Clinical Directorate of Laboratory Medicine, Beaumont Hospital			
Q-Pulse Doc No:	Memo68	**Date of Issue**	10th January 2018
CHANGE IN CHEMICAL PATHOLOGY ANALYSERS			

MEMORANDUM

Originating Department Chemical Pathology

Issued By: Dr. Shari Srinivasan

Issued To: All Laboratory Service Users

Subject: Change in Chemical Pathology Analysers

Details:

Dear Colleague,
As you may be aware, the Chemical Pathology Laboratory in Beaumont Hospital has introduced new analysers for routine chemistry and immunoassay testing. The table on the following pages provides a summary of changes to reporting ranges and units. Significant changes are highlighted in bold text. New reference ranges and interpretative comments (when required) will be appended to all test reports.

These reference ranges are effective immediately but sample requirements remain unchanged currently.

As time progresses, changes will be required to this table which will be updated in the 'Current Roche Reference Ranges' document available in the following locations:

- Chemical Pathology Internet Page: http://www.beaumont.ie/index.jsp?p=105&n=184
- Hospital Intranet Page: http://my.beaumont.ie/Pages/Departments/Pathlogy/Lab-user-guides-and-forms.aspx

The user manuals for the department will be updated with this information in due course.

As a result of this change in technology, please be aware that the department is no longer accredited for the tests listed above. However, internal validation of all assays has verified the clinical acceptability of these tests and accreditation will be sought for them at the next assessment by the Irish National Accreditation Board.

Please contact the laboratory on (852) 8391 with any clinical queries that may arise.

Kind regards,

Dr. Shari Srinivasan
Consultant Chemical Pathologist

Mr. Peter O'Leary
Laboratory Manager

NOTE: All memos issued from the Clinical Directorate of Laboratory Medicine must be recorded as active documents on Q-Pulse

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ROUTINE CHEMISTRY					
AAT	g/L	0.9 – 2.0	0.9 – 2.0		
ACE	IU/L	8 – 65	8 – 65		
ALBUMIN	**g/L**	**35 – 50**	**35 – 52**		
ALK	**U/L**	**30 – 130**	**F: 35 - 104** **M: 40 – 130**		
ALT	**U/L**	**F: 0 - 35** **M: 0 - 50**	**F: 0 - 33** **M: 0 - 41**		
AMYLASE	**U/L**	**22 – 80**	**28 - 100**		
AST	**U/L**	**F: 0 - 35** **M: 0 - 50**	**F: 0 - 32** **M: 0 - 40**		
(VITAMIN) B12	**ng/L**	**160 - 600**	**197 – 771**	**40% positive bias**	
B2MICROGLOBULIN	**mg/L**	**0.5 – 3.0**	**0.8 – 2.2**		
BILIRUBIN TOTAL	µmol/L	0 – 21	0 – 21		
BILIRUBIN DIRECT	µmol/L	0 – 3.4	0 – 5		
CALCIUM	**mmol/L**	**2.2 – 2.6**	**2.15 – 2.5**		
CERULOPLASMIN	**g/L**	**0.18 – 0.58**	**F: 0.16 – 0.45** **M: 0.15-0.3**		
CHOLESTEROL	mmol/L	0 – 5	0 – 5		
CK	**U/L**	**F: 0 - 170** **M: 0 – 210**	**F: 26 - 192** **M: 39 - 308**		
CL	mmol/L	95 – 108	95 – 108		
CREATININE	**µmol/L**	**F: 49 - 90** **M: 64 – 104**	**F: 45 - 84** **M: 59 – 104**	**10% positive bias**	
CRP	mg/L	0 - 5	0 – 5	**50% negative bias at high levels**	
CSF PROTEIN	mg/dL	15 – 45	15 – 45		

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CSF GLUCOSE	mmol/L		60% of serum		See interpretive comment
FE (IRON)	**µmol/L**	**F: 10.7 – 32.2 M: 12.5 – 32.0**	**5.8 – 34.5**		
FERRITIN	**ng/mL**	**F: 11 - 307 M: 24 - 336**	**F: 13 - 150 M: 30 – 400**	**30% negative bias**	
FOLATE	**µg/L**	**3.1 – 19.9**	**3.9 – 26.8**		
GGT	**U/L**	**F: 0 - 38 M: 0 – 55**	**F < 40 M < 60**		
GLUCOSE (fasting)	mmol/L	3.6 – 6.0	3.6 – 6.0		
HDL	mmol/L	1.0 – 1.7	>1.0		
IGA	g/L	0.7 – 4.0	0.7 – 4.0		
IGG	**g/L**	**6.0 – 15.0**	**7 – 16**		
IGM	g/L	0.5 – 2.3	0.4 – 2.3		
K	mmol/L	3.5 – 5.3	3.5 – 5.3		
LDH	**U/L**	**208 – 378**	**F: 135 - 214 M: 135 – 225**	**50% negative bias**	
LDL CHOLESTEROL	mmol/L	0 – 3	<3.0		Calculated Value
MG	**mmol/L**	**0.7 – 1.0**	**0.66 – 1.07**		
NA	mmol/L	133 - 146	133 – 146		
NT PRO BNP	pg/mL	Age related ranges	Age related ranges	No change	
NON HDLC	mmol/L	<3.8	<3.8		
PO4	**mmol/L**	**0.8 – 1.5**	**0.81 – 1.45**		
PROTEIN	g/L	60 - 80	60 – 80		
TCO2	mmol/L	22 - 29	22 – 29		

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TROPONIN		**<0.04 ug/L**	**<14ng/L**	***Change of assay to hsTNT * *New reporting units* *Do NOT compare old and new values***	**See interpretive comments**
TRANSFERRIN	**mg/dL**	**200 - 300**	**200-360**		
TRIGLYCERIDE	mmol/L	0 – 1.9	0– 2.0 (non-fasting) 0-1.7 (fasting)		
URATE	**µmol/L**	**F: 140 - 360** **M: 200 - 430**	**F: 143 - 339** **M: 202 - 416**		
UREA	**mmol/L**	**2.5 – 7.8**	**2.8 – 8.1**		
ENDOCRINOLOGY					
ACTH	pg/mL	7.2 – 63.3	7.2 – 63.3	No change	
CORTISOL (AM)	**nmol/L**	**185 - 624**	**166 – 507**		
DHEAS	µmol/L	Age and gender related ranges	Age and gender related ranges	No change	
ESTRADIOL	**pmol/L**	FEMALE Follicular: 99 - 448 Ovulation: 349 - 1590 Luteal:180 - 1068 Postmenopause: <147 MALE: <173	FEMALE Follicular:45.4 - 854 Ovulation: 151 - 1461 Luteal: 81.9 - 1251 Postmenopause: <18.4–505 MALE: 41.4 - 159:		See interpretive comment
FT4	**pmol/L**	**7 – 16**	**12 - 22**		
FSH	**mIU/L**	**FEMALE** **Follicular: 1 - 10** **Ovulation: 4- 23** **Luteal:1 - 8** **Postmenopause: 30 - 120** **MALE: 1 – 12**	**FEMALE** **Follicular: 3.5 – 12.5** **Ovulation: 4.7 – 21.5** **Luteal:1.7 – 7.7** **Postmenopause: 25.8 – 134.8** **MALE: 1.5 – 12.4**		See interpretive comment
INSULIN	mIU/L	2.6 – 24.9	2.6 – 24.9	No change	

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LH	**mIU/L**	**FEMALE** **Follicular: 2 - 12** **Ovulation: 15 - 100** **Luteal:1 - 13** **MALE: 1 – 9**	**FEMALE** **Follicular: 2.4 – 12.6** **Ovulation: 14 – 95.6** **Luteal: 1 – 11.4** **Postmenopause: 7.7 – 58.5** **MALE: 1.7 – 8.6**		See interpretive comment
PROGESTERONE	**nmol/L**	**FEMALE** **Follicular: 0.5 – 2.2** **Luteal: 6.4 – 79.5**	**FEMALE** **Follicular: 0.18 – 2.84** **Ovulation: 0.38 – 38.1** **Luteal: 5.82 – 75.9** **Postmenopause: <0.159 – 0.401** **MALE: <0.159 – 0.474**		See interpretive comment
PROLACTIN	**mIU/L**	**F: 70 - 566** **M: 55 - 278**	**F: 102 - 496** **M: 86 – 324**		
PTH	pg/mL	15 - 65	15 - 65	No change	
SHBG	nmol/L	Age and gender related ranges	Age and gender related ranges	No change	
TESTOSTERONE	nmol/L	Age and gender related ranges	Age and gender related ranges	No change	
TSH	**mIU/L**	**0.38 – 5.33**	**0.27 – 4.2**		
THERAPEUTIC DRUG MONITORING					
CARBAMAZEPINE	mg/L	4.0 - 12	4.0 - 12		
DIGOXIN	**µg/L**	**0.8 – 2.0**	**0.6 – 1.2**		
ETHANOL	mg%	<10	<10		
GENTAMYCIN	**µg/mL**	**0.3 - 12**	**Trough: 0.5 – 2.0** **Peak: 6-10**		
LITHIUM	**mmol/L**	**0.4 – 1.0**	**0.6 – 1.2**		
PARACETAMOL	**mg/L**	**<10**	**<5**		See Nomogram
PHENOBARBITONE	mg/L	10 - 40	10 -40	No change	
PHENYTOIN	mg/L	5 - 20	5 - 20	No change	

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SALICYLATE	**mg/L**	**<15**	**<10**		
THEOPHYLLINE	mg/L	10-20	10- 20	No change	
VALPROATE	mg/L	50- 100	50 -100	No change	
VANCOMYCIN	µg/mL	10-20	10 - 20	No change	