Patient ID	Patient Name		Birth Date	Gender	Age
SA00000975	SAMPLEREPDMGLM, VLD20150713A0236		1981-01-01	M	34
Order Number	**Client Order Number**	**Ordering Physician**	**Report Notes**		
SA00000975	SA00000975	CLIENT, CLIENT			
Account Information		**Collected**			
C7028846 DLMP Rochester		12 Jul 2015 18:18			

MMR Protein, IHC Only, Tumor

Result Summary

MCR

INTACT PROTEIN EXPRESSION

Result

MCR

Provided diagnosis: colorectal adenocarcinoma
IHC: Normal expression of MLH1, MSH2, MSH6, and PMS2

Interpretation

1 MCR

The results of the IHC analysis suggest 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.

These results reduce but do not completely rule out the possibility of defective DNA mismatch repair within the tumor because approximately 5% of cases with defective mismatch repair do not show absence of protein expression by IHC. These results also do not exclude 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 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 individual or if this individual has multiple tumors, consider microsatellite instability (MSI) testing (MSI / Microsatellite Instability, Tumor) on this tumor or a different tumor to further evaluate the possible role of defective DNA mismatch repair for this individual or family.

These data should be interpreted in the context of this histopathologic findings. A surgical pathology consult may be ordered separately.

A genetic consultation may be of benefit.

ADDITIONAL INFORMATION

Immunohistochemical staining (IHC) is used to determine the presence or absence of protein expression for one or more of the following: MLH1, MSH2, MSH6, and PMS2. Lymphocytes and normal epithelium exhibit strong nuclear staining to serve as positive internal controls for staining of these proteins. Test results should be interpreted in the 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.

Specimen

MCR

Tissue, Tumor

Tissue ID

MCR

S15–5999

Released By

MCR

EMILY LAUER

MLH1 IHC

MCR

Performed

MSH2 IHC

MCR

Performed

MSH6 IHC

MCR

Performed

PMS2 IHC

MCR

Performed

Received: 13 Jul 2015 20:27 **Reported:** 24 Jul 2015 19:14

Performing Site Legend

Code	Laboratory	Address	Lab Director	CLIA Certificate
MCR	Mayo Clinic Laboratories - Rochester Main Campus	200 First Street SW, Rochester, MN 55905	William G. Morice M.D. Ph.D	24D0404292

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Laboratory Notes

1 This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

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