INTRODUCING IN DENTAL EDUCATION PROGRAMMES OF NEW METHODS FOR ORAL CANCER IDENTIFICATION

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Aims
Oral cancer is one of the most common neoplasms and it is responsible for 2-3% of the total of human malign tumours. Early diagnose represents an advantage for improving the survival rate by reducing the diagnostic time. However there are few papers that allow to a regular dental student to have the ability to identify such lesions in the dental office.

Materials and Methods
The development stages of oral squamous cancer are presented from the histological point of view. However, this evaluation method is invasive. This is the reason that optical coherence tomography and fluorescence were used.

Spectral Domain Optical Coherence Tomography (SDOCT) was employed to evaluate the oral squamous cellular carcinoma (OSCC). The system was working at 870 nm and it is completely non-invasive (fig.2). The validations were performed by VELscope® Vx Handpiece (fig.3) which emits a safe, visible blue light into the oral cavity that excites the oral tissue and causes it to fluoresce.

Results and Discussion
VELscope® was designed to enhance the visualization of oral mucosal abnormalities. Abnormal fluorescence patterns aid the clinician in detecting unhealthy mucosal tissue (fig.3, 4). VELscope® Vx is further intended to be used by a surgeon in spotting the appropriate margins for surgical excision.

Conclusions
Based on the preview evaluations, the dental students can learn to identify the aspects on OCT and VELscope of the successive stages of this type of lesions during the normal inspection in the dental office, in a non invasive manner. Non-invasive methods, presented in early dental education curricula could act as a valuable tool in identification of the oral squamous cellular carcinoma.

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References