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Revisiting Early Detection of Oral Cancer: A Review on Methods, Impact on Survival Rates, and Recurrence Prevention

[Journal of Oncological Science](#) • Review • Open Access • 2025 •

DOI: 10.37047/jos.galenos.2025.2025-6-1

[Zardawi, Faraedon M.](#)^a; [Alahmad, Basma Ezzat Mustafa](#)^b; [Marla, Vinay](#)^c ; [Shaban, Sama N.](#)^d; [Amin, Shna Sami](#)^d^aQaiwan International University, Faculty of Dentistry, Department of Periodontics, Sulaymaniyah, Iraq[Show all information](#)

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Abstract

Oral cancer, particularly oral squamous cell carcinoma, represents a significant global health concern, with approximately 377,000 new cases diagnosed annually. Early detection is crucial, as the prognosis is heavily influenced by disease stage. Localized oral cancers can have a five-year survival rate exceeding 80%, compared to only 38% for metastatic cases. This literature review emphasizes the importance of early detection as a means of improving patient outcomes and quality of life.

Major risk factors, including tobacco use, excessive alcohol consumption, human papillomavirus

infection, and poor oral hygiene contribute to the disease's prevalence. While symptoms such as persistent ulcers and lumps may be overlooked, advancements in diagnostic techniques -such as visual examinations, fluorescence imaging, and molecular diagnostics- offer promising avenues for early identification. Public health initiatives focusing on awareness campaigns, regular dental check-ups, and comprehensive screening programs are essential for identifying at-risk populations. This review analyzes various methodologies, including salivary biomarkers, advanced imaging technologies, and tumor markers, which contribute to early detection strategies. As advancements in research and technology continue, the integration of these innovative approaches may enhance early intervention efforts. Ultimately, a collaborative approach involving education, research, and healthcare innovation is vital for combating oral cancer. Prioritizing early detection can significantly reduce the societal burden of oral cancer and improve the overall quality of life for affected individuals. © Copyright 2025 The Author. Published by Galenos Publishing House on behalf of Turkish Society of Medical Oncology. Licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 (CC BY-NC-ND) International License.

Author keywords

Cancer diagnosis and treatments; early detection; health; oncology; oral cancer; oral squamous cell carcinoma; public health initiatives; survival rates

Indexed keywords

EMTREE drug terms

biological marker

EMTREE medical terms

alcohol consumption; cancer diagnosis; dental prevention; diagnosis; fluorescence imaging; human; molecular diagnostics; mouth cancer; mouth hygiene; mouth squamous cell carcinoma; papillomavirus infection; prevalence; prevention; quality of life; recurrent disease; review; risk factor; survival rate; tobacco use; treatment outcome

Corresponding authors

Corresponding
author

V. Marla

Affiliation

Qaiwan International University, Faculty of Dentistry, Department Oral
Medicine and Pathology, Sulaymaniyah, Iraq
