U.S. Preventive Services Task Force
Literature Surveillance Report

Title: Screening for Oral Cancer
Literature surveillance date: September 2023

Recommendation Summary: In 2013, the Task Force concluded that the current evidence was insufficient to assess the balance of benefits and harms of screening for oral cancer in asymptomatic adults (**Grade: I statement**).

Research Gaps from Previous Task Force Review: The 2013 recommendation was based on a targeted evidence review with a search through July 2011. The Task Force identified important gaps and recommends further research on:

- The benefits and harms of oral cancer screening in persons in the US at increased risk (e.g., those with history of tobacco and heavy alcohol use) and in groups with higher oral cancer mortality (e.g., Black persons);
- The accuracy of screening persons in the US at increased risk conducted by primary care providers, dentists, dental hygienists, or other trained persons;
- Longitudinal followup of screening studies applicable to the US that illustrate the health effects of screening for oral cancer and provide a clear understanding of who is at high risk in the US;
- The benefits of screening for human papilloma virus (HPV) and selection of populations for oral cancer screening based on HPV status; and
- The efficacy of HPV vaccines in preventing infection at non-cervical sites and in decreasing the risk for oropharyngeal cancer.

Summary of New Evidence: Literature scans in the MEDLINE database and Cochrane Library were limited to English language, core and specialty clinical journals, 2011 to present. Three systematic reviews on oral cancer screening programs included only the one trial from India that was in the previous USPSTF review.[1, 2, 3]

No new studies address the effects of *screening* on morbidity or mortality outcomes. A risk-based reanalysis of the single RCT included in the prior USPSTF review (Kerala Oral Cancer Screening Trial) presents a risk prediction model for oral cancer incidence to enable identification of high-risk individuals and uses this model to compare screening efficacy on oral cancer mortality across risk thresholds.[4]

Sixteen studies evaluate the performance of screening tests,[5-20] including HPV tests[5, 18-20] toluidine blue,[6, 10, 13] swabs using droplet digital PCR,[7] fluorescent visualization,[12, 14, 15] DNA image cytometry,[11] cytology smears,[16, 17] methylene blue,[8] and high-frequency soft tissue ultrasound.[9] Only two studies were conducted in the US,[19, 20] and no studies were conducted in primary care settings.

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