# ORAL CANCER:
# screening and early diagnosis

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## Clinical Tip

PIERREL

# Oral cancer: screening and early diagnosis

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## What is Oral Cancer?

Oral cancer is a lethal disease, that if left untreated, dental professionals can encounter in their professional activity.

Although not usually directly involved in the specific therapeutic phase, the role of the dentist and the dental hygienist is fundamental in the prevention of mouth cancer in it's initial interception and in the control of discomfort resulting from oncological therapies.
It is extremely relevant to acquire adequate knowledge regarding epidemiology, etiology, natural history, clinical manifestations, therapeutic and rehabilitative techniques and principles and methods useful for the early diagnosis and prevention of oral cancer.

Despite advances in medicine, in recent decades, the stage of the disease at the time of diagnosis has not changed significantly.

Even with the adoption of the most modern combined therapeutic strategies, the overall average survival of oral cancer patients is not more than sixty percent.
It has not improved significantly, unlike what has been observed for other malignant tumors.
The recent Covid pandemic has reduced the chances of access to health facilities and healthcare professionals, causing delays in the diagnosis and early treatment of this dreaded oral disease.
Epidemiological data show that early diagnosis of oral cancer is crucial to improving patient survival and reducing mortality.

## How does oral cancer manifest itself?

In the early stages, oral cancer often causes no symptoms, but sometimes it is manifested by an area of persistent burning or pain.

Local lesions can be different: white or red spots, pathological growth zones or persistent ulcerations.

In the advanced stages the infiltration of the surrounding tissues causes pain and difficulty in the movements of chewing and swallowing or alterations in the phonation.
More frequently, the tumor of the oral cavity is localized to the lateral edges of the tongue and to the oral floor. Less frequent locations are the retromolar trigons, the gingiva, the geniena mucosa and the palate.

## How to diagnose oral cancer?

Currently, a realistic possibility of carrying out the interception and diagnosis at the initial stage of the disease is represented by the prompt planning of a correct diagnostic process in all patients who have any lesion of the oral mucosa.

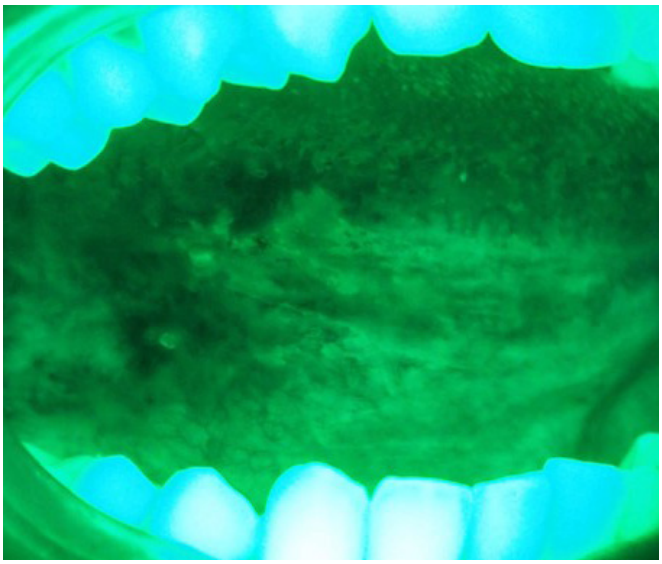
## The two week rule

The World Health Organization and other bodies and associations in the field have long recommended that they consider potentially malignant and subject to diagnostic testing, all lesions of the oral mucosa that do not regress spontaneously or with the removal of local irritants within 14 days.
In clinical practice, the diagnostic test currently required in the vast majority of cases is histopathological examination of the lesion or a fragment of the lesion after biopsy.
The use of auxiliary methods for the identification of lesions at pre-humoral or tumor risk improves the identification of areas and lesions of the oral mucosa to be supervised, sent to the specialist or where to carry out the biopsy.

These included the following:

i. Vital coloration with toluidine blue selectively coloring the areas of oral mucosa with malignant or dysplastic neoplastic alterations. The dye is selective for DNA content and therefore highlights sites with active cell replication and

ii. The detection of tissue autofluorescence (OFI). Dysplastic and neoplastic alterations of the oral mucous membranes cause the decrease or disappearance of the fluorescent image of visible normal tissue after excitation with blue-violet light. The lesion zones of the mucosa appear so dark and beautiful outlined in the context of the image of oral tissues that they emit intense green fluorescent light.



*In the two figures we can observe a clinical case of initial squamous cell carcinoma of the tongue with conventional illumination and with device of detection of tissue autofluorescence; we can highlight the loss of fluorescence (dark zone) in the areas of injury to be biopsied.*

*These auxiliary tests have been proposed both as a screening tool with high specificity and reduced sensitivity, in high-risk subjects and/or for planning incisional biopsy withdrawals in case of large lesions.*

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