

Patient Name SAMPLEREP,COMT	Patient ID 0000180809	Age 46	Gender F	Order # 0000180809
Ordering Phys				DOB 06/10/1966
Client Order # 0000180809	Account Information			Report Notes
Collected 03/14/2013 23:41	C7028846-DLMP Rochester 3050 Superior Drive Rochester, MN 55901			
Printed 05/23/2013 11:34				

Test	Flag Results	Unit	Reference Value	Perform Site*
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REPORTED 05/22/2013 14:46

Catechol Methyltransferase Genotype

MCR

Compound Heterozygous COMT*2/*3. This individual is heterozygous for the COMT*2 polymorphism and is also heterozygous for the COMT*3 polymorphism. This individual has two copies of the gene encoding enzyme with reduced activity. This genotype is consistent with a poor to intermediate metabolizer phenotype. This patient will have reduced enzyme activity and concentration compared to individuals with the normal genotype. Caution should be exercised when treating with drugs metabolized by COMT. Dose adjustments may be required.

Direct polymorphism analysis for 472G>A and 304G>A is performed following PCR amplification. Direct DNA testing will not detect all the known mutations that result in decreased or inactive COMT. Absence of a detectable gene mutation or polymorphism does not rule out the possibility that a patient has an intermediate or poor metabolizer phenotype. Patients with an extensive or intermediate metabolizer genotype may have COMT enzyme activity inhibited by a variety of medications, or their metabolites. The following is a partial listing of drugs known to affect COMT activity as of the date of this report.

Drugs that undergo metabolism by COMT: Alpha-methyl DOPA, Apomorphine, Benserazide, Bitolterol, Dihydroxyphenylserine, Dobutamine, Dopamine, Epinephrine, 2-Hydroxyestrogens, 4-Hydroxyestrogens, Isoetherine, Isoprenaline, Isoproterenol, Norepinephrine, Rimiterol. Co-administration may decrease the rate of elimination of other drugs metabolized by COMT.

Structurally modified drugs that are not metabolized by COMT: Albuterol, Metaproterenol, Methoxamine, Phenylephrine, Perbuterol, Terbutaline. Co-administration will not decrease the rate of metabolism of other drugs by COMT.

Drugs known to inhibit COMT activity: Entacapone, Tolcapone, Nitecapone. Dietary Components that inhibit COMT activity: Quercetin, Tea catechins. Co-administration will decrease the rate of metabolism of COMT metabolized drugs,

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* Report times for Mayo performed tests are CST/CDT

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increasing the possibility of toxicity, including heterozygous individuals. Laboratory developed test. Reviewed by		Jennifer Herman			MCR

* Performing Site:

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