Oral Cancer Screening and Testing

Policy Number: AHS – G2113 – Oral Cancer Screening and Testing	Prior Policy Name and Number, as applicable: AHS-G2113- Oral Screening Lesion Identification Systems and Genetic Screening
Effective Date: 12/01/2023	

I. Policy Description

Oral cancer is defined as cancer occurring in the oral cavity between the vermilion border of the lips and the junction of the hard and soft palates or the posterior one third of the tongue. Squamous cell carcinoma is the most common type of oral cancer (Gross et al., 2023).

II. Indications and/or Limitations of Coverage

Application of coverage criteria is dependent upon an individual's benefit coverage at the time of the request.

1) For individuals with oropharyngeal squamous cell carcinoma, testing for high-risk HPV with either mRNA expression testing for HPV E6/E7 or immunohistochemistry for p16 expression **MEETS COVERAGE CRITERIA**.

The following does not meet coverage criteria due to a lack of available published scientific literature confirming that the test(s) is/are required and beneficial for the diagnosis and treatment of an individual's illness.

2) To screen, detect, or diagnose oral cancer, the following testing **DOES NOT MEET COVERAGE CRITERIA:**
   a) Salivary biomarker testing (e.g., peptides/proteins, nucleic acids, metabolites).
   b) Genotyping of HPV (e.g., OraRisk® HPV).
   c) Gene expression profiling.
   d) Panels that incorporate genetic risk factors with nongenetic biomarkers (e.g., mRNA CancerDetect™).

III. Table of Terminology

Term	Definition
8-OHdG	8-hydroxy-2′-deoxyguanosine
ACS	American Cancer Society
ADA	American Dental Association
AF	Auto-fluorescence
AHSG	Alpha-2-HS-glycoprotein
ASCO	American Society of Clinical Oncology
AUC	Area under curve
AZGP1	Zinc-alpha-2-glycoprotein
BPIFB2	Bactericidal/permeability-increasing protein fold containing family B member 2
CAP	College of American Pathologists
CD59	Cluster of differentiation 59
CDC	Centers for Disease Control and Prevention
CL	Chemiluminescence
CLIA ’88	Clinical Laboratory Improvement Amendments of 1988
CMS	Centers for Medicare and Medicaid
COE	Conventional oral examination
CPT	Current procedural terminology
DNA	Deoxyribonucleic acid
DUSP1	*Dual specificity phosphatase 1*
EBER	Epstein-Barr-encoded ribonucleic acid
EBV	Epstein-Barr virus
EHNS	European Head and Neck Society
ESMO	European Society for Medical Oncology
ESTRO	European Society for Radiotherapy and Oncology
H3F3A	*H3 histone, family 3A*
HNSCC	Head and neck squamous cell carcinoma
HPV	Human papillomavirus
HR	High-risk
HR-HPV	High-risk human papillomavirus infection
IHC	Immunohistochemistry
IL-8	*Interleukin-*
IL-1B	*Interleukin-1B*
KLK1	Kallikrein 1
KRT6C	Keratin 6C
LACRT	Lacritin
LBDS	Light-based detection systems
LC-MS	Light chromatography-mass spectrometry
LDTs	Laboratory-developed tests
LED	Light emitting diodes

Term	Definition
M2BP	Mac-2 binding protein
MDA	Malondialdehyde
MED15	*Mediator complex subunit 15*
miRNA	Micro ribonucleic acid
mRNA	Messenger ribonucleic acid
MRP14	Migration inhibitory factor-related protein 14
MSP	Methylation-specific polymerase chain reaction
NCCN	National Comprehensive Cancer Network
OAZ1	*Ornithine decarboxylase antizyme 1*
OC	Oral cancer
OPC	Oropharyngeal cancer
OPMD	Oral potentially malignant disorders
OSCC	Oral squamous cell carcinoma
PCQAP	*Mediator complex subunit 15*
PMD	Potentially malignant disorder
RASSF1A	*Ras association domain family 1 isoform A (gene)*
RASSF1α	Ras association domain family 1 isoform A (protein)
RNA	Ribonucleic acid
S100P	*S100 Calcium Binding Protein P*
SAT	*Spermidine/spermine N1-acetyltransferase*
SCC	Squamous cell carcinoma
SCCUP	Squamous cell carcinoma of unknown primary
TIMP3	*TIMP metallopeptidase inhibitor 3*
USPSTF	United States Preventive Services Task Force

IV. Scientific Background

The American Cancer Society (ACS) estimates the 2019 incidence of oral cancer to be 53,000 cases with approximately 10,860 deaths (Siegel et al., 2019). The American Cancer Society estimates that in the United States in 2023, approximately 54,540 people will be diagnosed with oral cavity and oropharyngeal cancers and approximately 11,580 people will die from these cancers (ACS, 2023). Oral squamous cell carcinoma (OSCC) is the most common form of oral cavity cancer, which constitutes 94.08% of all epithelial tumors and 80.05% of all oral cancers (Dhanuthai et al., 2018; Scully & Porter, 2000). Many cases are preceded by a potentially malignant disorder (PMD), which is a heterogeneous group of conditions including erythroplakia, non-homogeneous leukoplakia, erosive lichen planus, oral submucous fibrosis and actinic keratosis (Warnakulasuriya et al., 2007). The early detection and excision of PMD can prevent malignant transformation (Paul Brocklehurst, 2017; van der Waal, 2009; Warnakulasuriya et al., 2007).

Human papillomavirus (HPV) is a common sexually transmitted infection that may lead to the development of warts or cancer in various parts of the body including the back of the throat, tonsils, and base of the tongue. This type of cancer is known as oropharyngeal cancer. HPV is

also a major contributor to the development of head and neck squamous cell carcinoma (HNSCC), which can develop in the mouth, nose, and throat (Borsetto et al., 2018). According to the CDC (2022), there is no test to determine an individual's HPV status, and "there is no approved HPV test to find HPV in the mouth or throat."

Oral Screening Lesion Identification Systems and Genetic Screening

Diagnosing and treating dermatologic lesions of the mouth and gums is challenging for most clinicians because of the wide variety of disease processes that can present with similar appearing lesions and the fact that most clinicians receive inadequate training in mouth diseases (Lodi, 2023). Several index tests have been proposed as adjuncts to a conventional oral examination (COE) to improve diagnostic test accuracy (Fedele, 2009; Lingen et al., 2008; Patton et al., 2008; Rethman et al., 2010; Seoane Leston & Diz Dios, 2010). These tests include vital staining, brush cytology, and blood or saliva analysis. These screening tests are not only used for diagnostic purposes but can also be utilized as a tool to measure any changes that may be signs of future disease development (Speight et al., 2017).

Finally, blood or saliva can be tested for biomarkers for cancer. The tests are non-invasive but have low standardization and are not widely used in clinical practice (Macey et al., 2015). Nonetheless, saliva has been identified as an ideal diagnostic medium for the early detection of HNSCC activity because it is close to the tumor site and is an easy sample to obtain (Lim et al., 2016). Macey et al. (2015) concluded that none of the adjunctive biomarker tests can be recommended as a replacement for the currently used standard of COE followed by a scalpel biopsy and histological assessment. However, the NCCN has stated that that "Expression of p16 as detected by IHC [immunohistochemistry] is a widely available surrogate biomarker that has a very good agreement with HPV status as determined by the gold standard of HPV E6/E7 mRNA expression" (NCCN, 2023). The protein known as p16 slows cell division, therefore acting as a tumor suppressor. Researchers have identified $p16^{INK4a}$, *RASSF1A, TIMP3*, and *PCQAP/MED15* as tumor suppressor genes that exhibited "excellent diagnostic accuracy in the early detection of OC [oral cancer] at 91.7% sensitivity and 92.3% specificity and of OPC [oropharyngeal cancer] at 99.8% sensitivity and 92.1% specificity from healthy controls" (Liyanage et al., 2019). A review by Kaur et al. (2018) that researched salivary biomarkers for oral cancer and pre-cancer screening have identified a plethora of salivary biomarkers which showed an improvement in oral cancer diagnoses including mRNAs, salivary transcriptomes (*IL-8, IL-1B, DUSP1, H3F3A, OAZ1, S100P*, and *SAT* were highly specific (91%) and sensitive (91%) for oral cancer detection), and salivary biomarkers (M2BP, profilin, CD59, MRP14, and catalase had a sensitivity of 83% and a specificity of 90% for oral cancer detection)" (Kaur et al., 2018).

The OraRisk® HPV by OralDNA Labs is a salivary diagnostic test that analyzes the molecular genotypes of HPV. The test can identify a total of 51 types of oral HPV including high-risk, low-risk and unknown-risk genotypes. High Risk Genotypes: 16, 18, 26, 30, 31, 33, 34, 35, 39, 45, 51, 52, 53, 56, 58, 59, 64, 66, 67, 68, 69, 70, 73, 82. Low Risk Genotypes: 2a, 6, 11, 32, 40, 42, 43, 44, 54, 55, 57, 61, 62, 71, 72, 74, 77, 81, 83, 84, 89. Unknown Risk Genotypes: 41, 49, 60, 75, 76, 80, 85 (OralDNA, 2023).

Clinical Utility and Validity

Nagi et al. (2016) conducted a systematic review to evaluate the effectiveness of adjunctive devices that utilize the principles of chemiluminescence and tissue autofluorescence in the detection of oral squamous cell carcinoma (OSCC) and oral potentially malignant disorders (OPMD). Twenty primary studies published satisfied the criteria for selection. Ten used chemiluminescence and 10 used tissue autofluorescence. ViziLite was used for evaluation of chemiluminescence, and it was evaluated at a sensitivity of 0.771 to 1.00 and specificity of 0.00 to 0.278. Tissue autofluorescence was evaluated with VELscope. This technique was evaluated at a sensitivity of 0.22-1.00 and specificity of 0.16 to 1.00. The authors concluded that more clinical trials in the future should be conducted to establish optical imaging as an efficacious adjunct tool in early diagnosis of OSCC and OPMD (Nagi et al., 2016).

Shaw et al. (2022) conducted a systematic review to compare the existing evidence on diagnostic accuracy of salivary biomarkers with their estimation method in detecting early oral squamous cell carcinoma. Salivary biomarkers provide promising complementary alternative diagnostic adjunct for its simple non- invasive collection and technique and to screen large population. "18 studies were included for qualitative synthesis, and out of that 13 for meta-analysis. Sensitivity and specificity were calculated with AUC. For mRNA it was 91% and 90% with 0.96 AUC, miRNA had 91% and 91% with 0.95 AUC for PCR. IL-1B had 46% and 60% with 0.61 AUC, S100p had 45% and 90% with 0.57 AUC for ELISA. IL-8 had 54% and 74% for ELISA and 89% and 90% for PCR with 0.79 AUC and DUSP1 had 32% and 87% for ELISA and 76% and 83% for PCR with 0.83 AUC respectively. Early detection of OSCC was best achieved by screening for salivary mRNA and miRNA estimated by PCR" (Shaw et al., 2022).

Lingen et al. (2017); Lingen et al. (2008) performed a meta-analysis of the screening adjuncts for oral cancer. The authors evaluated cytologic adjuncts as well as vital staining, tissue reflectance, autofluorescence, and salivary biomarkers. The vital staining cohort included 15 studies with 1453 lesions and was evaluated at a 0.87 sensitivity and 0.71 specificity. The tissue reflectance cohort (5 studies, 390 lesions) was assessed at a 0.72 sensitivity and 0.31 specificity. The autofluorescence segment (7 studies, 616 lesions) was computed at a 0.90 sensitivity and a 0.72 specificity. The authors stated, most biomarkers showed a wide range of diagnostic test accuracy results, "with sensitivity ranging from 0.5 to 0.9 and specificity ranging from 0.63 to 0.9." Finally, cytology (15 studies, 2148 lesions) was assessed at a 0.92 sensitivity and 0.94 specificity. The authors concluded that cytology appeared to be most accurate adjunct (Lingen et al., 2017).

Another systematic review was completed that focused on the use of oral brush cytology for the early detection of oral cancer and OPMDs (Alsarraf et al., 2018). Thirty-six of the 343 abstracts and articles identified met the inclusion criteria, with publication dates ranging from 1994 to 2017. These articles led to the inclusion of 4302 total samples from OPMDs, oral squamous cell carcinoma, and healthy controls. The results were somewhat troubling. "Findings from this study indicate that meaningful evidence-based recommendations for the implementation of a minimally invasive technique to be utilized as an adjunctive tool for screening and early detection of oral cancer and OPMDs are complicated from the reported studies in the literature" (Alsarraf et al., 2018).

Kaur et al. (2018) completed a review which focused on salivary biomarkers for oral cancer and pre-cancer screening. A total of 270 articles published between 1995 and 2017 were identified for this review. The authors note that biomarkers may be arranged into four categories: normal health (*IL-8, IL-1β*, etc.), general health (glycolytic enzyme lactate dehydrogenase, etc.), specific (*S100P* mRNA for cancer), and non-specific salivary (8-OHdG and MDA biomarkers of oral cancer and pre-cancer) (Kaur et al., 2018). Results from this study led to the conclusion that "Biomarkers such as methylation markers, IL-8, actin, myosin, and miRNAs are very speculative and remain without sufficient scientific evidence when it comes to oral cancer and pre-cancer detection using body fluids. Salivary peptides such as protein 14, Mac-2 binding protein, profilin 1, CD59, defensin-1, catalase proteins, etc. with sensitivity approximating 90% and specificity 80% for oral cancer diagnosis have been described"; "Furthermore, five salivary metabolites such as valine, lactic acid, and phenylalanine in combination yielded satisfactory accuracy (0.89), sensitivity (94.6%), and specificity (84.4%) in distinguishing oral cancer from controls or oral pre-cancer, respectively" (Kaur et al., 2018). Based on the results in this large group of studies, the researchers state that the "Combination approach of salivary biomarkers could be used as [a] screening tool to improve early detection and diagnostic precision of oral pre-cancer and cancer" (Kaur et al., 2018). The findings of this extensive review highlight that it is important for researchers to mitigate the current challenges involved with the use of salivary biomarkers for oral cancer and pre-cancer screening as this technique has the potential to improve early detection and diagnostic methods.

Using "targeted proteomics, identified initially by relative quantification of salivary proteins on LC-MS [light chromatography-mass spectrometry]," Jain et al. (2021) identified a potential salivary biomarker panel having been motivated by the high prevalence, incidence, and mortality of oral cancer/oral squamous cell carcinoma among Indians. In a case-control cohort study, "Out of the twelve proteins validated, two proteins AHSG and KRT6C were significantly upregulated and four proteins, AZGP1, KLK1, BPIFB2 and LACRT were found to be significantly downregulated," but when accounting for tobacco consumption habits, "AHSG and AZGP1 were dysregulated in cases compared to controls irrespective of their tobacco consumption habits. While KRT6C, KLK1 and BPIFB2 were significantly dysregulated only in the cases having tobacco consumption habits." AZGP1 is important in insulin sensitivity and the cell cycle; KLK1 is a serine protease involved in "remodelling of the extracellular matrix, cellular proliferation and differentiation, angiogenesis, and apoptosis;" BPIFB2 is a lipid transfer/lipopolysaccharide binding protein that is not well understood in cancer; KRT6C is a type II keratin subtype and is expressed in "filiform papillae of the tongue, stratified epithelial lining of the oesophagus, and oral mucosa and in glandular epithelia;" and AHSG is involved in "multiorgan expression during embryogenesis," but is mostly in the liver and some osteoblasts in adults. In their risk prediction model, AZGP1, AHSG, and KRT6C had sensitivities of 82.4%, 78%, and 73.5%, respectively for all stages of OSCC, and 87.9%, 87.5%, and 73.5%, respectively for late stage OSCC (Jain et al., 2021).

Lim et al. (2016) competed a study to determine the diagnostic ability of four HNSCC biomarkers (RASSF1α, $p16^{INK4a}$, TIMP3, PCQAP/MED15) isolated from saliva. The DNA methylation status of these biomarkers was measured via methylation-specific PCR (MSP). Data from a total of 88 HNSCC patients and 122 healthy controls was analyzed. The authors found that a "salivary DNA tumour-suppressor methylation gene panel has the potential to detect early-stage tumours in HPV-negative HNSCC patients. HPV infection was found to deregulate the methylation levels

in HPV-positive HNSCC patients"; biomarker analysis of HPV-negative HNSCC patients compared to healthy controls generated a sensitivity of 71% and specificity of 80%, while biomarker analysis of HPV-positive HNSCC patients compared to healthy controls generated a sensitivity of 80% and a specificity of 74% (Lim et al., 2016).

In their overview of non-invasive diagnostic devices in oral oncology, Mascitti et al. (2018) discussed and reviewed the Vizilite® chemiluminescence-based detected device for PMD and OSCC (Zila Pharmaceuticals), VELscope® non-magnifying device for visualization of oral mucosa autofluorescence (LED Medical Diagnostics), Identafi® device for multispectral screening of PMD (StarDEntal-DentalEZ), Microlux/DL™ chemiluminescence-based device (AdDent Inc.), GOCCLES® device for autofluorescence abnormalities in the oral cavity (Pierrel S.p.A), Orascoptic DK™ chemiluminscence-based device (Orascoptic), and other autofluorescence-based devices like those from Sapphire® PLUS LD (DenMat Holdings), DentLight DOE™ Oral Exam System (DentLight), and ORalID™ 2.0 (Forward Science Technologies). Ultimately, they concluded that there would be "great potential for screening and monitoring lesions. Unfortunately, to date several factors hinder an extensive use of these devices: (1) data do not demonstrate clear superiority of these methods compared to COE; (2) there remains the need for well-designed multicentre prospective studies; (3) these devices exhibit a not negligible interobserver variability limiting their use to clinicians with significant experience in oral pathology." However, in terms of their benefits, "the current evidence suggests that these devices: (1) seem to be useful in assessing lesion margins that must be biopsied and, therefore, may be useful in surgical management; (2) can be used to investigate biological aspects of oral carcinogenesis, leading to more accurate methods for interpreting data from LBDS [light-based detection systems]; (3) can be enhanced with new approaches used to analyse optical imaging data, with the aim to quantify the results obtained; (4) lowering the costs of these devices could indirectly lead to greater attention for oral lesions among both patients and general dental practitioners, allowing in turn to promote a culture of oral cancer prevention; (5) finally, the possibility of implementing LBDS through the use of tissue-marking dyes can in principle allows to develop strategies for the use of nanoparticles. Indeed, nanoparticles can provide molecular targeted imaging, with higher image contrast and resolution" (Mascitti et al., 2018).

Ribeiro et al. (2021) conducted a study aiming to identify prognostic biomarkers for OSCC using a whole genome technology and evaluate their clinical utility. With using array comparative genomic hybridization technology from 62 patients with OSCC, they found that the "chromosomes most commonly altered were 3p, 3q, 5q, 6p, 7q, 8p, 8q, 11q, 15q, 17q, and 18q", with a greater frequency of alterations found on 3p, 3q, 8p, 8q, and 11q. To differentiate between patients with and without metastases or relapses after primary treatment, the researchers identified a genomic signature of genes including *OCLN, CLDN16, SCRIB, IKBKB, PAK2, PIK3CB,* and *YWHAZ*; this rendered an overall accuracy of 79%. An amplification of the *PIK3CB* gene also predicted metastases and relapses in addition to reducing median survival by more than 5 years. This demonstrated the potential use of genes in developing precision medicine and treating patients with OSCC (Ribeiro et al., 2021).

V. Guidelines and Recommendations

US Preventive Services Task Force (USPSTF)

In 2013, the USPSTF published final recommendations for screening of oral cancer. The recommendation stated that "the current evidence is insufficient to assess the balance of benefits and harms of screening for oral cancer in asymptomatic adults." The USPSTF also noted that "although there is interest in screening for oral HPV infection, medical and dental organizations do not recommend it" (Moyer, 2014).

National Comprehensive Cancer Network (NCCN)

NCCN clinical practice guidelines on head and neck cancers does not mention the use of adjunctive screening aids based on autofluorescence or tissue reflectance as a management tool (NCCN, 2023). Regarding biomarker testing, the NCCN states that "A few HPV testing options are available for use in the clinical setting. Expression of p16 as detected by IHC [immunohistochemistry] is a widely available surrogate biomarker that has a very good agreement with HPV status as determined by the gold standard of HPV E6/E7 mRNA expression." They also state that "P16 expression is highly correlated with HPV status and prognosis and is widely available". HPV testing by p16 IHC is a required portion of the workup of the cancer of the oropharynx algorithm, such that "Expression of p16 as detected by IHC is a widely available surrogate biomarker that has very good agreement with HPV status as determined by HPV E6/E7 mRNA expression" (NCCN, 2023).

College of American Pathologists (CAP)

The CAP published guidelines on human papillomavirus testing in head and neck carcinomas. These guidelines state that "For oropharyngeal tissue specimens (ie, noncytology), pathologists should perform HR-HPV [high-risk HPV] testing by surrogate marker p16 IHC" (Lewis et al., 2018).

American Society of Clinical Oncology (Lingen et al.)

An expert panel from the ASCO has "determined that the recommendations from the HPV Testing in Head and Neck Carcinomas guideline, published in 2018, are clear, thorough, and based upon the most relevant scientific evidence. ASCO endorsed the [CAP] guideline and added minor qualifying statements" (Fakhry et al., 2018).

The ASCO states that "It is recommended that HPV tumor status should be determined for newly diagnosed oropharyngeal squamous cell carcinomas. HPV tumor status testing may be performed by surrogate marker p16 immunohistochemistry either on the primary tumor or from cervical nodal metastases only if an oropharyngeal primary tumor is present" (Fakhry et al., 2018).

Regarding diagnosis and management of squamous cell carcinoma of unknown primary (SCCUP) in the head and neck, the ASCO states with a moderate strength recommendation, "High-risk (Fakhry et al.) human papillomavirus (HPV) testing should be done routinely on level II and III SCCUP nodes. Epstein-Barr virus (EBV) testing should be considered on HPV-negative metastases… HR-HPV testing may be done nonroutinely for SCC metastases at other nodal levels when the clinical suspicion is high" (Maghami et al., 2020).

European Head and Neck Society (EHNS)-European Society for Medical Oncology (ESMO)-European Society for Radiotherapy and Oncology (ESTRO)

In 2020, the EHNS, ESMO, and ESTRO released joint clinical practice guidelines for squamous cell carcinoma of the oral cavity, larynx, oropharynx, and hypopharynx. For HPV testing, they recommended that "for SCCHN [squamous cell carcinoma of the head and neck] of unknown primary, p16 and EBER [Epstein-Barr-encoded RNA] are recommended. If p16 staining is positive, another specific HPV test should be carried out to confirm the HPV status [III, A]." p16 measured by immunohistochemistry is validated in use as a surrogate marker for HPV-induced oropharyngeal cancer and prognostic factor for oropharyngeal cancer [I, A] (Machiels et al., 2020)

VI. Applicable State and Federal Regulations

Food and Drug Administration (FDA)

Many labs have developed specific tests that they must validate and perform in house. These laboratory-developed tests (LDTs) are regulated by the Centers for Medicare and Medicaid (CMS) as high-complexity tests under the Clinical Laboratory Improvement Amendments of 1988 (CLIA '88). LDTs are not approved or cleared by the U. S. Food and Drug Administration; however, FDA clearance or approval is not currently required for clinical use.

VII. Applicable CPT/HCPCS Procedure Codes

Procedure codes appearing in medical policy documents are only included as a general reference. This list may not be all inclusive and is subject to updates. In addition, codes listed are not a guarantee of payment.

CPT	Code Description
81599	Unlisted multianalyte assay with algorithmic analysis
82397	Chemiluminescent assay
87623	Infectious agent detection by nucleic acid (DNA or RNA); Human Papillomavirus (HPV), low-risk types (eg, 6, 11, 42, 43, 44)
87624	Infectious agent detection by nucleic acid (DNA or RNA); Human Papillomavirus (HPV), high-risk types (eg, 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68)
87625	Infectious agent detection by nucleic acid (DNA or RNA); Human Papillomavirus (HPV), types 16 and 18 only, includes type 45, if performed
88341	Immunohistochemistry or immunocytochemistry, per specimen; each additional single antibody stain procedure (List separately in addition to code for primary procedure)
88342	Immunohistochemistry or immunocytochemistry, per specimen; initial single antibody stain procedure
0296U	Oncology (oral and/or oropharyngeal cancer), gene expression profiling by RNA sequencing at least 20 molecular features (eg, human and/or microbial mRNA), saliva, algorithm reported as positive or negative for signature associated with malignancy Proprietary test: mRNA CancerDetect™ Lab/Manufacturer: Viome Life Sciences, Inc

VIII. Evidence-based Scientific References

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IX. Revision History

Revision Date	Summary of Changes
01/01/2022	Initial Effective Date
04/12/2022	Annual review: Updated background, guidelines, and evidence-based scientific references. Literature review did not necessitate any modifications to the coverage criteria. Removed Coverage Criteria 3, CPT code 81599

09/14/2022	Updated background, guidelines, and evidence-based scientific references. Literature review necessitated the following modification to coverage criteria: CC2b removed, as this test is no longer available: "MOP™ testing" Removed Coverage Criteria 2c: SaliMark OSCC® (PeriRx) Added PLA code 0296U Revised code disclaimer statement
08/15/2023	Reviewed and Updated: Updated background, guidelines, and evidence-based scientific references. Literature review necessitated the following changes in coverage criteria: Lesion identification systems are outside the scope of our enforcement, leading to edits to the body of the document, CC verbiage, and a title change to "Oral Cancer Screening and Testing". CC1 edited for clarity. Former CC2 and CC3 were combined into a single CC, now reads: "2) To screen, detect, or diagnose oral cancer, the following testing DOES NOT MEET COVERAGE CRITERIA: a) Salivary biomarker testing (e.g., peptides/proteins, nucleic acids, metabolites). b) Genotyping of HPV (e.g., OraRisk® HPV). c) Gene expression profiling. d) Panels that incorporate genetic risk factors with nongenetic biomarkers (e.g., mRNA CancerDetect™)." Committee approved: 08/15/2023