

DPYD testing: Variant analysis for fluoropyrimidine toxicity

DPYD testing information

Germline variants in the dihydropyrimidine dehydrogenase (*DPYD*) gene can confer an increased risk of severe or fatal toxicity for cancer patients being treated with common fluoropyrimidine based chemotherapies, 5-fluoruracil, tegafur or capecitabine.

AWMGS uses Agena VeriDose *DPYD* Panel Set and the Agena MassARRAY system to identify the following variants in the *DPYD* gene.

c.1905+1G>A
c.1679T>G
c.2846A>T
c.557A>G
c.1129-5923C>G
c.1236G>A

Sample requirements

4ml blood in EDTA anticoagulant (purple top)

All samples must be accompanied by a completed general laboratory genetics request form, with at least 3 patient identifiers and all relevant clinical information (the request form is available on our website).

'*DPYD*' must be clearly marked on the request form.

Send samples to:

All Wales Medical Genomics Service
Gwasanaeth Genomeg Cymru Gyfan
Wales Genomic Health Centre
Canolfan Iechyd Genomic Cymru
Cardiff Edge Business Park
Parc Busnes ymyl Caerdydd
Longwood Drive
Eglwys Newydd
Cardiff
Caerdydd
Wales
Cymru
CF14 7YU

Referral criteria

Patients being considered for fluoropyrimidine based therapy should undergo pre-treatment pharmacogenomic screening for the five variants of *DPYD* associated with severe toxicity.

Turnaround Time

A report will be issued listing any variants identified, and the treatment recommendation based on the patient's genotype **within 7 calendar days.**

Contact details

Email:

Lab.Genetics.CAV@wales.nhs.uk

Phone: 02921 844023

References

- Clinical Pharmacogenetics Implementation Consortium

<https://cpicpgx.org/guidelines/guideline-for-fluoropyrimidines-and-dpyd/>