DecisionDx Uveal Melanoma

Procedures addressed

The inclusion of any procedure code in this table does not imply that the code is under management or requires prior authorization. Refer to the specific Health Plan's procedure code list for management requirements.

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What is DecisionDx Uveal Melanoma

Definition

Melanoma is the most deadly form of skin cancer.¹ The median age at diagnosis is 59 years.² According to NCCN, “The incidence of melanoma continues to increase dramatically, at an overall rate of 33% for men and 23% for women from 2002 to 2006.”²

- Risk factors for melanoma include the following: “skin type, previous history of melanoma, multiple clinically atypical moles or dysplastic nevi, and a positive family history of melanoma.”² Some individuals have a genetic mutation which increases their risk of melanoma.
- Screening for melanoma typically involves a visual skin examination. A skin biopsy of the lesion and pathological examination can diagnose melanoma.
- “Uveal Melanoma, commonly known as ocular or choroidal melanoma, is a rare cancer of the eye.”³ Although this type of melanoma is treatable in most cases, approximately 50% of individuals with uveal melanoma will develop metastasis.³
- DecisionDx Uveal Melanoma (DecisionDx-UM) is a test designed to assess an individual’s risk of metastasis.

Test information

- DecisionDx-UM measures gene expression of 15 genes present in an ocular melanoma tumor. This test is designed to assess the risk of metastasis within 5 years.
• DecisionDx-UM test results are reported as follows:
  o Class 1A – very low risk (2%) of metastasis within 5 years\(^4\)
  o Class 1B – moderate risk (21%) of metastasis within 5 years\(^4\)
  o Class 2 – high risk (72%) of metastasis within 5 years\(^4\)

• DecisionDx-PRAME is a test that can be added on to the DecisionDx-UM assay. According to Castle Biosciences,“PRAME (preferentially expressed antigen in melanoma) is a cancer testis antigen gene that is not expressed at appreciable levels in normal adult tissues but its expression can become aberrantly increased in some types of cancer, including sarcoma, hematological malignancies, breast cancer, and melanoma.”\(^5\)

• The manufacturer also offers the DecisionDX-UMSeq test, which is a 7-gene panel that identifies the following: mutations at hotspots in GNAQ, GNA11, CYSLTR2, PLCB4, and SF3B1; mutations in exons 1-2 of EIF1AX; and all coding exon mutations in the BAP1 gene.\(^6\) This test uses next generation sequencing (NGS) to identify somatic mutations in patients with UM and can be ordered in addition to DecisionDX-UM using the same tissue specimen.

• The DecisionDx-UMSeq reports on clinically relevant mutations identified in any of the 7 gene targets. For each mutation found, the report describes any of the following:\(^6\)
  o Genomic location of the mutation
  o Type of mutation
  o Functional change that occurs because of the mutation
  o Frequency that the mutation was detected in the sample; and
  o Potential consequences of that mutation on gene function and relevant literature references

Guidelines and evidence

National Comprehensive Cancer Network (NCCN)

• The National Comprehensive Cancer Network (NCCN, 2018) states the following regarding gene expression tests for uveal melanoma:\(^7\)
  o “Biopsy of the primary tumor does not impact outcome, but may provide prognostic information that can help inform frequency of follow-up and may be needed for eligibility for clinical trials. Specimen should be sent for histology, chromosome analysis, and/or gene expression profiling. The risk/benefits of biopsy for prognostic analysis should be carefully considered and discussed.”
Literature Review

Based on the review of the available peer-reviewed published literature, the DecisionDx-UM 15-gene assay has sufficient evidence for use as a prognostic test in patients diagnosed with primary, localized uveal melanoma to assist clinicians with predicting disease severity and improving disease management strategies.8-18

DecisionDX PRAME and DecisionDX-UMSeq

There is currently insufficient evidence from 2 analytical validity studies regarding use of DecisionDX PRAME.19,20 No clinical validity or clinical utility studies were identified. There is also no evidence evaluating use of DecisionDX-UMSeq. As a result, no conclusions can be drawn regarding the value and usefulness of these two additional tests.

Criteria

• DecisionDx-UM testing is considered medically necessary when the following criteria are met:
  o No previous DecisionDx-UM testing performed after current diagnosis when a result was successfully obtained, AND
  o Member has primary, localized uveal melanoma, AND
  o No evidence of metastatic disease, AND
  o Rendering laboratory is a qualified provider of service per the Health Plan policy.

DecisionDx-PRAME

• This test is considered investigational and/or experimental.
  o Investigational and experimental (I&E) molecular and genomic (MolGen) tests refer to assays involving chromosomes, DNA, RNA, or gene products that have insufficient data to determine the net health impact, which typically means there is insufficient data to support that a test accurately assesses the outcome of interest (analytical and clinical validity), significantly improves health outcomes (clinical utility), and/or performs better than an existing standard of care medical management option. Such tests are also not generally accepted as standard of care in the evaluation or management of a particular condition.
  o In the case of MolGen testing, FDA clearance is not a reliable standard given the number of laboratory developed tests that currently fall outside of FDA oversight and FDA clearance often does not assess clinical utility.

DecisionDx-UMSeq

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References


