NHS
Central & South
Genomic Laboratory Hub

**West Midlands Genomics Laboratory**
Birmingham Women's and Children's NHS Foundation Trust
Edgbaston | Birmingham | B15 2TG
***WMGL website:*** ***https://bwc.nhs.uk/west-midlands-regional-genetics-laboratory***

June 2025

Dear Service User,
We are writing to inform you of a change to cancer testing protocols at Central and South GLH (the testing is performed at West Midlands Genomics Laboratory, WMGL).

**How have things been done historically and how are they going to change?**

Historically, for most solid cancer referrals, we have triggered both a DNA NGS panel and an RNA NGS panel, irrespective of what was actually requested. This has allowed us to deliver essentially all the targets listed on the National Genomic Test Directory for every cancer.

From 1st July 2025, for certain cancers, we will only trigger the tests which you have explicitly requested on the request form. This will apply to the following cancers:

- Colorectal cancer (M1)
- Ovarian cancer (M2)
- Endometrial cancer (M215)
- Breast cancer (M3)
- Melanoma (M7)
- Prostate cancer (M218)

If you request only the targets on the DNA NGS panel, for example, we will *not* also perform an RNA NGS panel.

This will result in the following changes to testing strategies for these cancers

| **If you request …** | **… we have historically performed** | **… we will perform from 01.07.25** |
|---|---|---|
| DNA panel for colorectal cancer (*KRAS NRAS BRAF*) | DNA panel (M1.1) for colorectal cancer (*KRAS NRAS BRAF*)*<br>AND<br>RNA panel (M1.6) for colorectal cancer (*NTRK1-3*)** | DNA panel for colorectal cancer (*KRAS NRAS BRAF*)* |
| DNA panel for ovarian cancer (HRD *BRCA1/2*) | DNA panel (M2.1/M2.5) for ovarian cancer (HRD or *BRCA1/2 SMARCA4*)*<br>AND<br>RNA panel (M2.3) for ovarian cancer (*NTRK1-3*)** | DNA panel for ovarian cancer (HRD or *BRCA1/2 SMARCA4*)* |
| DNA panel for endometrial cancer *(POLE*) | DNA panel (M215.5) for endometrial cancer (*POLE*)*<br>AND<br>RNA panel (M215.1) for endometrial cancer (*NTRK1-3*)** | DNA panel for endometrial cancer (*POLE*)* |
| DNA panel for breast cancer *(PIK3CA AKT1 PTEN*) | DNA panel (M3.6) for breast cancer *(PIK3CA AKT1 PTEN*)*<br>AND<br>RNA panel (M3.5) for endometrial cancer (*NTRK1-3*)** | DNA panel for breast cancer *(PIK3CA AKT1 PTEN*)* |
| DNA panel for melanoma (*BRAF KIT NRAS*) | DNA panel (M7.1) for melanoma (*BRAF KIT NRAS*)*<br>AND<br>RNA panel (M7.3) for melanoma (*NTRK1-3*)** | DNA panel for melanoma (*BRAF KIT NRAS*)* |

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|---|---|---|
| DNA panel for prostate cancer (*BRCA1/2*) | DNA panel (M218.1) for prostate cancer (*BRCA1/2*)*<br>AND<br>RNA panel (M218.2) for prostate cancer (*NTRK1-3 TMPRSS2*::*ERG*)** | DNA panel for prostate cancer (*BRCA1/2*)* |

*Including additional clinical trial targets: *ALK*, *BRAF*, *ERBB2* small variants; *MET* exon 14 skipping; *ERBB2*, *MET* copy number variants
**Including additional clinical trial targets: *ALK*, *BRAF*, *ROS1*, *MET* rearrangements; *MET* exon 14 skipping

In all the above cases, if an RNA panel target is requested on the request form, RNA panel testing will of course still be undertaken. The above changes apply only to cases where only DNA panel targets are requested.

**What are we asking of you?**

We would like to ask our referrers to only request RNA panel targets for the above cancers if they are genuinely needed at the time of requesting. For example, if you only need to know about *POLE* for an endometrial cancer, we ask that you do not also request an RNA panel (ostensibly for *NTRK1-3* status) automatically.

Of course, if you do need an RNA panel, please do not hesitate to include it on the request form.

We have no intention of reducing the volume of RNA panel testing for cases where it is genuinely needed. Examples of scenarios where an RNA panel is immediately required include:

- Cases where an oncologist has specifically requested *NTRK1-3* status;
- Patients who are running out of treatment options;
- Difficult to classify melanocytic neoplasms;
- Cases of carcinoma of unknown primary, or where origin from the prostate is suspected but not definite.

**Why is this change happening?**

As in all areas of the NHS, we are being asked to deliver the same amount of work (or more work) with less resource.

By implementing this change:

- We hope to divert resource from testing which is of limited clinical benefit to cases where results will immediately impact on patients. In this way, we hope to at least maintain turnaround times, and potentially improve them.
- We hope to free up capacity to be able take on work from new referrers.

We have decided to attempt to reduce the volume of RNA panel testing undertaken in the above tumour types because:

- RNA panel testing in most of these tumour types is undertaken largely to determine *NTRK1-3* status. Information about these genes only directly informs the management of patients who have no other suitable treatment options. This is not the case for the majority of the patients we

test, and many of these RNA panel results will never be used. This uses a lot of resource which could be used for other purposes.

- In most of these tumour types, clinically relevant findings by RNA panel are very rare. Huge numbers of cases will need to be tested to change management for one patient. While this was justifiable previously, it is difficult to defend against a backdrop of limited resource.

**What if a patient later needs an RNA panel, or if I realise that I should have requested an RNA panel?**

We will continue to extract and store RNA automatically from all referred cancer cases, irrespective of what has been requested. This means that if you tell us that you need an RNA panel after all, we can quickly start testing on the already extracted RNA and deliver a fast result to you.

If you decide that an RNA panel is needed after all:

- Send us an email at bwc.rglsolidcancer@nhs.net, providing us with the patient details and the targets required.
- You do not need to send us more tissue. We will use the RNA which we already have stored.

We are extremely grateful for your ongoing support in delivering our service. If you have any questions about this change, please do not hesitate to contact us at matthew.evans7@nhs.net and/or y.wallis@nhs.net

Best wishes

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