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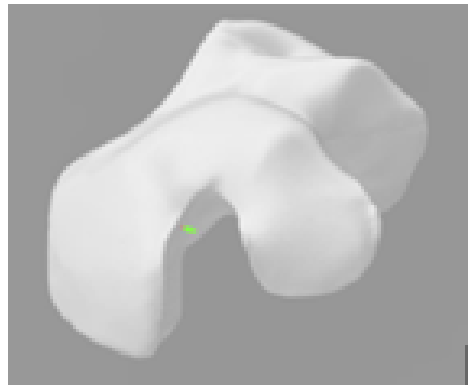
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Dental restorations according to Rayo 3Dtoothfill

Direct filling technique with composite has several shortcomings. Especially larger fillings in posterior teeth are challenging. As result, most restorations need repetitive repair or replacement within a couple of years. Indirect restorations are used to overcome the challenges linked with direct restorations. Subtractive CAD/CAM (computer-aided design and computer-aided manufacturing) milling technology has been generalized along with the expanding role of digitalization. Additive CAD/CAM technique called 3D printing Additive manufacturing may be used to pass challenges linked with milling: material waste, milling accuracy that is dependent on the machining tools, and undercuts or locations that are inaccessible to end-mills cannot be milled. Accuracy of the technology makes it suitable for manufacturing of several dental applications, like surgical guides, aligners and dental implants. RAYO 3DToothFill is a novel technique utilizing digital imaging and 3D printing to fabricate tooth fillings and other dental restorations. Based on our in vitro study, the accuracy of 3D printing technique overcomes that of milling technique in the fabrication of dental inlay

and onlay fillings. Additional clinical investigations are planned to carry out during 2019 to confirm the findings. The 3D printing process is fast and likely to be used chairside at the dental office in the future. The technique has been developed by a team of professors and experts from the University of Eastern Finland and University of Oulu.



Biography

Pirkko-Liisa Tarvonen has a specialist degree in dental public health from the University of Turku, Finland, and a PhD degree from the University of Eastern Finland. She acts as dental marketing director at Rayo 3D-Toothfill Ltd and as University Lecturer at the University of Helsinki and at the University of Eastern Finland. As a voluntary project coordinator for ten years she has had a remarkable contribution in the support of primary dental care and dental education in the Democratic People's Republic Korea.

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