

April 3rd 2017

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

Tel: 01865 225983

Fax: 01865 225990

Email: Ross.Sadler@ouh.nhs.uk

Web site : ouh.nhs.uk/immunology

Dear Colleagues,

Re: Implementation of age specific reference ranges for serum free light chain analysis

As part of a wider study being performed within the Oxford immunology laboratory on the utility of serum light chain analysis in primary care and in line with UKAS verification of CE marked assays, we have analysed the possible significance of age specific reference ranges for free kappa, free lambda and kappa/lambda ratios.

This work analysed 4340 consecutive samples coming from primary care where the median age of this cohort was 67 (range 20-102). All patients with prior history of lymphoproliferative disease or active kidney disease were omitted. This work was performed on the standard platform used in Oxford – SPAlus analyser (The Binding Site) and FLITE assay (The Binding Site). Data was analysed by normality plotting to remove outliers and the 97.5th and 2.5th percentiles calculated.

This work highlighted that there were significant differences between age ranges and after discussions with our haematology department and The Binding Site we have decided to implement these age specific ranges on our laboratory information system and as part of our results reports. The changes are detailed below.

ORIGINAL REFERENCE RANGE:	KAPPA (mg/L)	3.30 – 19.40
	LAMBDA (mg/L)	5.71 – 26.30
	KAPPA/LAMBDA RATIO	0.26 – 1.65

NEW AGE SPECIFIC REFERENCE RANGES

KAPPA (mg/L)				
AGE	20-40	41-60	61-80	81+
RANGE	7.5-16.8	9.6-21.6	11.3-27.6	14.2-37.0
LAMBDA (mg/L)				
AGE	20-40	41-60	61-80	81+
RANGE	9.1-20.2	9.8-22.6	10.3-24.4	13.7-38.0
KAPPA/LAMBDA RATIO				
AGE	20-40	41-60	61-80	81+
RANGE	0.73-1.48	0.87-1.45	0.99-1.80	1.0-1.80

These changes will become active from the **4th of April 2017**.

We hope that this change will cause minimum disruption to your clinical work. Please do not hesitate to contact me if you have any queries

Yours sincerely

Dr Ross Sadler PhD FRCPath

Deputy Clinical Lead of Immunology Laboratory