DRLOGY PATHOLOGY LAB

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Yashvi M. Patel
Age : 21 Years
Sex : Female
UHID : 556

Sample Collected At:
125, Shiv complex, S G Road, Mumbai
Sample Collected By: Mr Suresh
Ref. By: **Dr. Hiren Shah**

0 35545 62336 78 1
Registered on: 02:31 PM 02 Dec, 2X
Collected on: 03:11 PM 02 Dec, 2X
Reported on: 04:35 PM 02 Dec, 2X

THIOPURINE METHYL TRANSFERASE (TPMT), GENOTYPING

Investigation	Result	Reference Value	Unit

THIOPURINE METHYL TRANSFERASE (TPMT), GENOTYPING
Real Time PCR

Sample Type	Blood (2 ml)	**TAT :** 1 Week (Normal: 1 - 4 Weeks)	
TPMT*1 wild type	Not Detected	Negative	
TPMT*2 G238C	Not Detected	Negative	
TPMT*3A G460A and A719G	Not Detected	Negative	
TPMT*3B G460A	Not Detected	Negative	
TPMT*3C A719G	Not Detected	Negative	

Interpretation	
GENOTYPE	**EFFECT OF POLYMORPHISM**
TPMT*1 wild type	Normal enzyme activity
TPMT*2 G238C	Reduced enzyme activity
TPMT*3A G460A and A719G	No enzyme activity
TPMT*3B G460A	Reduced enzyme activity
TPMT*3C A719G	Reduced enzyme activity

Note
1. This test predicts the TPMT enzyme activity based on polymorphism at three positions 238, 460 and 719 of TPMT gene
2. Current TPMT phenotype may not be reproducible in patients who have received blood transfusions within 30-60 days of testing

Comments:
It is recommended to measure TPMT (Thiopurine S-methyltransferase) activity before initiating treatment with Thiopurine drugs, such as Azathioprine, 6-Mercaptopurine, and 6-Thioguanine. Patients with low TPMT activity (prevalence of about 10%) or those with absent TPMT activity (prevalence of about 0.3%) are at a significantly higher risk of experiencing drug-induced bone marrow toxicity. This increased risk is primarily due to the accumulation of unmetabolized drug in their bodies.
Approximately 5% of all Thiopurine therapies may fail due to drug-induced toxicity. It's worth noting that there is considerable variation in TPMT mutations, and the types of mutations can differ among ethnic groups. This diversity in mutation types contributes to the variability in individual responses to these drugs. Therefore, measuring TPMT activity before starting Thiopurine therapy is important in identifying individuals at risk for toxicity and optimizing treatment outcomes.

Thanks for Reference

Medical Lab Technician
(DMLT, BMLT)

****End of Report****

Dr. Payal Shah
(MD, Pathologist)

Dr. Vimal Shah
(MD, Pathologist)