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**Immunology Laboratory**  
The Churchill Hospital  
Old Rd  
Headington  
Oxford  
OX3 7 LJ

Tel: 01865 225983

Fax: 01865 225990

Email: [Ross.Sadler@ouh.nhs.uk](mailto:Ross.Sadler@ouh.nhs.uk)

Web site : [ouh.nhs.uk/immunology](http://ouh.nhs.uk/immunology)

Dear Colleagues,

**Re: Change in measurement platform for the enumeration of lymphocyte subpopulations by flow cytometry**

Recently, due to tender procedure, the flow cytometric platform offered by Oxford Immunology has changed from Becton Dickinson to Beckmann Coulter. The measurement of lymphocyte sub populations is now to be performed using an Aquios – this is a CE- marked, random access, automated, 4-colour machine that will allow for more efficient testing of samples that arrive at the laboratory throughout the day.

A full verification (according to UKAS standards) of this instrument has been performed before implementation into routine service. This verification has allowed us to understanding the performance of the machine with respect to our current service and to identify any potential new limitations. Analysis of concordance between our existing analysers and the Aquios has shown there to be no overall bias between the systems giving us confidence ongoing monitoring of patients with HIV seropositivity will not be affected.

**Changes to service currently offered**

Implementation of this new platform has led to some changes to the service offered. We will be changing the acceptance time post venepuncture that blood samples can be analysed by from **48 hours to 39 hours**. A recent audit of all samples sent to the laboratory showed that out of 240 consecutive samples, 0% were outside of this new time frame.

The reportable ranges of the new analyser are also different to our existing procedure. This will be reviewed prospectively by the laboratory to ascertain the potential of reversion back to our original reporting procedure. Please find below, the new reporting ranges that we will be implementing.

New procedure (X10<sup>9</sup>/L)

Parameter	Reporting range
CD3+	0.06 – 4.70
CD3+CD4+	0.04 – 3.00
CD3+CD8+	0.05 – 1.60
CD3-CD19+	0.03 – 1.00
CD3-CD16/56+	0.02 – 1.00
Lymphocytes	0.08 – 6.50

The transition to this new platform will be multi-stage with samples requiring a full lymphocyte subset panel transitioning first to the Aquios. This first stage will commence from the 18<sup>th</sup> April 2017. The second stage will be for samples that require only T cell enumeration to move across and this will be occurring from the 2<sup>nd</sup> May 2017.

Please let me know if you have any queries regarding these changes

Yours sincerely

Dr Ross Sadler PhD FRCPATH

Clinical Lead of Laboratory Immunology