



PROSTHETIC AND RESTORATIVE DENTISTRY: ARTIFICIAL INTELLIGENCE & ROBOTICS

Application of artificial intelligence in the design of single tooth-supported restorations: A systematic review [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Prosthet Dent 2026; online 1 June doi.org/10.1016/j.prosdent.2026.05.014
Accuracy and time efficiency of deep learning-based method for single-crown design compared with a conventional CAD software program: A systematic review [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Prosthet Dent 2026; 135 (5): e20-e28
Deep learning applications in prosthodontics: A systematic review [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Prosthet Dent 2026; 135 (3): 539-51
The convergence of prosthodontics and prosocial artificial intelligence: advancing equity and excellence in dental care [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): 487-501
Harnessing AI in prosthodontics and implant dentistry: An umbrella review of systematic evidence	J Prosthodont 2026; online 14 Jan doi.org/10.1111/jopr.70091
'New' AI in prosthodontics - what has changed two years on? [Log in to the BDA home page and follow the link to the BDJ to access]	BDJ 2025; 238 (10): 799
Dental composite performance prediction using artificial intelligence	J Dent Res 2025; 104 (5): 513-21
Artificial intelligence in prosthodontics [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(2): 315-326
Generative deep learning approaches for the design of dental restorations: A narrative review	J Dentistry 2024; 145: 104988
Comparison of three-dimensional printed resin crowns and preformed stainless steel crowns for primary molar restorations: a randomized controlled trial	J Clin Pediatr Dent 2024; 48 (3): 59-67
Evaluation of the efficiency, trueness, and clinical application of novel artificial intelligence design for dental crown prostheses [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	Dental Materials 2024; 40 (1): 19-27
Tooth morphology, internal fit, occlusion and proximal contacts of dental crowns designed by deep learning-based dental software: A comparative study [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Dent 2024; 141: 104830
Deep learning-based automated detection of the dental crown finish line: An accuracy study [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Prosthet Dent 2023; Dec 13 [Ahead of print]



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Accuracy of artificial intelligence-designed single-molar dental prostheses: A feasibility study	J Prosthet Dent 2023; Jan 09 [Ahead of print]
Applications and performance of artificial intelligence models in removable prosthodontics: A literature review	J Prosthodont Res 2023; Oct 5 [Ahead of print]
Quantitative level determination of fixed restorations on panoramic radiographs using deep learning [can be accessed on DOSS free by logging in on this page]	Int J Computerized Dent 2023; 26(4): 285-299
Teeth reconstruction using artificial intelligence: trends, perspectives, and prospects	J Calif Dent Assoc 2023; 51(1): 2199910
Detection of dental restorations using no-code artificial intelligence [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Dent 2023; 139: 104768
Applications, functions, and accuracy of artificial intelligence in restorative dentistry: A literature review	J Esthet Restor Dent 2023; 35(6): 842-859
The use of artificial intelligence and game-based learning in removable partial denture design: A comparative study	J Dent Educ 2023; 87(8): 1188-1199
Use of bioinformatic strategies as a predictive tool in implant-supported oral rehabilitation: a scoping [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Prosthet Dent 2023; 129 (2): 322.e1-322.e8
Artificial intelligence models for tooth-supported fixed and removable prosthodontics: a systematic review [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Prosthet Dent 2023; 129 (2): 276-292
Morphology and mechanical performance of dental crown designed by 3D-DCGAN	Dent Mater 2023; 39(3): 320-332
Preoperative risk assessment does not allow to predict root filling length using machine learning: A longitudinal study	J Dent 2023; 128: 104378
Using artificial intelligence to predict the final color of leucite-reinforced ceramic restorations [Accessible from the Wiley link on this page]	J Esthet Restor Dent 2023; 35 (1): 105-115
Accuracy of artificial intelligence-designed single-molar dental prostheses: A feasibility study	J Prosthet Dent 2023; Jan 09 [Ahead of print]
Artificial intelligence applications in restorative dentistry: A systematic review [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Prosthet Dent 2022; 128 (5): 867-75
Interpretable AI explores effective components of CAD/CAM resin composites [can be accessed on DOSS free by logging in on this page]	J Dental Research 2022; 101(11): 1363-1371



PROSTHETIC AND RESTORATIVE DENTISTRY: ARTIFICIAL INTELLIGENCE & ROBOTICS

Artificial intelligence-designed single molar dental prostheses: A protocol of prospective experimental study	PLoS ONE 2022; 17(6): e02685636
Automated detection of dental restorations using deep learning on panoramic radiographs	Dento-Maxillofac Radiol 2022; 51(8): 20220244
Automated detection of posterior restorations in permanent teeth using artificial intelligence on intraoral photographs [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	J Dent 2022; 121: 104124
Personalized workflows in reconstructive dentistry-current possibilities and future opportunities	Clin Oral Investig 2022; 26(6): 4283-4290
Influence of dental fillings and tooth type on the performance of a novel artificial intelligence-driven tool for automatic tooth segmentation on CBCT images - A validation study	J Dent 2022; 119: 104069
A system for designing removable partial dentures using artificial intelligence. Part 1. Classification of partially edentulous arches using a convolutional neural network	J Prosthodont Res 2021; 65(1): 115-118
The use and performance of artificial intelligence in prosthodontics: A systematic review	Sensors 2021; 21(19): 6628
A deep learning approach to dental restoration classification from bitewing and periapical radiographs [can be accessed on DOSS free by logging in on this page]	Quintessence Int 2021; 52(7): 568-574
Deep learning-based detection of dental prostheses and restorations	Sci Rep 2021; 11(1): 1960
Artificial intelligence in fixed implant prosthodontics: a retrospective study of 106 implant-supported monolithic zirconia crowns inserted in the posterior jaws of 90 patients	BMC Oral Health 2020; 20(1): 80
An artificial intelligence system using machine-learning for automatic detection and classification of dental restorations in panoramic radiography [free to members on Science Direct. If you do not have a login email library@bda.org to request one]	Oral Surg Oral Med Oral Pathol Oral Radiol 2020; 130(5): 593-602