

Clinical Biochemistry News – City Hospital

No. External - 05 City Laboratory

13th April 2007

Whole Blood TPMT Assay Audit of First Year

In April 2006 we introduced our new whole blood TPMT assay together with genotyping to test selected samples, thereby offering an integrated TPMT phenotyping and genotyping service.

Basic Audit Information for our service

From April 2006 to April 2007 we have:

- Analysed 11,167 samples for TPMT activity
- Identified 1493 (13.4%) patients with low TPMT activity
- Identified 70 (0.6%) patients with undetectable TPMT activity – 1 in 169 patients screened. This equates to a cost to a referring Trust of £4,500 per deficient identified.
- Performed genotyping for 902 samples
- Of 168 laboratories currently using our service approximately 20 have a thiopurine drug pre-treatment screening policy. We estimate that one third of patients who start thiopurine drugs are screened prior to treatment commencing.

TPMT Genotyping Technique

We use a multiplex amplification refractory mutation system (ARMS) strategy to screen for the common TPMT mutations TPMT*2 and TPMT*3, which in Caucasians, Asians and African-Americans populations are responsible for ~95% of all mutant alleles for deficient TPMT activity.

TPMT Genotyping Testing Policy

We perform TPMT genotyping automatically for:

- Repeat samples to confirm patients undetectable TPMT activity status.
- Patients that have had a transfusion within 3 months of a sample being taken.
- Patients who exhibited a reaction to azathioprine as indicated by clinical details.
- Uncertainty about the phenotype (discordance between previous and current phenotype).

There is no additional charge for the genotyping component for the above criteria.

New Stone Analyser

We have recently purchased a new FT-IR machine for stone analysis. We are now able to offer this service to other Trusts. Our user information leaflet will be available on our website, www.cityassays.co.uk in a few weeks time and will feature in our summer newsletter.

Prices & CPA information 2007-08

- We have made small adjustments to our prices for the coming year

Analyte	Turn Round (working days)	In EQA Scheme and OK QC performance	Price 07/08 (£)
Vitamin A	3	✓ ✓	10-50
Vitamin D	3	✓ ✓	18-00
Vitamin E	3	✓ ✓	10-50
Carotenes	5	✓ ✓	25-00
TPMT Service	2	✓ ✓	28-00
Faecal elastase-1	3	✓ ✓	28-00
ACE	3	✓ ✓	11-00
Stone Analysis	5	✓ ✓	20-00

Other CPA Information Required by Referring Labs: We currently have conditional CPA accreditation status.

Key Contact Points

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- If you would like to email this news letter to relevant clinical teams it can be downloaded from our website as a PDF.