Caries diagnosis with lasers and their alternatives

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In developed countries, clinical manifestation of caries lesions is changing: instead of being confronted with wide open cavities, more and more hidden caries are present. For a long time, the focus of the research community was to find a method for the detection of carious lesions without the need for radiographs. In the last few years different detection and diagnostic tools were introduced and are mostly based on laser transillumination or the reflection of the emitted wavelength, providing sensitive information about early non cavitated lesions. This improved imaging and diagnostic capabilities will provide greater support to promote the principles of minimally invasive dentistry including caries monitoring of non-cavitated carious tooth surfaces, remineralisation therapy, and use of non invasive preventive and restorative materials that will improve our ability to monitor disease activity and the outcomes of preservative therapies.

Biography
Marwa Abdelaziz graduated from the University of Geneva in 2010 and since she has been working simultaneously in a private practice as a general dentist and at the University of Geneva (Division of cariology, endodontology and pediatric dentistry) teaching students and conducting research. In 2013, she started a PhD project supervised by the University of Amsterdam (ACTA) and the University of Geneva. The subject of the research is focused on non-invasive diagnostic methods and non-invasive treatment options of initial carious lesions like infiltration and sealing.

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