

Study Findings: The Canary System Can Detect Caries Under the Intact Margins of Glass Ionomer and Compomer Restorations

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Quantum Dental Technologies presented findings of a study at the 96th General Session of the International Association for Dental Research (IADR) in London England. This study found that The Canary System[®] can detect caries under the intact margins of glass ionomer and compomer restorations more accurately than Spectra, DIAGNOdent and visual examination.

Finding caries beneath intact restoration margins is a challenging clinical problem. Glass Ionomer and Compomers are radiopaque and reflect light from their respective surfaces. The study found that visual examination could not detect caries. The glow or fluorescence from the restorations prevented

Spectra from detecting any marginal caries. DIAGNOdent was unable to consistently differentiate sound from carious tissue at various distances from the restoration margins. It was able to detect between 20% - 70% of the lesions beneath the restorations depending upon the distance from the margin. The Canary System was able to detect 91% - 100% of the lesions around the restoration margins. This study demonstrated that The Canary system is a valuable diagnostic tool for detecting caries that develop around and beneath the margins of glass ionomer and compomer restorations.

The findings in this study mirror the findings in studies on detection of caries around amalgam, composite, orthodontic brackets and ceramic crowns. In each of these clinical situations, The Canary System was able to detect over 90% of the lesions beneath these various restorative materials.

“The Canary System provides dentists with the ability to detect and monitor tooth decay beneath the edges of fillings, crowns and bridges; one of the most common clinical conditions that would lead to the failure of these restorations. X-Rays can only aid clinicians to diagnose decay on the sides or interproximal areas of teeth. When a glass ionomer or compomer restorations are placed, x-rays can only detect tooth decay in certain limited areas and not along the visible margins”, said Dr. Stephen Abrams, co-founder of Quantum Dental Technologies.

“Compomers and Glass Ionomer may reduce the incidence of marginal breakdown but caries can still develop. Early detection of tooth decay, before it is seen on an x-ray or detected with visual inspection means that dentists can treat problems before the decay has destroyed large amounts of vital tooth structure.”

The Canary System, with its unique crystal structure diagnostics, can, quantify, image, monitor and record changes in the structure of enamel, dentin and cementum. It can detect caries beneath opaque sealants, around the margins of restorations, around orthodontic brackets and beneath interproximal, occlusal and smooth surfaces.

The Canary Cloud enables dentists to view and analyze this data and track Canary usage in their office.

Visit www.thecanarysystem.com or email sales@thecanarysystem.com to request additional information.