MAYO CLINIC
Mayo Medical Laboratories

Laboratory Service Report 1-800-533-1710

Patient Name	Patient ID	Age	Gender	Order #
SAMPLEREPORT,CANCP	SA00065683	48	M	SA00065683
Ordering Phys CLIENT,CLIENT				**DOB** 06/12/1965
Client Order # SA00065683	**Account Information**			**Report Notes**
Collected 02/20/2014 00:00	C7028846-DLMP Rochester SDSC 2 - Client Support Rochester, MN 55901			
Printed 03/27/2014 14:38				

Test	Flag	Results	Unit	Reference Value	Perform Site*

Solid Tumor Targeted Cancer Panel
RECEIVED: 02/20/2014 07:26 **REPORTED:** 02/20/2014 08:11

Result Summary MCR

ALTERATION(S) IDENTIFIED (see below)

Result MCR

Provided diagnosis: Colorectal adenocarcinoma

Gene: KRAS
DNA change: c.35G>T
Amino Acid change: p.G12V (Gly12Val)
Classification: MUTATION

Interpretation MCR

ASSOCIATIONS BETWEEN KRAS MUTATIONS AND COLORECTAL CANCER
Approximately 35% of patients with colorectal cancer have a somatic mutation in the KRAS gene (1). KRAS mutations, primarily those occurring at codons 12, 13, and 61, result in constitutive activation of the RAS/MAPK signaling pathway.

Current data suggests that the efficacy of EGFR-targeted therapies in colorectal cancer is limited to patients with tumors lacking KRAS mutations. Thus, the detection of a KRAS mutation within this tumor suggests that EGFR-targeted therapies may have limited therapeutic value for this patient (2).

Additional Information CLINICAL TRIALS MCR

Possible clinical trials of benefit for this patient can be found at the following sites:
1) ClinicalTrials.gov:
http://clinicaltrials.gov/ct2/search/advanced
2) Mayo Clinic:
http://www.mayo.edu/research/clinical-trials/
3) National Cancer Institute:
http://www.cancer.gov/clinicaltrials/search

REFERENCES
1. http://cancer.sanger.ac.uk/cancergenome/projects/cosmic/
2. Ann Oncol. 2013 Aug;24(8):2062-7 (PMID 23666916)

LOW COVERAGE AREAS (<100X)
None.

CAUTIONS
CLINICAL CORRELATIONS

Performing Site Legend on Last Page of Report

* Report times for Mayo performed tests are CST/CDT

Patient Name	Patient ID	Age	Gender	Order #
SAMPLEREPORT,CANCP	SA00065683	48	M	SA00065683
Ordering Phys CLIENT,CLIENT				**DOB** 06/12/1965
Client Order # SA00065683	**Account Information**			**Report Notes**
Collected 02/20/2014 00:00	C7028846-DLMP Rochester SDSC 2 - Client Support Rochester, MN 55901			
Printed 03/27/2014 14:38				

Test	Flag	Results	Unit	Reference Value	Perform Site*

Test results should be interpreted in context of clinical findings, tumor sampling, histopathology, and other laboratory data. If results obtained do not match other clinical or laboratory findings, please contact the laboratory for possible interpretation. Misinterpretation of results may occur if the information provided is inaccurate or incomplete.

The presence or absence of a mutation may not be predictive of response to therapy in all patients.

TECHNICAL LIMITATIONS
This test does not detect large insertions, deletions, or duplications or genomic copy number variants.

This assay has been shown to detect >99% of single base substitutions and >93% of known COSMIC insertions and deletions up to 22bp in length within the reportable range.

A negative (wild type) result does not rule out the presence of a mutation that may be present but below the limits of detection of this assay (approximately 5-10%).

Rare polymorphisms may be present that could lead to false negative or false positive results.

This test cannot differentiate between somatic and germline alterations. Additional testing may be necessary to clarify the significance of results if there is a potential hereditary risk.

Metastatic and corresponding primary lesions may have discordant results.

TEST CLASSIFICATION
Laboratory developed test.

Method MCR

Microscopic examination was performed by a pathologist to identify areas of tumor for enrichment by macrodissection. Next generation sequencing is performed to test for the presence of a mutation in targeted regions of the following genes: ABL1, AKT1, ALK, APC, ATM, BRAF, CDH1, CDKN2A, CSF1R, CTNNB1, EGFR, ERBB2, ERBB4, EZH2, FBXW7, FGFR1, FGFR2, FGFR3, FLT3, GNA11, GNAQ, GNAS, HNF1A, HRAS, IDH1, IDH2,

Patient Name	Patient ID	Age	Gender	Order #
SAMPLEREPORT,CANCP	SA00065683	48	M	SA00065683
Ordering Phys CLIENT,CLIENT				**DOB** 06/12/1965
Client Order # SA00065683	**Account Information**			**Report Notes**
Collected 02/20/2014 00:00	C7028846-DLMP Rochester SDSC 2 - Client Support Rochester, MN 55901			
Printed 03/27/2014 14:38				

Test	Flag	Results	Unit	Reference Value	Perform Site*
JAK2, JAK3, KDR, KIT, KRAS, MET, MLH1, MPL, NOTCH1, NPM1, NRAS, PDGFRA, PIK3CA, PTEN, PTPN11, RB1, RET, SMAD4, SMARCB1, SMO, SRC, STK11, TP53, VHL. See www.mayomedicallaboratories.com (Test ID CANCP) for additional information about this test, including the specific regions covered by this assay.					
Specimen		Tissue-Tumor			MCR
Reviewed By					MCR
Kevin Carl Halling MD, PhD					
Release Date		20 Feb 2014 08:10			MCR

* Performing Site:

MCR	Mayo Clinic Laboratories - Rochester Main Campus 200 First St SW Rochester, MN 55905	Lab Director: