

Neuromyelitis Optica UK Specialist Services

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Dear Non UK Users of the Oxford Neuroimmunology Service

**Change to Screening Strategy for suspected Neuromyelitis Optica Spectrum Disorders [NMOSD]:
Introduction of a fixed cell based AQP4 assay**

FOR patients not eligible for the UK nationally commissioned service

The Oxford Neuroimmunology service will change the testing strategy for screening patients suspected of suffering from NMOSD from March 1st 2017.

In order to comply with UKAS standard ISO 15189, we will change to a CE marked fixed cell based AQP4 assay for routine Aquaporin 4 testing. A recent multi-centre study assessing multiple platforms for the measurement of AQP4 antibodies found the Oxford live cell assay and the CE marked fixed cell based AQP4 assay highly comparable, each with approximately 97% accuracy (1. Waters et al 2016). We will continue however to blindly audit the sensitivities and specificities of these two tests relative to the clinical picture in a routine clinical setting.

Sample requirements will remain the same; a minimum of 1 ml of serum will be sufficient to perform the anti-Aquaporin 4 assay, paired CSF can be tested if available, although it may not add diagnostic value to the serum AQP4 test. Please see our website for detailed information on our assays and on how to send samples for testing to the Oxford Service. The AQP4 assay will be charged as on the website

(www.ouh.nhs.uk/immunology/neuroimmunology)

The original live cell CBA used by the Oxford Immunology laboratory to detect AQP4 antibodies will remain available for all users but must be explicitly requested as the default from March 1st will be the fixed cell CBA.

Finally, we are examining the cost of the AQP4 assay with a view to reducing the cost in the near future

Please do not hesitate to contact us if you have any queries

BL Ferry

Professor BL Ferry

Clinical Lead of Diagnostic Immunology

REFERENCES

Patrick Waters, Markus Reindl, Albert Saiz, Kathrin Schanda, Friederike Tuller, Vlastimil Kral, Petra Nytrova, Ondrej Sobek, Helle Hvilsted Nielsen, Torben Barington, Søren T Lillevang, Zsolt Illes, Kristin Rentzsch, Achim Berthele, Tímea Berki, Letizia Granieri, Antonio Bertolotto, Bruno Giometto, Luigi Zuliani, Dörte Hamann, E Daniëlle van Pelt, Rogier Hintzen, Romana Höftberger, Carme Costa, Manuel Comabella, Xavier Montalban, Mar Tintoré, Aksel Siva, Ayse Altintas, Günnur Deniz, Mark Woodhall, Jacqueline Palace, Friedemann Paul, Hans-Peter Hartung, Orhan Aktas, Sven Jarius, Brigitte Wildemann, Christian Vedeler, Anne Ruiz, M Isabel Leite, Peter Trillenber, Monika Probst, Sandra Saschenbrecker, Angela Vincent, Romain Marignier

Multicentre comparison of a diagnostic assay: aquaporin-4 antibodies in neuromyelitis optica. *J Neurol Neurosurg Psychiatry* 2016. **87**: 1005-1015

In this paper, Table 3 shows:

Accuracy of commercially available assay – performed by Euroimmun (EI)-ranged from 97.4- 97.9%	average = 97.5%
<i>Accuracy of commercially available assay- performed by NHS Oxford Lab. 100% concordant with EI</i>	<i>average = 97.5%</i>
Accuracy of Live assay – performed by diagnostic centres - ranged from 96.4 – 99.5% -	average = 97.9%
Accuracy of commercially available assay- performed by diagnostic centres- ranged from 88.6-97.4%	average = 94.6%