

# Oral Cancers and Treatments

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## Key Points

- Oral cancers are one of the leading causes of death.
- Symptoms of oral causes.
- Detection & treatment.

Oral cancers are the 15<sup>th</sup> leading cause of death worldwide. Many factors affect our susceptibility of gaining oral cancers. Oral cancers are not only linked with environmental factors further researches are to be made by using cellular as well as molecular techniques. DNA/RNA changes and specific aberrations such as gene deletion mutation etc are responsible for transformation of normal epithelia to a malignant one.

Oral cancers are one of the most life threatening diseases spreading around world. Squamous cell carcinoma is the most frequently occurring (about 90%) malignancy of the oral cavity. Bacteria, viruses fungi all are playing a role in spread of this disease but two factors that progressively increase risk for oral cancers are smoking and alcohol consumption.<sup>1</sup>

### Causes of oral cancers:

Increase in oral cancers is mainly attributed to our carcinogenic environmental factors and modern lifestyles that includes much smoking and pollution.

### Symptoms of oral cancers include:

1. Unexplained bleeding in mouth
2. Unexplained numbness, loss of feeling or pain/tenderness in any area of the face, mouth or neck
3. Persistent sores on the face, neck or mouth that bleed easily and do not heal within 2 weeks
4. A soreness or feeling that something is caught in the back of the throat
5. Difficulty chewing or swallowing, speaking or moving the jaw or tongue
6. Hoarseness, chronic sore throat or change in voice
7. Ear pain

8. Swelling or pain in your jaw. If you wear dentures they might be uncomfortable or hard to put in.
9. A change in the way your teeth or dentures fit together
10. Dramatic weight loss.<sup>2</sup>

### Detection of oral cancers:

Incisional biopsy is most common way to diagnose oral cancers.

Development of oral cancers is a multistage process. Even after a lot of research for detection of oral cancers initially our resources are limited. In such a case developing biological markers were necessary. Vimentin expression in oral premalignant lesions correlates to degree of malignancy.

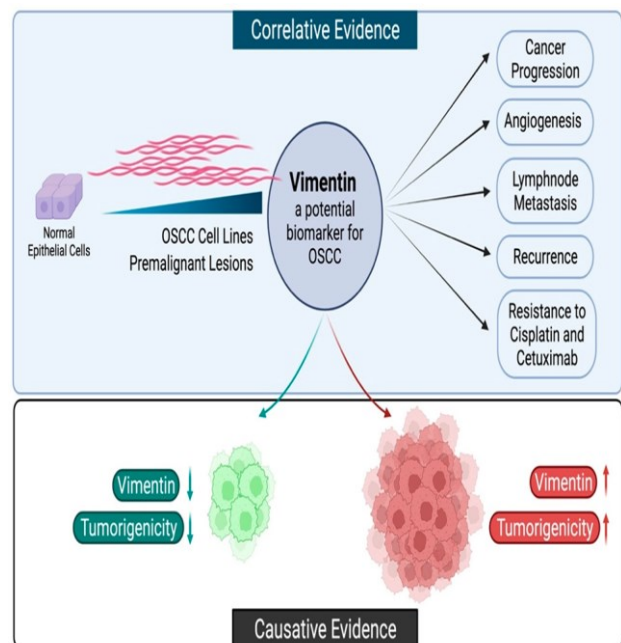


Figure 1: Detection of oral cancers by vimentin expression<sup>3</sup>

During normal life testing radio imaging is used to detect the stage of cancer and for treatment planning. CT Scan images are also used for detection of regional lymphadenopathy. MRI is used to detect size shape location margin and configuration of oral cancer. 18F-fluorodeoxyglucose positron emission tomography/CT has a contribution in detecting metastasis.

Oral cancers are related to periodontics and other chronic inflammatory diseases. Poor oral hygiene leads to much increased risk factors for development of oral cancers. Among all other cancers spreading in world on a higher rate oral cancers are leading ones. Main sites for oral cancers are lips, pharynx, nasal cavity and paranasal sinuses. Progress is made with different researchers in order to find most effective treatments to stop progress of this disease.<sup>3</sup>

#### **Treatments for different stages of oral cancers:**

##### **Stage 1 and 2 oral cancers:**

For patients having stage 1 and 2 oral cancers mostly a surgery or chemotherapy is used as a treatment. Both radiation therapy and surgery work same in treating stage 1 and 2 cancers. Type of method we adopt depends upon patient and dentist's convenience and the part which has to be treated.

##### **Lip:**

Radiations can be used as a first treatment for lip cancers. Surgery is also a convenient method for treating these types of cancers. If during scanning tumors appear thick then it might be possible that they have reached lymph nodes of neck in this case the surgeon must remove lymph nodes as soon as possible to avoid further spread of disease in body.

##### **Oral cavity:**

For cancers found in floor of mouth, front of tongue, inside the cheeks gums and hard palate surgery is mainly used as a treatment. Lymph nodes in neck are also removed depending upon progression of disease. If surgery is unable to remove complete

cancer, then chemotherapy can also be added in this treatment plan. For some people chemotherapy is only option as they are restricted to therapy only because of other medical conditions.

##### **Stage 3 and 4a of oral cancers:**

This stage includes cancers that have progressed in nearby areas and are also causing disease in those areas. For this purpose mostly surgery is done which includes removal of neck lymph nodes. This treatment is also sometimes followed by chemo radiations and radiations alone.

##### **Stage 4b and 4c of oral cancers:**

This stage includes progress of disease even to other parts of body such as lungs. Patients of this category are mostly unable to undergo surgery because of their weak body so immunotherapy and chemo radiations are mostly used to prevent further disease progression. Cetuximab is also used as a treatment for this stage.<sup>4,6</sup>

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