GENETICS LABORATORY REPORT G00029

To:

Consultant Oncologist
GenQA Trust

Joseph Forrester

Lab Number	**GM21.14730**	DOB	**18 February 1940**
Sample Type	**DNA**	NHS Number	
Date Sample Obtained	**11 August 2021**	MRN	
Date Requested	**26 August 2021**	Your Refr.	**2021DPYD_01**
Date Reported	**16 September 2021**	Patient Sex	**Male**
		Pedigree Number	

REFERRAL REASON **M1.7 Colorectal cancer. Pre-chemotherapy. To determine whether this patient has dihydropyrimidine dehydrogenase (DPD) deficiency that increases the risk of developing severe fluoropyrimidine associated toxicity.**

REPORT **Increased risk of 5-fluoruracil or capecitabine toxicity**

RESULT
This patient is heterozygous for the DPYD HapB3 genotype.

IMPLICATIONS when treated with 5-fluoruracil or capecitabine
This heterozygous genotype is associated with partial DPD deficiency and severe toxicity to fluoropyrimidine therapy at standard doses.

DOSING RECOMMENDATIONS for 5-fluoruracil or capecitabine
- Consider a 50% dose reduction.
- If tolerant after the first cycle, dose increment to a dose of 75% of the target dose over subsequent cycles.
- If no toxicity is observed at a dose of 75%, a further increment to a maximum of 85% may be possible, but caution is advised.

Reported By:

Clinical Scientist

Authorised By:

Clinical Scientist

GENETICS LABORATORY REPORT

Joseph Forrester | MRN: | ReportDate: 16 September 2021

Please note that if there is any DNA remaining from this sample, this will be stored in the laboratory.

BASIS OF TEST

TECHNICAL INFORMATION
VARIANT DETAILS
Gene: DPYD
Zygosity: Heterozygous
HGVS description: NM_000110.3: c.1129-5923C>G
Location: GRCH37(hg19) Chr1: g.98045449
Predicted DPD enzyme activity: 50-75%

TEST METHODOLOGY
Polymorphic variants in the DPYD gene are associated with severe, sometimes fatal, toxicity to fluoropyrimidine therapy. Germline analysis was undertaken for four variants/ haplotypes in DPYD that have an established effect on function: variants c.1905+1G>A (rs3918290), c.1679T>G (rs55886062) & c.2846A>T (rs67376798), and the haplotype HapB3 variants, c.1129-5923C>G (rs75017182), c.1236G>A (rs56038477) and c.483+18G>A (rs56276561).

DNA extracted from peripheral blood has been tested using an Elucigene DPYD kit (ONDYDB1) which is an IVD marked multiplex ARMS assay which detects the presence and zygosity of the four established variants/haplotypes listed above.

Interpretation is based on the UK Chemotherapy Board "Personalised Medicine Approach for Fluoropyrimidine-based therapies" guidance issued July 2020. Interpretation recommendations are based on the assumption that when two variants relating to reduced function are detected, they are in trans.

Please note: other genetic, clinical and environmental factors may affect a patient's response to fluoropyrimidines and their risk for adverse drug reactions.

Note that this is a new test that is in the process of being included in an extension to our scope of UKAS accreditation. This test has undergone validation within the laboratory and is subject to ongoing internal quality control.

{M1.7}