PATIENT NAME: **ADDR L3, ADDR F3** DOB: **16-Oct-1966**

AGENDIA PRECISION ONCOLOGY

GENDER:	Female	**ORDERED BY:**	AMS-StagingClient1, Physician2	**REQUISITION #:**	ROW ADDR3
SPECIMEN ID:	SID 3	**ACCOUNT:**	AMS-Staging Client 1 IN	**SPECIMEN TYPE:**	FFPE, Needle Core
PATIENT/MRN:	MRN 3			**SPECIMEN SOURCE:**	
CUSTOMER REF:	CREF 3			**COLLECTED DATE:**	05-Apr-2020
				RECEIVED DATE:	06-Apr-2020
				REPORTED DATE:	06-Apr-2020

BluePrint® Result

Luminal-type

According to the 2013 St Gallen Consensus regarding the treatment of women with early breast cancer, identification of intrinsic subtypes is most precise using molecular technologies, such as gene expression profiling by microarray.[1] The BluePrint test result represents the numerical outputs of an 80-gene microarray-based signature that assesses a breast tumor for its molecular subtype by calculating the correlation scores between its gene expression patterns and a template for each of three molecular subtypes (Luminal-type, HER2-type, or Basal-type). Each tumor will have 3 individual scores, and the highlighted molecular subtyping classification of each tumor is determined by the molecular subtype with the highest correlation score. Luminal-type breast cancers can be sub-stratified into “Luminal A” and “Luminal B” using the MammaPrint categorical result of “Low Risk” and “High Risk”, respectively, in combination with the BluePrint Luminal molecular subtype.

Luminal-type: +0.444

HER2-type: +0.333

Basal-type: -0.123

Additional Comments:

Assay Description

BluePrint, a microarray-based assay, has been developed to classify both fresh and formalin-fixed paraffin embedded (FFPE) breast tumor samples into one of three molecular subtypes (Luminal-type, HER2-type, or Basal-type) based on functional molecular pathways. The BluePrint molecular subtyping profile (MSP) contains 80 genes, and it was developed by evaluating early stage breast tumor samples with concordant ER, PR, and HER2 status by immunohistochemistry (IHC)/fluorescence in situ hybridization (FISH) and mRNA expression levels. BluePrint is a combination of 3 correlation-type scores to each of the three functional subtypes: Luminal-type (endocrine dependent), HER2-type (ERBB2 dependent), and Basal-type (triple negative). The BluePrint MSP has been shown to have high concordance with the subgroups (excluding normal-like) described by Perou et al.[2,3] Based on the analytical performance of BluePrint, the precision of classifying a sample as Luminal-type, HER2-type, or Basal-type is 99.3% for fresh and 98.6% for FFPE, and the repeatability is 99.6% for FFPE.

Sign Off

Sign Off
Jia-Perng Jennifer Wei, MD, PhD
Laboratory Director

Disclaimer IVD

BluePrint was developed and its performance characteristics determined by Agendia. It has not been cleared or approved by the US Food and Drug Administration (FDA). The FDA has determined that such clearance or approval is not necessary. This test is used for clinical purposes. It should not be regarded as investigational or for research. This test was performed at Agendia, Inc (05D1089250), which is certified under the Clinical Laboratory Improvement Amendment (CLIA) as qualified to perform high-complexity clinical laboratory testing. It has also been CE-marked for use in Europe.

References:

1) Goldhirsch A, Winer EP, Coates AS, et al., Ann Oncol. 2013; 24(9):2206-23.
2) Perou CM, Sørlie T, Eisen MB, et al., Nature. 2000; 406(6797):747-52.
3) Krijgsman O, Roepman P, Zwart W, et al., Breast Cancer Res Treat. 2012; 133(1):37-47.

AGENDIA BLUEPRINT

PATIENT NAME: **Example Last, First** DOB: **10-Oct-1961**

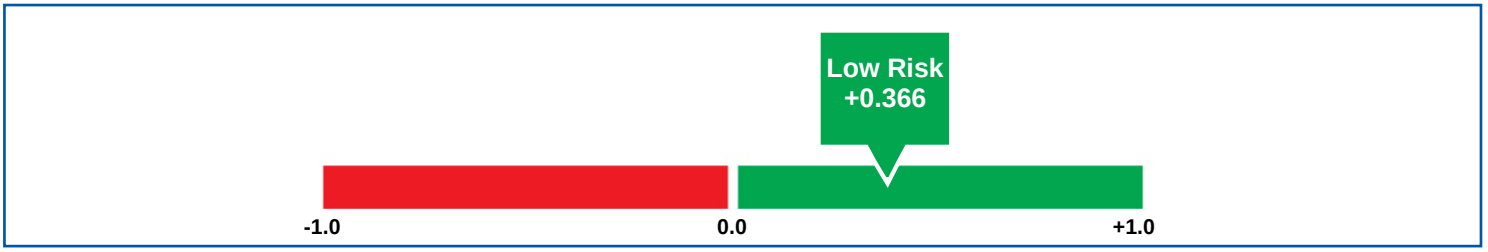
AGENDIA PRECISION ONCOLOGY

GENDER:	Female	**ORDERED BY:**	Physician, Test	**REQUISITION #:**	Example
SPECIMEN ID:	SID 2	**ACCOUNT:**	Agendia Test -NL- Amsterdam NL	**SPECIMEN TYPE:**	FFPE, Needle Core
PATIENT/MRN:	MRN 2			**SPECIMEN SOURCE:**	Left Breast
CUSTOMER REF:	CREF 2			**COLLECTED DATE:**	13-Apr-2020
				RECEIVED DATE:	14-Apr-2020
				REPORTED DATE:	20-Apr-2020

MammaPrint® FFPE Result

Low Risk

The breast cancer tissue sample submitted was analyzed by MammaPrint FFPE, an IVDMIA 70-Gene Profile of Breast Cancer for Metastatic Risk that has been validated to correlate with high or low outcome risk for distant metastases in patients with invasive breast cancer.[1] This risk assessment is based on a retrospective analysis of a prospective observational study that included 345 breast cancer patients treated and not treated with adjuvant therapy.[2] Treatment was selected according to clinical assessments that included MammaPrint test results. The risk for distant metastases in unselected patients who did not receive adjuvant treatment was not studied; therefore, MammaPrint FFPE should be used as a prognostic marker only. As a group, "Low Risk" patients like those in the MammaPrint FFPE clinical validation (RASTER) study have a 1.3% chance (95% CI 0-3.1), and "High Risk" patients have an 11.7% chance (95% CI 6.6-16.8) that their cancer will recur within 5 years (not accounting for any covariates other than the patient's MammaPrint FFPE status).



Additional Comments:

Assay Description

The U.S. FDA has provided IVDMIA clearance of MammaPrint with FFPE tissue for patients with Stage I and II invasive breast cancer, tumor size ≤ 5 cm, lymph node negative, based upon the development and validation of the MammaPrint assay as reported in Nature, New England Journal of Medicine, JNCI, BMC Genomics, Pers. Medicine, and Ann Oncol.[3-8] The test is performed using a microarray-based gene expression profile that was independently validated on 5-year outcome data on a patient cohort.[2] If a FFPE sample's MammaPrint Index (MPI) falls within a pre-defined area around the classification cut-off between -0.050 and +0.050, the classification accuracy is less than 90%. See MammaPrint Physician's Brochure found on www.agendia.com for more information.

Sign Off

Sign Off
Jia-Perng Jennifer Wei, MD, PhD
Laboratory Director

For In Vitro Diagnostic Use IVD

Caution: U.S. Federal law restricts this device to sale by or on the order of a physician.
Agendia, Inc (05D1089250) is certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA) as qualified to perform high-complexity clinical testing. MammaPrint FFPE is an aid in estimating the prognosis of patients diagnosed with breast cancer. Decisions on treatment should be based on the independent medical judgment of the treating physician taking into consideration all available information concerning the patient's condition, including other pathological tests, in accordance with the standard of care in a given community. MammaPrint was developed using adjuvantly untreated, lymph node negative, mainly European, patients to capture the biology of the primary tumor in a gene expression profile. The metastasis free survival data is from an independent external patient group in Europe. This test was performed at Agendia's Irvine, USA laboratory. General information about MammaPrint FFPE can be found at www.agendia.com.

References:

1) FDA label - USFDA Clearance; http://www.accessdata.fda.gov website.
2) Drukker CA et al. Int J Cancer 2013;133(4):929-36.
3) Van 't Veer LJ et al. Nature 2002;415(31):530-536.
4) Van de Vijver MJ et al. New Engl J Med 2002; 347(25):1999-2009.
5) Buyse M et. al. J Natl Cancer Inst 2006; 98(17):1183-1192.
6) Glas AM et al. BMC Genomics 2006;7:278.
7) Delahaye LJM et al. Pers Med 2013;10:801.
8) Mook S et al. Ann Oncol 2010;21(4):717-722.

PATIENT NAME: **Example Last, First** DOB: **10-Oct-1961**

AGENDIA PRECISION ONCOLOGY

GENDER:	Female	**ORDERED BY:**	Physician, Test	**REQUISITION #:**	Example
SPECIMEN ID:	SID 2	**ACCOUNT:**	Agendia Test -NL- Amsterdam NL	**SPECIMEN TYPE:**	FFPE, Needle Core
PATIENT/MRN:	MRN 2			**SPECIMEN SOURCE:**	Left Breast
CUSTOMER REF:	CREF 2			**COLLECTED DATE:**	13-Apr-2020
				RECEIVED DATE:	14-Apr-2020
				REPORTED DATE:	14-Apr-2020

MammaPrint® FFPE Result

High Risk

The breast cancer tissue sample submitted was analyzed by MammaPrint FFPE, an IVDMIA 70-Gene Profile of Breast Cancer for Metastatic Risk that has been validated to correlate with high or low outcome risk for distant metastases in patients with invasive breast cancer.[1] This risk assessment is based on a retrospective analysis of a prospective observational study that included 345 breast cancer patients treated and not treated with adjuvant therapy.[2] Treatment was selected according to clinical assessments that included MammaPrint test results. The risk for distant metastases in unselected patients who did not receive adjuvant treatment was not studied; therefore, MammaPrint FFPE should be used as a prognostic marker only. As a group, "Low Risk" patients like those in the MammaPrint FFPE clinical validation (RASTER) study have a 1.3% chance (95% CI 0-3.1), and "High Risk" patients have an 11.7% chance (95% CI 6.6-16.8) that their cancer will recur within 5 years (not accounting for any covariates other than the patient's MammaPrint FFPE status).

Additional Comments:

Assay Description

The U.S. FDA has provided IVDMIA clearance of MammaPrint with FFPE tissue for patients with Stage I and II invasive breast cancer, tumor size ≤ 5 cm, lymph node negative, based upon the development and validation of the MammaPrint assay as reported in Nature, New England Journal of Medicine, JNCI, BMC Genomics, Pers. Medicine, and Ann Oncol.[3-8] The test is performed using a microarray-based gene expression profile that was independently validated on 5-year outcome data on a patient cohort.[2] If a FFPE sample's MammaPrint Index (MPI) falls within a pre-defined area around the classification cut-off between -0.050 and +0.050, the classification accuracy is less than 90%. See MammaPrint Physician's Brochure found on www.agendia.com for more information.

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2) Drukker CA et al. Int J Cancer 2013;133(4):929-36.
3) Van 't Veer LJ et al. Nature 2002;415(31):530-536.
4) Van de Vijver MJ et al. New Engl J Med 2002; 347(25):1999-2009.
5) Buyse M et. al. J Natl Cancer Inst 2006; 98(17):1183-1192.
6) Glas AM et al. BMC Genomics 2006;7:278.
7) Delahaye LJM et al. Pers Med 2013;10:801.
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