New Paper Published on Detecting Caries Beneath Resin Modified Glass Ionomer & Compomer Restorations

Posted on September 20, 2018

Sensitivity & Specificity for Detecting Caries Beneath Glass Ionomer & Compomers

	ICDAS II Visual Ranking	SPECTRA	DIAGNODent 0.5 mm. from Restoration Margin	Canary System 0.5 mm. from Restoration Margin
Sensitivity	34.9	34.9	30.2	90.7
Specificity	52.4	61.4	66.7	81.0

Sensitivity (also called the true positive rate or probability of detection) measures the proportion of actual positives that are correctly identified. In this case, the percentage of teeth with caries.

Specificity (also called the true negative rate) measures the proportion of actual negatives that are correctly identified as such. In this case, the proportion of teeth with no caries.

A new paper published in the Dentistry Journal (http://www.mdpi.com/2304-6767/6/3/47) evaluated caries detection around the Sensitivity & Specificity 09 -17-2018 intact margins of resin modified glass ionomer and compomer restorations. The study found that The Canary System was more accurate than SPECTRA, DIAGNODent and visual examination. The sensitivity and specificity data (table on the right) indicate that The Canary System could find 90.7% of the caries where the other devices found less than 35% of the caries.

One of the major reasons for replacing restorations is tooth decay that develops around the edges of the filling. SPECTRA and DIAGNODent use fluorescence or glow from the tooth to detect tooth decay but filling materials including amalgam, composite, glass ionomer and compomers all fluoresce, making it difficult to accurately examine around the margins.

X-Rays can only aid clinicians to diagnose decay on the sides or interproximal areas of teeth and fillings placed in this area make it more challenging to use X-Rays to examine the edges of the restoration. Visual examination can only detect changes along the surface of the restoration.

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. During a Canary Examination, the Canary Voice provides both the patient and dentist with the Canary Number. The Canary Cloud enables dentists to view and analyze this data and track Canary usage in their office. The Canary System engages patients in their oral health care.

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