

**PATIENT INFORMATION**

Last Name Smith	First Name John	MI —
DOB xx / xx / xxxx		
Social Security or ID # xxx-xxxx-xxxx		<input type="checkbox"/> Male <input type="checkbox"/> Female

**ORDERING PHYSICIAN**

Physician Name Dr. Grey	Phone #
Account Name Oncology of Rosetta	Fax #
Street Address 123 Basketball Rd	Email
City, State, Zip, Country Anytown, CA 12345 USA	*Copy To (If different from ordering) will be on page 2 of report

**SPECIMEN INFORMATION**

Biopsy Site Right Colon cecal mass	Specimen Type Paraffin Block	Date Result Reported xx / xx / xxxx	Sample # xxxxxxx
Date Specimen Collected xx / xx / xxxx	Date Specimen Received xx / xx / xxxx	Barcode # xxxxxxxxxxxx	Submitting Lab Internal ID# xxxxxxxxxxx

**TEST RESULT – TUMOR ORIGIN**

**Colorectal Adenocarcinoma**

**PATHOLOGY COMMENTS**

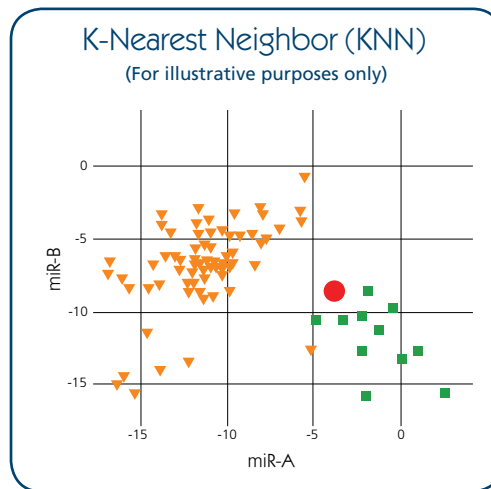
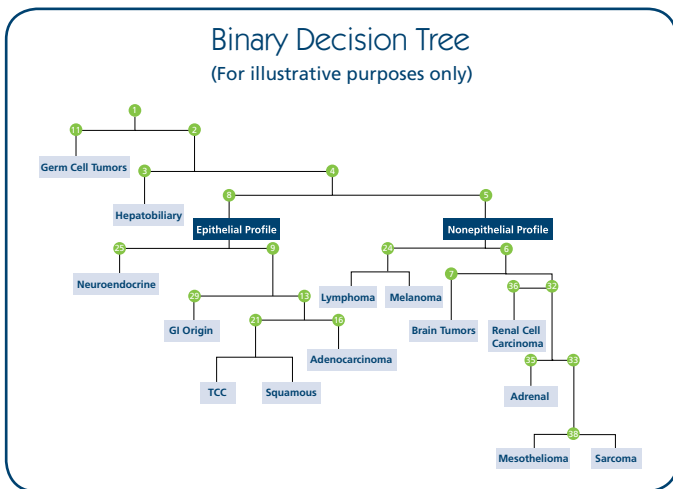
Laboratory Director Comments:

The result of above was generated by our Binary Decision Tree and K-Nearest Neighbor (KNN) algorithm, with a high probability of 85% and 5/5 nearest neighbors.

**Intended Use:**

The Cancer Origin Test™ is a molecular test that is intended to help guide the process of cancer classification/identification. This molecular cancer classification/identification test should be interpreted in the context of additional clinical, radiological, and/or histopathological findings. You may also consider reviewing NCCN Guidelines for specific treatment options for Cancer of Unknown Primary (CUP), or when a primary is discovered, treatment based upon that cancer type.

**CANCER ORIGIN TEST ALGORITHM & CLASSIFIERS**



■ miR-A Training Set  
▲ miR-B Training Set  
● Sample  
 (For illustrative purposes only)

**Colorectal Adenocarcinoma**

The Cancer Origin Test uses two distinct classifiers and then reports either one or two answers based upon the probabilities of the two classifiers. In the event that both classifiers yield the same result a single result is reported. If both classifiers report different results, two results will then be reported. If only one classifier has high probability it may then only report that single result.

**Binary Decision Tree:** The tree utilizes just a few microRNAs at each node to determine the next or final branch to take.

**K-Nearest Neighbor (KNN):** A sample is assigned an identification based on the K-nearest samples in the training set (Pearson correlation).

The above Tree and KNN are for illustrative purposes only and are intended to help give a better understanding of the test algorithm.

### INTERPRETATION & TEST DESCRIPTION

**Interpretation:**

The reported origin(s) are directly generated by algorithms (a binary-decision tree classifier and KNN classifier) trained on data from ~1300 known primary and metastatic tumors, with validated sensitivity of 85% or greater.

**Test Description:**

microRNA extracted using organic solvents from Formalin Fixed Paraffin Embedded (FFPE) tissue microdissected (if necessary) to a tumor cell percentage of 60% or more. The relative expression of 64 microRNAs is quantified on a custom microarray, and their signals normalized to a reference set on the array, and entered into an algorithm that combines a binary decision-tree and a K-nearest-neighbor classifier to determine tumor origin among 49 possible validated cancer origins. The result is reported as either a single tumor origin or as two possible origins listed in alphabetical order. If the probability for origin(s) is below a predetermined value, no result will be reported.

### ADDITIONAL NOTES

- a. The tumor panel consists of the following origins: Breast Cancer; Adrenocortical Ca.; Astrocytic Tumor; GI Carcinoid; Cholangiocarcinoma/Extrahepatic Biliary Adenocarcinoma; Chondrosarcoma; Colorectal Ca.; Ewing Sarcoma; Gastric/Esophageal Adenocarcinoma; GIST; HCC; Liposarcoma; Lung: Large Cell/Adenocarcinoma, Small Cell Ca., Carcinoid; Lymphoma; MFH/Fibrosarcoma; Melanoma; Oligodendroglioma; Osteosarcoma; Ovarian Ca.; Ovarian Primitive Germ Cell Tumor; Pancreatic Adenocarcinoma; Pancreatic Islet Cell Tumor; Pheochromocytoma; Mesothelioma; Prostatic Adenocarcinoma; RCC: chromophobe, clear cell, papillary; Rhabdomyosarcoma; SCC: Anus/Skin, Lung/Head&Neck/Esophagus, Cervix; Synovial Sarcoma; Non-Seminomatous Testicular Germ Cell Tumor; Seminoma; Thymoma/Thymic Carcinoma; Thyroid Ca.: follicular, medullary, papillary; Urothelial Ca.. Tumors other than the ones listed may be misclassified. This test does not determine malignancies.
- b. MicroRNA expression profiles of prostate metastases may differ significantly from prostate cancer primaries. Therefore, for male patients where prostate cancer is in the differential diagnosis based on the clinical and pathological presentation, prostate cancer should be considered even if prostate is not suggested as a tissue of origin by this test.
- c. This test is intended for clinical use and was developed, and its performance characteristics determined by Rosetta Genomics. It has not been cleared or approved by the U.S. Food and Drug Administration. Patient management decisions should always be based on the independent medical judgment of the treating physician, taking into consideration all available information concerning the patient's condition, including other tests. The Laboratory is certified under the Clinical Laboratory Improvement Amendments Act of 1988 (CLIA-88) to perform high complexity testing.

### COPY TO (IF DIFFERENT FROM ORDERING)

Physician Name <u>Dr. Blue</u>	Account Phone # _____
Account Name <u>Green Medical</u>	Account Country _____
Street Address <u>1234 Street Street</u>	Account Fax# _____
City, State, Zip, Country _____	