



# Reference Range Update: Complete Blood Cell (CBC) Count

*Offering our clients state-of-the-art testing is part of CPL's ongoing commitment to excellence.*

**Effective March 16, 2020**, Clinical Pathology Laboratories (CPL) will update reference ranges for the complete blood cell (CBC) count. This is the first of several planned CBC updates.

The new adult reference ranges reflect a Sonic Healthcare USA consensus which align with those of other large reference laboratories and hospital systems. The pediatric reference ranges align with those published by the American Association for Clinical Chemistry [Pediatric Reference Intervals, 7<sup>th</sup> Ed. (2011)] using similar Sysmex technology and a large pediatric population. In aggregate the new reference ranges are not expected to significantly shift the percentage of patients flagged as having abnormal values, however clinicians may see a shift of up to 5% in the number of patients with abnormal results for select components such as hemoglobin.

Over the course of the year, CPL will make additional changes to CBC reporting to more closely align with widely accepted laboratory standards. These include the following changes (implemented in the order listed):

- Reporting absolute WBC counts (e.g., absolute neutrophil count, absolute lymphocyte count, etc.) with appropriate reference ranges, in addition to the relative percentage WBC differential for all unit codes. This change will also include reporting absolute immature granulocyte count (IG#) in addition to the relative immature granulocyte percentage (IG%).

*Under most circumstances, clinically relevant WBC elevations and declines are defined by absolute counts, not by relative percentages. Current recommendations from the College of American Pathologists (CAP) and the Clinical and Laboratory Standards Institute (CLSI), recommend that absolute counts be the preferred method for reporting the WBC differential.*

- Discontinuing reporting of reference ranges for relative WBC differentials as they are superfluous.
- Retiring unit codes 1011, 1014, 1016, 1017 (these orderable codes currently provide absolute WBC counts for subsets of the WBC differential and will become redundant).

As a reminder, with the latest CBC instrumentation, automated WBC differentials are superior to manual WBC differentials in terms of accuracy, precision, turn-around-time, and clinical sensitivity in distinguishing normal from abnormal samples. The instruments have complex flagging systems which alert technologists to abnormal morphology that requires a manual slide review and replacement of the automated differential with a manual differential. After slide review, the technologist will note if criteria are met for pathologist slide review.

Please contact your Account Representative should you have any questions regarding the changes described above.

**See pages 2 - 11 for the full list of updated complete blood cell (CBC) count reference ranges**

*Thank you for supporting Clinical Pathology Laboratories*

# Reference Range Update: Complete Blood Cell (CBC) Count

**ORDER UNIT CODES:** 1000, 1001, 1005, 1007, 1010, 1011, 1013, 1014, 1015, 1016, 1017, 1025, 1030, 1041, 1045, 1047, 1050, 1051, 1365

REFERENCE RANGES:				
Test	Sex	Age	New Reference Range Low	New Reference Range High
WBC	M	14D	8.0	15.4
WBC	M	30D	7.8	15.9
WBC	M	60D	8.1	15.0
WBC	M	6M	6.5	13.3
WBC	M	1Y	6.0	13.5
WBC	M	5Y	5.1	13.4
WBC	M	11Y	4.3	11.0
WBC	M	17Y	3.8	9.8
WBC	M	>18Y	3.5	10.0
WBC	F	14D	8.2	14.6
WBC	F	30D	8.4	14.4
WBC	F	60D	7.1	14.7
WBC	F	6M	6.0	13.3
WBC	F	1Y	6.5	13.0
WBC	F	5Y	4.9	13.2
WBC	F	11Y	4.3	11.4
WBC	F	17Y	4.2	9.4
WBC	F	>18Y	3.5	10.0
RBC	M	14D	4.10	5.55
RBC	M	30D	3.16	4.63
RBC	M	60D	3.02	4.22
RBC	M	6M	3.43	4.80
RBC	M	1Y	4.03	5.07
RBC	M	5Y	3.89	4.97
RBC	M	11Y	3.96	5.03
RBC	M	17Y	4.03	5.29
RBC	M	>18Y	4.30	5.70
RBC	F	14D	4.12	5.74
RBC	F	30D	3.32	4.80
RBC	F	60D	2.93	3.87
RBC	F	6M	3.45	4.75
RBC	F	1Y	3.97	5.01
RBC	F	5Y	3.84	4.92
RBC	F	11Y	3.90	4.96
RBC	F	17Y	3.93	4.90
RBC	F	>18Y	3.80	5.20
HGB	M	14D	13.9	19.1
HGB	M	30D	10.0	15.3
HGB	M	60D	8.9	12.7
HGB	M	6M	9.6	12.4
HGB	M	1Y	10.1	12.5
HGB	M	5Y	10.2	12.7
HGB	M	11Y	10.7	13.4

# Reference Range Update: Complete Blood Cell (CBC) Count

**ORDER UNIT CODES:** 1000, 1001, 1005, 1007, 1010, 1011, 1013, 1014, 1015, 1016, 1017, 1025, 1030, 1041, 1045, 1047, 1050, 1051, 1365

REFERENCE RANGES:				
Test	Sex	Age	New Reference Range Low	New Reference Range High
HGB	M	17Y	11.0	14.5
HGB	M	>18Y	13.5	17.0
HGB	F	14D	13.4	20.0
HGB	F	30D	10.8	14.6
HGB	F	60D	9.2	11.4
HGB	F	6M	9.9	12.4
HGB	F	1Y	10.2	12.7
HGB	F	5Y	10.2	12.7
HGB	F	11Y	10.6	13.2
HGB	F	17Y	10.8	13.3
HGB	F	>18Y	12.0	16.0
HCT	M	14D	39.8	53.6
HCT	M	30D	30.5	45.0
HCT	M	60D	26.8	37.5
HCT	M	6M	28.6	37.2
HCT	M	1Y	30.8	37.8
HCT	M	5Y	31.0	37.7
HCT	M	11Y	32.2	39.8
HCT	M	17Y	33.9	43.5
HCT	M	>18Y	38.0	50.0
HCT	F	14D	39.6	57.2
HCT	F	30D	32.0	44.5
HCT	F	60D	27.7	35.1
HCT	F	6M	29.5	37.1
HCT	F	1Y	30.9	37.9
HCT	F	5Y	31.2	37.8
HCT	F	11Y	32.4	39.5
HCT	F	17Y	33.4	40.4
HCT	F	>18Y	35.0	46.0
MCV	M	14D	91.3	103.1
MCV	M	30D	89.4	99.7
MCV	M	60D	84.3	94.2
MCV	M	6M	74.1	87.5
MCV	M	1Y	69.5	81.7
MCV	M	5Y	71.3	84.0
MCV	M	11Y	74.4	86.1
MCV	M	17Y	76.7	89.2
MCV	M	>18Y	80.0	99.0
MCV	F	14D	92.7	106.4
MCV	F	30D	90.1	103.0
MCV	F	60D	83.4	96.4
MCV	F	6M	74.8	88.3
MCV	F	1Y	71.3	82.6

# Reference Range Update: Complete Blood Cell (CBC) Count

**ORDER UNIT CODES:** 1000, 1001, 1005, 1007, 1010, 1011, 1013, 1014, 1015, 1016, 1017, 1025, 1030, 1041, 1045, 1047, 1050, 1051, 1365

REFERENCE RANGES:				
Test	Sex	Age	New Reference Range Low	New Reference Range High
MCV	F	5Y	72.3	85.0
MCV	F	11Y	75.9	87.6
MCV	F	17Y	76.9	90.6
MCV	F	>18Y	80.0	99.0
MCH	M	14D	31.3	35.6
MCH	M	30D	29.9	34.1
MCH	M	60D	27.8	32.0
MCH	M	6M	24.4	28.9
MCH	M	1Y	22.7	27.2
MCH	M	5Y	23.7	28.3
MCH	M	11Y	24.9	29.2
MCH	M	17Y	25.2	30.2
MCH	M	>18Y	25.0	34.0
MCH	F	14D	31.1	35.9
MCH	F	30D	30.4	35.3
MCH	F	60D	28.0	32.5
MCH	F	6M	24.4	29.5
MCH	F	1Y	23.2	27.5
MCH	F	5Y	23.7	28.6
MCH	F	11Y	24.8	29.5
MCH	F	17Y	24.8	30.2
MCH	F	>18Y	25.0	34.0
MCHC	M	14D	33.0	35.7
MCHC	M	30D	32.7	35.1
MCHC	M	60D	32.3	34.8
MCHC	M	6M	31.9	34.4
MCHC	M	1Y	31.6	34.4
MCHC	M	5Y	32.0	34.7
MCHC	M	11Y	32.2	34.9
MCHC	M	17Y	31.8	34.8
MCHC	M	>18Y	31.0	36.0
MCHC	F	14D	33.4	35.4
MCHC	F	30D	33.2	35.0
MCHC	F	60D	32.5	34.9
MCHC	F	6M	32.1	34.4
MCHC	F	1Y	31.9	34.2
MCHC	F	5Y	31.8	34.6
MCHC	F	11Y	31.8	34.6
MCHC	F	17Y	31.5	34.2
MCHC	F	>18Y	31.0	36.0
RDW-CV	M	14D	14.8	17.0
RDW-CV	M	30D	14.3	16.8
RDW-CV	M	60D	13.8	16.1

# Reference Range Update: Complete Blood Cell (CBC) Count

**ORDER UNIT CODES:** 1000, 1001, 1005, 1007, 1010, 1011, 1013, 1014, 1015, 1016, 1017, 1025, 1030, 1041, 1045, 1047, 1050, 1051, 1365

REFERENCE RANGES:				
Test	Sex	Age	New Reference Range Low	New Reference Range High
RDW-CV	M	6M	12.4	15.3
RDW-CV	M	1Y	12.9	15.6
RDW-CV	M	5Y	12.5	14.9
RDW-CV	M	11Y	12.3	14.1
RDW-CV	M	17Y	12.4	14.5
RDW-CV	M	>18Y	11.5	15.0
RDW-CV	F	14D	14.6	17.3
RDW-CV	F	30D	14.4	16.2
RDW-CV	F	60D	13.6	15.8
RDW-CV	F	6M	12.2	14.3
RDW-CV	F	1Y	12.7	15.1
RDW-CV	F	5Y	12.4	14.9
RDW-CV	F	11Y	12.2	14.4
RDW-CV	F	17Y	12.3	14.6
RDW-CV	F	>18Y	11.5	15.0
PLT	M	14D	218	419
PLT	M	30D	248	586
PLT	M	60D	229	562
PLT	M	6M	244	529
PLT	M	1Y	206	445
PLT	M	5Y	202	403
PLT	M	11Y	206	369
PLT	M	17Y	175	332
PLT	M	>18Y	130	400
PLT	F	14D	144	449
PLT	F	30D	279	571
PLT	F	60D	331	597
PLT	F	6M	247	580
PLT	F	1Y	214	459
PLT	F	5Y	189	394
PLT	F	11Y	199	367
PLT	F	17Y	194	345
PLT	F	>18Y	130	400
MPV	M	14D	10.2	11.9
MPV	M	30D	10.1	12.1
MPV	M	60D	9.2	10.8
MPV	M	6M	8.9	10.6
MPV	M	1Y	8.7	10.5
MPV	M	5Y	9.0	10.9
MPV	M	11Y	9.2	11.4
MPV	M	17Y	9.6	11.8
MPV	M	>18Y	9.3	13.0
MPV	F	14D	10.4	12.0

# Reference Range Update: Complete Blood Cell (CBC) Count

**ORDER UNIT CODES:** 1000, 1001, 1005, 1007, 1010, 1011, 1013, 1014, 1015, 1016, 1017, 1025, 1030, 1041, 1045, 1047, 1050, 1051, 1365

REFERENCE RANGES:				
Test	Sex	Age	New Reference Range Low	New Reference Range High
MPV	F	30D	10.0	12.2
MPV	F	60D	9.4	11.1
MPV	F	6M	9.0	10.9
MPV	F	1Y	8.8	10.6
MPV	F	5Y	8.9	11.0
MPV	F	11Y	9.3	11.3
MPV	F	17Y	9.6	11.7
MPV	F	>18Y	9.3	13.0
Relative RETIC	M/F	3D	3.5	5.4
Relative RETIC	M/F	30D	1.1	2.4
Relative RETIC	M/F	60D	2.1	3.5
Relative RETIC	M/F	5M	1.6	2.7
Relative RETIC	M/F	1Y	1.0	1.8
Relative RETIC	M/F	5Y	0.8	1.5
Relative RETIC	M/F	11Y	1.0	1.9
Relative RETIC	M/F	17Y	0.9	1.5
Relative RETIC	M/F	>18Y	0.5	2.3
Absolute RETIC	M/F	3D	148	216
Absolute RETIC	M/F	30D	51	110
Absolute RETIC	M/F	60D	52	78
Absolute RETIC	M/F	5M	48	88
Absolute RETIC	M/F	1Y	44	111
Absolute RETIC	M/F	5Y	36	68
Absolute RETIC	M/F	11Y	42	70
Absolute RETIC	M/F	17Y	42	65
Absolute RETIC	M/F	>18Y	39	57
RETIC HE	M/F	5M	27.6	38.7
RETIC HE	M/F	1Y	28.7	35.7
RETIC HE	M/F	5Y	27.7	37.8
RETIC HE	M/F	11Y	32.4	37.6
RETIC HE	M/F	17Y	30.3	40.4
RETIC HE	M/F	150Y	28.2	36.6
Relative NRBC	M/F	3D	0.1	8.3
Relative NRBC	M/F	30D	0.0	0.0
Relative NRBC	M/F	60D	0.0	0.0
Relative NRBC	M/F	5M	0.0	0.0
Relative NRBC	M/F	1Y	0.0	0.0
Relative NRBC	M/F	5Y	0.0	0.0
Relative NRBC	M/F	11Y	0.0	0.0
Relative NRBC	M/F	17Y	0.0	0.0
Relative NRBC	M/F	>18Y	0.0	0.0
Relative NEUT	M	14D	20.2	46.2
Relative NEUT	M	30D	14.0	54.6

# Reference Range Update: Complete Blood Cell (CBC) Count

**ORDER UNIT CODES:** 1000, 1001, 1005, 1007, 1010, 1011, 1013, 1014, 1015, 1016, 1017, 1025, 1030, 1041, 1045, 1047, 1050, 1051, 1365

REFERENCE RANGES:				
Test	Sex	Age	New Reference Range Low	New Reference Range High
Relative NEUT	M	60D	10.2	48.7
Relative NEUT	M	6M	10.9	47.8
Relative NEUT	M	1Y	17.5	69.5
Relative NEUT	M	5Y	22.4	69.0
Relative NEUT	M	11Y	28.6	74.5
Relative NEUT	M	17Y	32.5	74.7
Relative NEUT	M	>18Y	40.0	75.0
Relative NEUT	F	14D	15.2	66.1
Relative NEUT	F	30D	10.6	57.3
Relative NEUT	F	60D	8.9	68.2
Relative NEUT	F	6M	14.1	76.0
Relative NEUT	F	1Y	16.9	74.0
Relative NEUT	F	5Y	22.4	69.0
Relative NEUT	F	11Y	29.8	71.4
Relative NEUT	F	17Y	39.0	73.6
Relative NEUT	F	>18Y	40.0	75.0
Absolute NEUT	M	14D	1.60	6.06
Absolute NEUT	M	30D	1.18	5.45
Absolute NEUT	M	60D	0.83	4.23
Absolute NEUT	M	6M	0.97	5.45
Absolute NEUT	M	1Y	1.19	7.21
Absolute NEUT	M	5Y	1.54	7.92
Absolute NEUT	M	11Y	1.63	7.55
Absolute NEUT	M	17Y	1.54	7.04
Absolute NEUT	M	>18Y	1.50	7.50
Absolute NEUT	F	14D	1.73	6.75
Absolute NEUT	F	30D	1.23	4.80
Absolute NEUT	F	60D	1.00	4.68
Absolute NEUT	F	6M	1.04	7.20
Absolute NEUT	F	1Y	1.27	7.18
Absolute NEUT	F	5Y	1.60	8.29
Absolute NEUT	F	11Y	1.64	7.87
Absolute NEUT	F	17Y	1.82	7.47
Absolute NEUT	F	>18Y	1.50	7.50
Relative LYMPH	M	14D	33.7	67.6
Relative LYMPH	M	30D	33.6	76.8
Relative LYMPH	M	60D	42.5	85.7
Relative LYMPH	M	6M	40.7	83.7
Relative LYMPH	M	1Y	26.0	79.6
Relative LYMPH	M	5Y	18.4	66.6
Relative LYMPH	M	11Y	15.5	56.6
Relative LYMPH	M	17Y	16.4	52.7
Relative LYMPH	M	>18Y	20.0	45.0

# Reference Range Update: Complete Blood Cell (CBC) Count

**ORDER UNIT CODES:** 1000, 1001, 1005, 1007, 1010, 1011, 1013, 1014, 1015, 1016, 1017, 1025, 1030, 1041, 1045, 1047, 1050, 1051, 1365

REFERENCE RANGES:				
Test	Sex	Age	New Reference Range Low	New Reference Range High
Relative LYMPH	F	14D	24.9	68.5
Relative LYMPH	F	30D	31.9	82.7
Relative LYMPH	F	60D	37.8	86.7
Relative LYMPH	F	6M	30.4	85.6
Relative LYMPH	F	1Y	27.4	79.9
Relative LYMPH	F	5Y	18.1	68.6
Relative LYMPH	F	11Y	16.7	57.8
Relative LYMPH	F	17Y	18.2	49.8
Relative LYMPH	F	>18Y	20.0	45.0
Absolute LYMPH	M	14D	2.07	7.53
Absolute LYMPH	M	30D	2.11	8.38
Absolute LYMPH	M	60D	2.47	7.95
Absolute LYMPH	M	6M	2.45	8.89
Absolute LYMPH	M	1Y	1.56	7.83
Absolute LYMPH	M	5Y	1.13	5.52
Absolute LYMPH	M	11Y	0.97	3.96
Absolute LYMPH	M	17Y	0.97	3.26
Absolute LYMPH	M	>18Y	0.80	4.00
Absolute LYMPH	F	14D	1.75	8.00
Absolute LYMPH	F	30D	2.42	8.20
Absolute LYMPH	F	60D	2.29	9.14
Absolute LYMPH	F	6M	2.14	8.99
Absolute LYMPH	F	1Y	1.52	8.09
Absolute LYMPH	F	5Y	1.25	5.77
Absolute LYMPH	F	11Y	1.16	4.28
Absolute LYMPH	F	17Y	1.16	3.33
Absolute LYMPH	F	>18Y	0.80	4.00
Relative MONO	M	14D	6.7	19.9
Relative MONO	M	30D	4.3	18.3
Relative MONO	M	60D	4.4	14.0
Relative MONO	M	6M	3.8	13.4
Relative MONO	M	1Y	4.4	13.4
Relative MONO	M	5Y	4.2	12.2
Relative MONO	M	11Y	4.2	12.3
Relative MONO	M	17Y	4.4	12.3
Relative MONO	M	>18Y	4.0	12.0
Relative MONO	F	14D	5.2	20.6
Relative MONO	F	30D	5.6	13.8
Relative MONO	F	60D	3.8	15.5
Relative MONO	F	6M	3.8	12.6
Relative MONO	F	1Y	3.8	12.8
Relative MONO	F	5Y	4.1	11.4
Relative MONO	F	11Y	4.2	11.3



# Reference Range Update: Complete Blood Cell (CBC) Count

**ORDER UNIT CODES:** 1000, 1001, 1005, 1007, 1010, 1011, 1013, 1014, 1015, 1016, 1017, 1025, 1030, 1041, 1045, 1047, 1050, 1051, 1365

REFERENCE RANGES:				
Test	Sex	Age	New Reference Range Low	New Reference Range High
Relative MONO	F	17Y	4.1	10.9
Relative MONO	F	>18Y	4.0	12.0
Absolute MONO	M	14D	0.52	1.77
Absolute MONO	M	30D	0.28	1.38
Absolute MONO	M	60D	0.28	1.05
Absolute MONO	M	6M	0.28	1.07
Absolute MONO	M	1Y	0.25	1.15
Absolute MONO	M	5Y	0.19	0.94
Absolute MONO	M	11Y	0.19	0.85
Absolute MONO	M	17Y	0.18	0.78
Absolute MONO	M	>18Y	0.40	1.00
Absolute MONO	F	14D	0.57	1.72
Absolute MONO	F	30D	0.42	1.21
Absolute MONO	F	60D	0.28	1.21
Absolute MONO	F	6M	0.24	1.17
Absolute MONO	F	1Y	0.26	1.08
Absolute MONO	F	5Y	0.24	0.92
Absolute MONO	F	11Y	0.19	0.81
Absolute MONO	F	17Y	0.19	0.72
Absolute MONO	F	>18Y	0.40	1.00
Relative EOS	M	14D	0.3	5.2
Relative EOS	M	30D	0.2	5.4
Relative EOS	M	60D	0.0	4.5
Relative EOS	M	6M	0.0	4.0
Relative EOS	M	1Y	0.0	3.7
Relative EOS	M	5Y	0.0	4.1
Relative EOS	M	11Y	0.0	4.7
Relative EOS	M	17Y	0.0	4.0
Relative EOS	M	>18Y	0.0	7.0
Relative EOS	F	14D	0.4	4.6
Relative EOS	F	30D	0.0	5.3
Relative EOS	F	60D	0.0	4.1
Relative EOS	F	6M	0.0	3.6
Relative EOS	F	1Y	0.0	3.2
Relative EOS	F	5Y	0.0	3.3
Relative EOS	F	11Y	0.0	4.0
Relative EOS	F	17Y	0.0	3.4
Relative EOS	F	>18Y	0.0	7.0
Absolute EOS	M	14D	0.12	0.66
Absolute EOS	M	30D	0.08	0.80
Absolute EOS	M	60D	0.05	0.57
Absolute EOS	M	6M	0.03	0.61
Absolute EOS	M	1Y	0.02	0.82

# Reference Range Update: Complete Blood Cell (CBC) Count

**ORDER UNIT CODES:** 1000, 1001, 1005, 1007, 1010, 1011, 1013, 1014, 1015, 1016, 1017, 1025, 1030, 1041, 1045, 1047, 1050, 1051, 1365

REFERENCE RANGES:				
Test	Sex	Age	New Reference Range Low	New Reference Range High
Absolute EOS	M	5Y	0.03	0.53
Absolute EOS	M	11Y	0.03	0.52
Absolute EOS	M	17Y	0.04	0.38
Absolute EOS	M	>18Y	0.00	0.50
Absolute EOS	F	14D	0.09	0.64
Absolute EOS	F	30D	0.06	0.75
Absolute EOS	F	60D	0.04	0.63
Absolute EOS	F	6M	0.02	0.74
Absolute EOS	F	1Y	0.02	0.58
Absolute EOS	F	5Y	0.03	0.46
Absolute EOS	F	11Y	0.03	0.47
Absolute EOS	F	17Y	0.02	0.32
Absolute EOS	F	>18Y	0.00	0.50
Relative BASO	M	14D	0.1	0.8
Relative BASO	M	30D	0.0	0.6
Relative BASO	M	60D	0.0	0.6
Relative BASO	M	6M	0.0	0.6
Relative BASO	M	1Y	0.0	0.6
Relative BASO	M	5Y	0.1	0.6
Relative BASO	M	11Y	0.0	0.7
Relative BASO	M	17Y	0.0	0.7
Relative BASO	M	>18Y	0.0	2.0
Relative BASO	F	14D	0.1	0.6
Relative BASO	F	30D	0.0	0.5
Relative BASO	F	60D	0.0	0.5
Relative BASO	F	6M	0.0	0.6
Relative BASO	F	1Y	0.0	0.6
Relative BASO	F	5Y	0.0	0.6
Relative BASO	F	11Y	0.0	0.6
Relative BASO	F	17Y	0.0	0.6
Relative BASO	F	>18Y	0.0	2.0
Absolute BASO	M	14D	0.02	0.11
Absolute BASO	M	30D	0.01	0.07
Absolute BASO	M	60D	0.01	0.07
Absolute BASO	M	6M	0.01	0.06
Absolute BASO	M	1Y	0.01	0.06
Absolute BASO	M	5Y	0.01	0.06
Absolute BASO	M	11Y	0.01	0.06
Absolute BASO	M	17Y	0.01	0.05
Absolute BASO	M	>18Y	0.00	0.20
Absolute BASO	F	14D	0.02	0.07
Absolute BASO	F	30D	0.01	0.06
Absolute BASO	F	60D	0.01	0.05

# Reference Range Update: Complete Blood Cell (CBC) Count

**ORDER UNIT CODES:** 1000, 1001, 1005, 1007, 1010, 1011, 1013, 1014, 1015, 1016, 1017, 1025, 1030, 1041, 1045, 1047, 1050, 1051, 1365

REFERENCE RANGES:				
Test	Sex	Age	New Reference Range Low	New Reference Range High
Absolute BASO	F	6M	0.01	0.07
Absolute BASO	F	1Y	0.01	0.06
Absolute BASO	F	5Y	0.01	0.06
Absolute BASO	F	11Y	0.01	0.05
Absolute BASO	F	17Y	0.01	0.05
Absolute BASO	F	>18Y	0.00	0.20
Relative IG	M/F	2D	0.0	1.7
Relative IG	M/F	14D	0.0	1.9
Relative IG	M/F	30D	0.0	1.3
Relative IG	M/F	2M	0.0	0.9
Relative IG	M/F	5M	0.0	0.5
Relative IG	M/F	1Y	0.0	0.9
Relative IG	M/F	5Y	0.0	0.8
Relative IG	M/F	11Y	0.0	0.3
Relative IG	M/F	17Y	0.0	0.3
Relative IG	M/F	>18Y	0.0	1.0
Absolute IG	M/F	2D	0.00	0.28
Absolute IG	M/F	14D	0.00	0.27
Absolute IG	M/F	30D	0.00	0.22
Absolute IG	M/F	2M	0.00	0.09
Absolute IG	M/F	5M	0.00	0.06
Absolute IG	M/F	1Y	0.00	0.14
Absolute IG	M/F	5Y	0.00	0.06
Absolute IG	M/F	11Y	0.00	0.04
Absolute IG	M/F	17Y	0.00	0.03
Absolute IG	M/F	>18Y	0.00	0.10