

Report Guide

The DecisionDx-SCC integrated test result (i40-GEP) combines the 40-gene expression profile with clinicopathologic risk factors and optimized nested predictive models to deliver refined risk-assessment and treatment guidance for high-risk cSCC patients.

WHAT'S INCLUDED IN THE REPORT?

The integrated DecisionDx-SCC report includes:

- Risk of metastasis (regional or distant)
- Risk of local recurrence
- Response to adjuvant radiation therapy (ART)

CLASS RESULT WITH METASTASIS & LOCAL RECURRENCE RISK

The DecisionDx-SCC integrated class result (i40-GEP) is reported as a classification of the gene expression profile in combination with 5 clinicopathologic risk factors and is validated to predict individual risk of metastasis (regional or distant) and local recurrence in patients diagnosed with high-risk cSCC.

Three-year metastasis-free survival (MFS) for the overall study population was 88.8%. Three-year local recurrence-free survival (LRFS) for the overall study population was 90.7%.

- **Class 1A – Low risk**
 - MFS 97.3%
 - LRFS 96.8%
- **Class 1B – Moderate risk**
 - MFS 94.6%
 - LRFS 90.0%
- **Class 2A – High risk**
 - MFS 77.9%
 - LRFS 83.1%
- **Class 2B – Highest risk**
 - MFS 66.2%
 - LRFS 82.1%

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DecisionDx
►SCC

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FINAL REPORT

Patient:

Sex:

DOB:

Client:

Provider:

Tumor Location:

Specimen ID:

Collected:

Received:

Reported:

Tumor Diameter:

Head or Neck Location:

Perineural Invasion:

Immunosuppressed:

Poor Differentiation:

The clinicopathologic information above, provided from the pathology report, test requisition form, and submitted clinical documentation, is not independently verified by Castle and is incorporated into the integrated 40-GEP result (i40-GEP). If any information is inaccurate or has changed since testing, contact Castle Biosciences at 866-788-9007. As with all tests, these results should be evaluated within the context of the patient's other risk factors and overall clinical scenario.

Class Result with Metastasis and Local Recurrence Risk

Class 2B

This signature is associated with the highest risk of metastasis and local recurrence within 3 years.

Metastasis-Free Survival

66.2%

Local Recurrence-Free Survival

82.1%

The DecisionDx-SCC Integrated test (i40-GEP) is validated to predict a patient's individual risk of metastasis (regional or distant) and local recurrence. The test was validated in a multicenter study evaluating 572 patients diagnosed with localized cSCC, and had one or more high-risk factors, who underwent definitive surgery with reported negative margins (R0). Patients had a median follow-up time of 4.3 years. Those without a metastatic event had a minimum follow-up of 3 years.

Three-year metastasis-free survival (MFS) for the overall study population was 88.8%. Three-year local recurrence-free survival (LRFS) for the overall study population was 90.7%.

Response to Adjuvant Radiation Therapy (ART)

High likelihood of benefit

The performance of the DecisionDx-SCC integrated test (i40-GEP) in predicting response to ART was validated in a multicenter study in patients diagnosed with localized cutaneous SCC eligible for ART by the presence of clinicopathologic risk factors.

In this study patients with Class 2B tumors showed a significant 50% reduction in metastatic risk when treated with ART, while Class 2A patients did not show reduction in metastatic risk. Class 1B patients are less likely to benefit due to lower metastatic incidence, while Class 1A patients are identified as likely safe to defer due to the lowest rate of metastasis.

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RESPONSE TO ADJUVANT RADIATION THERAPY

The performance of the DecisionDx-SCC integrated test (i40-GEP) in predicting response to ART was validated in a multicenter study in patients diagnosed with localized cSCC eligible for ART by the presence of clinicopathologic risk factors.

- Class 1A – Low likelihood of benefit from ART
- Class 1B – Low likelihood of benefit from ART
- Class 2A – Low likelihood of benefit from ART
- Class 2B – High likelihood to benefit from ART

ABOUT THE TEST

- The DecisionDx-SCC integrated test (i40-GEP) is a gene expression profile consisting of 40 genes (34 discriminant and 6 control). An optimized, nested algorithm integrates five clinicopathologic risk factors (immunosuppression, tumor diameter, poor differentiation, perineural invasion, and head or neck location) to provide enhanced metastatic and local recurrence risk prediction while maintaining ART benefit prediction.
- qRT-PCR technology is used to measure gene expression levels of the discriminant genes which are normalized to the control genes.



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About the Test

The DecisionDx-SCC test is a qRT-PCR assay of 6 control and 34 discriminant genes (40 in total) that uses an integrated algorithm founded on the neural network algorithm comprised of two gene expression signatures to assign disease risk. A nested algorithm, focusing on a subset of the 40 genes and integrating five clinicopathologic factors, was added to provide enhanced metastatic and local recurrence risk prediction with maintained ART benefit prediction. DecisionDx-SCC is indicated for patients with cutaneous squamous cell carcinoma (cSCC) and one or more high-risk factors (see Test Requisition Form). The test predicts individual metastatic risk, risk of local recurrence, and response to ART to help inform risk appropriate management.

The 34 discriminating genes are: ACSBG1, ALOX12, APOBEC3G, ATP6V0E2, BBC3, BHLHB9, CEP76, DUXAP9, GTPBP2, HDDC3, ID2, LCE2B, LIME1, LOC100287896, LOC101927502, MMP10, MRC1, MSANTD4, NFASC, NFIC, PDPN, PI3, PLS3, RCHY1, RNFI35, RPP38, RUNX3, SLC1A3, SPP1, TAF6L, TFAP2B, ZNF48, ZNF496 and ZNF839. Six control genes consist of BAG6, FXR1, KMT2C, KMT2D, MDM2, MDM4. The 5 integrated clinicopathologic factors are: Immunosuppression, tumor diameter, poor differentiation, perineural invasion, and head or neck location.

For additional information about the development, validation and clinical use of the DecisionDx-SCC test, including references, scan the QR code.



Castle Biosciences, Inc. | Sherri Borman, PhD, HCLD, Lab Director

This test was developed and its performance characteristics determined by Castle Biosciences Inc. It has not been cleared or approved by the FDA. The laboratory is regulated under CLIA as qualified to perform high-complexity testing. This test is used for clinical purposes. It should not be regarded as solely for investigational or research use.

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Additional information

For additional information about the development and validation of the integrated DecisionDx-SCC test and references, scan the QR code below.

