Patient Name	Patient ID	Age	Gender	Order #
SAMPLEREPORT,HNPCC	SA00046795	45	F	SA00046795
Ordering Phys				**DOB** 06/10/1966
Client Order # SA00046795	**Account Information**			**Report Notes**
Collected 05/24/2012	C7028846-DLMP ROCHESTER 3050 SUPERIOR DRIVE ROCHESTER,MN 55901			
Printed 09/15/2012 14:50				

Test	Flag	Results	Unit	Reference Value	Perform Site*
HNPCC Screen		REPORTED 07/13/2012 10:25			
Microsatellite Instability, Tumor					
Specimen		Tissue-Tumor			MCR
Specimen ID		1038228			MCR
Order Date		29 May 2012 08:43			MCR
Reason For Referral					MCR
Possible diagnosis of Hereditary Nonpolyposis Colon Cancer (HNPCC)/Lynch syndrome. Evaluate tumor tissue for evidence of defective DNA mismatch repair.					
Method					MCR
Immunohistochemical staining (IHC) is used to determine the presence or absence of protein expression for MLH1, MSH2, MSH6 and PMS2. Lymphocytes and normal epithelium exhibit strong nuclear staining and serve as positive internal controls for staining of these proteins.					
A PCR based assay is used to test for tumor microsatellite instability (MSI) with the use of 5 mononucleotide repeat markers (BAT25, BAT26, Mono27, NR24, and NR21). The tumor tissue is classified as MSS/MSI-L (instability detected in 0 or 1 out of 5 markers), or MSI-H (instability in 2 or more of 5 markers tested).					
Results					MCR
Tumor type: colon adenocarcinoma IHC: Normal expression of MLH1, MSH2, MSH6, and PMS2 MSI: MSS/MSI-L (instability observed in 0 of 5 informative markers)					
Interpretation					MCR
The combination of normal protein expression and an MSS/MSI-L phenotype suggests the presence of normal DNA mismatch repair function within the tumor. Thus, the likelihood that this individual has an inherited colon cancer syndrome due to defective DNA mismatch repair (HNPCC/Lynch syndrome) is reduced but not eliminated.					
However, these results do not rule out the possibility that this individual's tumor is due to an inherited defect in another gene not involved in DNA mismatch repair. A significant fraction of clinically defined HNPCC cases (30% or more) do not have defective DNA mismatch repair as the underlying genetic basis of their disease.					
Additionally, we cannot rule out the possibility that this individual or family has					

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HNPCC/Lynch syndrome because this tumor could represent a sporadic occurrence. If there is a strong personal or family history of HNPCC/Lynch syndrome related cancers for this patient or if this individual has multiple tumors, consider microsatellite instability (MSI) and immunohistochemical staining (IHC) on a different tumor to further evaluate the possible role of defective DNA mismatch repair for this individual or family.					
Of note, the literature suggests that MSI analysis on neoadjuvant chemoradiated tumor specimens may influence MSI status and lead to an erroneous interpretation of results (Int J Radiat Oncol Biol Phys. 2007 68(5):1584).					
Due to the sensitivity of the method being used, microsatellite instability cannot be reliably detected in samples containing less than 30% tumor DNA. Samples are routinely macrodissected to enrich for tumor cells, with those less than 30% rejected from further testing.					
A genetic consultation may be of benefit.					
CAUTIONS: Test results should be interpreted in context of clinical findings, family history, 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.					
For research use only.					
Extraction Performed?		Yes			MCR
Consultant					MCR
Melody Elizabeth Kimball					
Report Date		13 Jul 2012 10:22			MCR
MMR Protein, IHC Only, Tumor					
Specimen		Tissue-Tumor			MCR
Specimen ID		1038228			MCR
Order Date		29 May 2012 08:43			MCR
MLH1 IHC		Performed			MCR
MSH2 IHC		Performed			MCR
MSH6 IHC		Performed			MCR
PMS2 IHC		Performed			MCR
Result					MCR

Performing Site Legend on Last Page of Report

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Ordering Phys				**DOB** 06/10/1966
Client Order # SA00046795	**Account Information**			**Report Notes**
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Printed 09/15/2012 14:50				

Test	Flag	Results	Unit	Reference Value	Perform Site*
Analysis has been completed. Refer to the Microsatellite Instability, Tumor for results and interpretation.					
Reviewed By:					MCR
Melody Elizabeth Kimball					
Release Date		13 Jul 2012 10:23			MCR

* Performing Site:

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