

IMMF358 Version 2

Immunology & Immunogenetics

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Dear Immunology Service Users,

Anti-neutrophil cytoplasmic antibody (ANCA) testing: notification of changes

Change in testing pathway: The Immunology & Immunogenetics laboratory at North Bristol Trust (NBT) is implementing a new testing algorithm for ANCA testing for the investigation of suspected ANCA-associated vasculitis (AAV).

From the date specified we will be switching to first line ANCA testing using anti-myeloperoxidase (MPO-ANCA) and anti-proteinase 3 (PR3-ANCA) antibody immunoassays (Thermofisher Scientific EliA IgG MPO^S & PR3^S). This will replace the previous indirect immunofluorescence first-line screening method using ethanol-fixed human neutrophil slides (Werfen NOVA Lite IgG).

The MPO^S and PR3^S antibody tests are high quality third generation immunoassays that are already well established in our laboratory and used as the current confirmatory test for positive ANCA indirect immunofluorescence as well as for monitoring patients with established AAV. From the date specified these immunoassays will become the first-line tests for all ANCA requests.

The use of first line MPO and PR3 immunoassays for ANCA testing will increase our level of laboratory automation and testing capacity, reduce our result turnaround times and provide a higher level of diagnostic accuracy compared to the current methods. The switch will also align us with the majority of other UK clinical immunology laboratories who are using first line automated immunoassays as well as with the Revised International Consensus Statement on ANCA testing¹.

In addition to the above changes, all new positive MPO-ANCA or PR3-ANCA results will also receive anti-glomerular basement membrane (GBM) IgG antibody testing by immunoassay.

Change to the site of testing: The location of testing is also changing for users at Royal United Hospitals (RUH) Bath and University Hospitals Bristol & Weston (UHBW); from the date of change all ANCA testing will be centralised to the Immunology & Immunogenetics laboratory at Southmead Hospital, Bristol.



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Will I notice any differences to my ANCA results? Yes, all ANCAs will now be reported as numerical results for MPO-ANCA and PR3-ANCA in IU/mL, irrespective of whether they are ANCA positive or negative. This was previously only the case for new, established or previously ANCA-positive patients. As a reminder the following reference intervals apply:

- **MPO Negative:** <3.5 IU/mL
- **MPO Equivocal:** 3.5 – 5.0 IU/mL
- **MPO Positive:** >5.0 IU/mL

- **PR3 Negative:** <2.0 IU/mL
- **PR3 Equivocal:** 2.0 – 3.0 IU/mL
- **PR3 Positive:** >3.0 IU/mL

In addition, we will also apply a clinical decision limit of **15 IU/mL** for both MPO and PR3 assays in line with local and national audit findings. Different interpretative comments are used for positive results above and below this limit which also align closely with published interval-specific likelihood ratios¹. We are planning to replace this cut-off with interval-specific likelihood ratio (IS-LR) reporting in the future.

Will ANCA testing by indirect immunofluorescence (IIF) still be available: for the time being, we will be retaining ANCA IIF as the confirmatory test for all new positive MPO-ANCA or PR3-ANCA results in line with the international consensus¹. The utility of this approach will be reviewed in the future.

Positive ANCA immunofluorescence in the context of negative MPO and PR3 antibodies is a non-specific and diagnostically ambiguous result. For this reason, we will no longer be providing ANCA IIF testing as a requestable first-line investigation. In the unlikely event that ANCA immunofluorescence is required as a first line investigation¹⁻² please contact the laboratory directly and we will consider testing on a case-by-case basis.

When? The new ANCA testing pathway will go live at NBT on **Monday 20th April 2026.**

Please feel free to contact me if you wish to discuss this matter further.

Kind regards

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1. Bossuyt, X., Cohen Tervaert, JW., Arimura, Y. et al. Revised 2017 international consensus on testing of ANCAs in granulomatosis with polyangiitis and microscopic polyangiitis. *Nat Rev Rheumatol* 13, 683–692 (2017).
2. Moiseev S et al. 2020 international consensus on ANCA testing beyond systemic vasculitis. *Autoimmun Rev.* 2020 Sep;19(9):102618.



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