Patient Name	Patient ID	Age	Gender	Order #
SAMPLEREPORT,MSIO N	SA00058846	46	F	SA00058846
Ordering Phys CLIENT,CLIENT				**DOB** 06/10/1966
Client Order # SA00058846	**Account Information**			**Report Notes**
Collected 06/06/2013 00:00	C7028846-DLMP Rochester 3050 Superior Drive Rochester, MN 55901			
Printed 06/13/2013 10:29				

Test	Flag	Results	Unit	Reference Value	Perform Site*
Microsatellite Instability, Tumor					
RECEIVED: 06/07/2013 14:41 **REPORTED:** 06/13/2013 08:30					
Microsatellite Instability, Tumor					
Specimen		Tissue-Tumor			MCR
Specimen ID		1062113			MCR
Order Date		10 Jun 2013 09:10			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

Microscopic examination was performed by a pathologist to identify areas of normal and tumor for enrichment by macrodissection. 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: Colorectal adenocarcinoma
MSI: MSS/MSI-L (instability observed in 0 of 5 informative markers)

Interpretation MCR

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 cannot rule out the possibility that this individual's tumor is due to an inherited defect in another gene not involved in 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 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

Performing Site Legend on Last Page of Report

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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.					
Laboratory developed test.					
Extraction Performed?		Yes.			MCR
Consultant Emily Christine Lauer					MCR
Report Date		13 Jun 2013 08:28			MCR

* Performing Site:

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