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The potential role of in vivo reflectance confocal microscopy for evaluating oral cavity lesions: a systematic review.

Lucchese A, Gentile E, Romano A, Maio C, Laino L, Serpico R. *J Oral Pathol Med*. 2016 May 27. doi: 10.1111/jop.12454.

ABSTRACT

BACKGROUND: Since the early 2000s, several studies have examined the application of reflectance confocal microscopy (RCM) to the oral cavity. This review gives an overview of the literature on reflectance confocal microscopy analysis of the oral cavity in vivo and identifies flaws in the studies, providing guidance to improve reflectance confocal microscopy applications and inform the design of future studies. **METHODS:** The PubMed, ISI, Scopus, and Cochrane Library databases were searched for publications on RCM using the terms 'reflectance confocal microscopy' in combination with 'mouth' and other terms related to the topic of interest. **RESULTS:** The search gave 617 results. Seventeen studies were included in our final analysis. We decided to organize the selected articles according to four topics: healthy mucosa, autoimmune diseases, cancer and precancerous lesions, and hard dental tissues. **CONCLUSION:** Although reflectance confocal microscopy is promising for diagnosing and monitoring oral pathology, it has shortcomings and there are still too few publications on this topic. Further studies are needed to increase the quantity and quality of the results, to translate research into clinical practice. © 2016 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd. **KEYWORDS:** in vivo ; hard tissues; medical databases; oral mucosa; reflectance confocal microscopy PMID:27229884