelligence-driven solutions for automated segmentation of dental pulp cavity on cone-beam computed tomography images. A systematic review	J Endod 2024; online 29 May doi.org/10.1016/j.joen.2024.05.012
Artificial intelligence for detection of external cervical resorption using label-efficient self-supervised learning method [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2024; 50(2): 144-153
Unveiling the ChatGPT phenomenon: evaluating the consistency and accuracy of endodontic question answers	Int Endod J 2024; 57(1): 108-113
Validity and reliability of artificial intelligence chatbots as public sources of information on endodontics [Accessible from the Wiley link on this page]	Int Endod J 2023; Dec 20 [Ahead of print]
Applying artificial intelligence to detect and analyse oral and maxillofacial bone loss—a scoping review	Aust Endod J 2023; 49(3): 720-734
Artificial intelligence: is it more accurate than endodontists in root canal therapy? [Log in to the BDA home page and follow the link to the BDJ to access]	EBD 2023; 24(3): 106-107



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Artificial intelligence and its application in endodontics: A review	J Contemporary Dent Pract 2023; 24(11): 912-917
Predicting case difficulty in endodontic microsurgery using machine learning algorithms	J Dent 2023; 133: 104522
Prediction of pulp exposure before caries excavation using artificial intelligence: Deep learning-based image data versus standard dental radiographs	J Dent 2023; 138: 104732
ChatGPT, consistency and accuracy of endodontic question [Accessible from the Wiley link on this page]	Int Endod J 2023; Nov 07 [Ahead of print]
Evaluating the performance of generative adversarial network-synthesized periapical images in classifying C-shaped root canals	Sci Rep 2023; 13(1): 18038
Artificial intelligence in endodontics	J Calif Dent Assoc 2023; 51(1): 2199933
Contemporary role and applications of artificial intelligence in dentistry [Accessible from the Wiley link on this page]	F1000Research 2023; 12: 1179
The efficiency of artificial intelligence methods for finding radiographic features in different endodontic treatments - a systematic review	Acta Odontol Scand 2023; 81(6): 422-435
An endodontic forecasting model based on the analysis of preoperative dental radiographs: A pilot study on an endodontic predictive deep neural network [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2023; 49(6): 710-719
Experimental validation of computer-vision methods for the successful detection of endodontic treatment obturation and progression from noisy radiographs	Oral Radiol 2023; 39(4): 683-698
Preoperative risk assessment does not allow to predict root filling length using machine learning: A longitudinal study [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Dent 2023; 128: 104378
Can ChatGPT pass the "Iranian Endodontics Specialist Board" exam?	Iran Endod J 2023; 18(3): 192
Detection of the separated root canal instrument on panoramic radiograph: a comparison of LSTM and CNN deep learning methods	Dento-Maxillofac-Radiol 2023; 52(3): 20220209
Second opinion for non-surgical root canal treatment prognosis using machine learning models	Diagnostics (Basel) 2023; 13(17): 2742
Developments and performance of artificial intelligence models designed for application in endodontics: A systematic review	Diagnostics (Basel) 2023; 13(3): 414
The role of neural artificial intelligence for diagnosis and treatment planning in endodontics: A qualitative review	Saudi Dent J 2022; 34(4): 270-281



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A lightweight convolutional neural network model with receptive field block for C-shaped root canal detection in mandibular second molars	Sci Rep 2022; 12(1): 17373
Machine learning models for prognosis prediction in endodontic microsurgery	J Dent 2022; 118: 103947
Association between patient-, tooth- and treatment-level factors and root canal treatment failure: A retrospective longitudinal and machine learning study	J Dent 2022; 117: 103937
Critical analysis of artificial intelligence in endodontics: a scoping review [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2022; 48(2): 152-160
Deep learning for categorization of endodontic lesion based on radiographic periapical index scoring system [can be accessed on DOSS free by logging in on this page]	Clin Oral Investig 2022; 26(1): 651-658
Predicting postoperative pain following root canal treatment by using artificial neural network evaluation	Sci Rep 2021; 11(1): 17243
Artificial intelligence in endodontics: Current applications and future directions [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Endod 2021; 47(9): 1352-1357
Effectiveness of artificial intelligence applications designed for endodontic diagnosis, decision-making, and prediction of prognosis: A systematic review	J Contemporary Dent Pract 2020; 21(8): 926-934