03 April 2025

Dear Colleague,

IMPORTANT: CHANGE TO NATIONAL TEST DIRECTORY

Removal of R53: Fragile X testing

NHSE genetic laboratories are required to deliver testing according to the National Genomic Test Directory https://www.england.nhs.uk/publication/national-genomic-test-directories/. A new version of the Directory was published on 2nd January 2025 and the following test has been removed:

R53 Fragile X
This test was previously available as a stand-alone test. 9000 tests per annum were reported with diagnostic yield of 0.3% (n=1000) and 0.37% (n=2421) demonstrating low clinical effectiveness.

This change does not affect Fragile X tests for family members with a confirmed diagnosis of Fragile X in the family.

Patients meeting the eligibility criteria will continue to have diagnostic *FMR1* testing via the following tests:

1) R27: Paediatric disorders
2) R29: Intellectual disability
3) R402: Premature ovarian insufficiency

The referral information given **must** state how the patient meets the testing criteria:
https://www.england.nhs.uk/wp-content/uploads/2025/01/rare-and-inherited-disease-eligibility-criteria-V7.1-OFFICIAL-2.pdf

If the patient does not meet the criteria for testing or insufficient clinical information is provided the test request will be rejected.

These changes will be implemented by the North East and Yorkshire GLH from 1st May 2025.

All samples must be accompanied by a laboratory request form, which can be downloaded here:
https://ney-genomics.org.uk/wp-content/uploads/2023/02/411.027-Rare-Disease-Referral-Form-v3.1.pdf

R27 and R29 involve whole genome sequencing (WGS). Analysis is most effective as part of a trio (i.e. using samples from the affected individual and both parents). All WGS tests require completion of two forms in addition to the standard laboratory request forms:

1) WGS GMS test order form for rare disease (one form per trio)
https://www.england.nhs.uk/wp-content/uploads/2024/07/gms-test-order-form-rare-disease-v1.5.pdf

2) Record of Discussion Regarding Genomic Testing (one form per individual)
https://www.england.nhs.uk/wp-content/uploads/2021/09/nhs-genomic-medicine-service-record-of-discussion-form.pdf

Turnaround times

Standard reporting targets set by NHSE for testing are 84 days for whole genome sequencing. However, patients should be aware that results may take significantly longer, due to capacity issues within the laboratories. Backlogs in the analysis of WGS tests mean that routine cases are currently taking approximately 9 months to report.

If you have any questions regarding this change in service, please do not hesitate to contact your local genetics laboratory:

Newcastle Genetics Laboratory: Ciaron McAnulty ciaron.mcanulty@nhs.net
Leeds Genetics Laboratory: Andrea Coates andrea.coates1@nhs.net
Sheffield Genetic Diagnostic Service: Nick Beauchamp nick.beauchamp@nhs.net

Yours faithfully,

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