

## ECH Meditech HCIS CBC and Differential Reference Intervals

**Applicability** This document applies to all Central Zone ECH Meditech HCIS personnel of AHS Laboratory Services and laboratories administered under the Covenant Health Group and the Lamont Health Centre collectively referred to here as Laboratory Services.

**Purpose** This document states the reference intervals for Central Zone ECH Meditech HCIS Laboratory Complete Blood Count (CBC) and differential testing.

### Complete Blood Count (CBC)

Age	White Blood Cell Count (X10 <sup>9</sup> /L)	Red Blood Cell Count (X10 <sup>12</sup> /L)	Hemoglobin (g/L)	Hematocrit L/L	MCV (fl)	MCH (pg)	MCHC (g/L)	RDW	Platelet Count (X10 <sup>9</sup> /L)
0 d	9.0 - 33.0	3.9 - 5.5	135 - 195	0.42 - 0.60	98 - 118	26 - 35	320 - 360	0 - 15.5	140 - 450
1 - 6 d	9.4 - 34.0	4.0 - 6.6	145 - 225	0.45 - 0.67	95 - 121	26 - 35	320 - 360	0 - 15.5	140 - 450
7 - 13 d	5.0 - 21.0	3.9 - 6.3	135 - 215	0.42 - 0.66	88 - 126	26 - 35	320 - 360	0 - 15.5	140 - 450
14 d - <1 mo	5.0 - 20.0	3.6 - 6.2	125 - 205	0.39 - 0.63	86 - 124	26 - 35	320 - 360	0 - 15.5	140 - 450
1 mo - <2 mo	5.0 - 19.5	3.0 - 5.4	100 - 180	0.31 - 0.55	85 - 123	26 - 35	320 - 360	0 - 15.5	140 - 450
2 - <3 mo	5.0 - 19.5	2.7 - 4.9	90 - 140	0.28 - 0.42	77 - 115	26 - 35	320 - 360	0 - 15.5	140 - 450
3 - 5 mo	5.0 - 19.5	3.1 - 4.5	95 - 135	0.29 - 0.41	74 - 108	26 - 35	320 - 360	0 - 15.5	140 - 450
6 mo - 1yr	6.0 - 17.5	3.7 - 5.3	105 - 135	0.33 - 0.39	70 - 86	26 - 35	320 - 360	0 - 15.5	140 - 450
2 - 3 yr	6.0 - 17.0	3.9 - 5.3	115 - 135	0.34 - 0.40	75 - 87	26 - 35	320 - 360	0 - 15.5	140 - 450
4 - 5yr	5.5 - 15.5	3.9 - 5.3	115 - 135	0.34 - 0.40	75 - 87	26 - 35	320 - 360	0 - 15.5	140 - 450
6 - 7yr	5.0 - 14.5	4.0 - 5.2	115 - 155	0.35 - 0.45	77 - 95	26 - 35	320 - 360	0 - 15.5	140 - 450
8 - 11 yr	4.5 - 13.5	4.0 - 5.2	115 - 155	0.35 - 0.45	77 - 95	26 - 35	320 - 360	0 - 15.5	140 - 450
12 - 15 yr	4.5 - 13.5	F 4.1 - 5.1 M 4.5 - 5.3	F 120 - 160 M 130 - 170	F 0.36 - 0.46 M 0.37 - 0.49	F 78 - 100 M 78 - 98	26 - 35	320 - 360	0 - 15.5	140 - 450
16 - 17 yr	4.5 - 13.0	F 4.1 - 5.1 M 4.5 - 5.3	F 120 - 160 M 130 - 170	F 0.36 - 0.46 M 0.37 - 0.49	F 78 - 100 M 78 - 98	26 - 35	320 - 360	0 - 15.5	140 - 450
≥ 18 yr Adult	4.0 - 11.0	F 3.8 - 5.2 M 4.3 - 6.0	F 120 - 160 M 135 - 175	F 0.36 - 0.46 M 0.41 - 0.52	80 - 100	26 - 35	320 - 360	0 - 15.5	140 - 450

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Page 1 of 3

**Five Part Automated and Manual Differential (Absolute)**

Age	Neutrophils x10 <sup>9</sup> /L	Lymphocyte x10 <sup>9</sup> /L	Monocyte x10 <sup>9</sup> /L	Eosinophil x10 <sup>9</sup> /L	Basophil x10 <sup>9</sup> /L
0 day	6.0 - 26.0	2.0 - 11.0	0 - 3.5	0 - 2.0	0 - 0.4
1 - 6 day	5.0 - 21.0	2.0 - 11.5	0 - 3.5	0 - 2.0	0 - 0.4
7 - 13 days	1.5 - 10.0	2.0 - 17.0	0 - 1.8	0 - 1.7	0 - 0.4
14 d - <1 mo	1.0 - 9.5	2.0 - 17.0	0 - 1.8	0 - 1.7	0 - 0.4
1 - 5 months	1.0 - 9.0	2.5 - 16.5	0 - 1.0	0 - 0.7	0 - 0.3
6 - 11 months	1.0 - 8.5	4.0 - 13.5	0 - 1.0	0 - 0.7	0 - 0.3
1 year	1.5 - 8.5	4.0 - 10.5	0 - 1.0	0 - 0.7	0 - 0.3
2 - 3 years	1.5 - 8.5	3.0 - 9.5	0 - 1.0	0 - 0.7	0 - 0.3
4 - 5 years	1.5 - 8.5	2.0 - 8.0	0 - 1.0	0 - 0.7	0 - 0.3
6 - 7 years	1.5 - 8.0	1.5 - 7.0	0 - 1.0	0 - 0.7	0 - 0.3
8 - 9 years	1.5 - 8.0	1.5 - 6.8	0 - 1.0	0 - 0.7	0 - 0.3
10 - 15 years	1.8 - 8.0	1.5 - 6.5	0 - 1.0	0 - 0.7	0 - 0.3
16 - 17 years	1.8 - 8.0	1.2 - 5.2	0 - 1.0	0 - 0.7	0 - 0.3
≥18 years	1.8 - 7.5	1.0 - 4.5	0 - 1.1	0 - 0.7	0 - 0.3

**Three Part Automated Differential (Absolute)**

Age	Granulocytes x10 <sup>9</sup> /L	Lymphocyte x10 <sup>9</sup> /L	Monocyte x10 <sup>9</sup> /L
0 day	6.0 - 28.4	2.0 - 11.0	0 - 3.5
1 - 6 day	5.0 - 23.4	2.0 - 11.5	0 - 3.5
7 - 13 days	1.5 - 12.1	2.0 - 17.0	0 - 1.8
14 d - <1 mo	1.0 - 11.6	2.0 - 17.0	0 - 1.8
1 - 5 months	1.0 - 10.0	2.5 - 16.5	0 - 1.0
6 - 11 months	1.0 - 9.5	4.0 - 13.5	0 - 1.0
1 year	1.5 - 9.0	4.0 - 10.5	0 - 1.0
2 - 3 years	1.5 - 9.0	3.0 - 9.5	0 - 1.0
4 - 5 years	1.5 - 9.0	2.0 - 8.0	0 - 1.0
6 - 7 years	1.5 - 9.0	1.5 - 7.0	0 - 1.0
8 - 9 years	1.5 - 9.0	1.5 - 6.8	0 - 1.0
10 - 15 years	1.8 - 9.0	1.5 - 6.5	0 - 1.0
16 - 17 years	1.8 - 9.0	1.2 - 5.2	0 - 1.0
≥18 years	1.8 - 8.5	1.0 - 4.5	0 - 1.1

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Page 2 of 3

**Seven Part Automated Manual Differential (Absolute)**

Age	Neutrophil x10 <sup>9</sup> /L	Lymphocyte x10 <sup>9</sup> /L	Monocyte x10 <sup>9</sup> /L	Eosinophil x10 <sup>9</sup> /L	Basophil x10 <sup>9</sup> /L	Immature Granulocyte x10 <sup>9</sup> /L	NRBC x10 <sup>9</sup> /L
0 day	6.0 - 26.0	2.0 - 11.0	0 - 3.5	0 - 2.0	0 - 0.4	0 - 0.1	0
1 - 6 day	5.0 - 21.0	2.0 - 11.5	0 - 3.5	0 - 2.0	0 - 0.4	0 - 0.1	0
7 - 13 days	1.5 - 10.0	2.0 - 17.0	0 - 1.8	0 - 1.7	0 - 0.4	0 - 0.1	0
14 d - <1 mo	1.0 - 9.5	2.0 - 17.0	0 - 1.8	0 - 1.7	0 - 0.4	0 - 0.1	0
1 - 5 months	1.0 - 9.0	2.5 - 16.5	0 - 1.0	0 - 0.7	0 - 0.3	0 - 0.1	0
6 - 11 months	1.0 - 8.5	4.0 - 13.5	0 - 1.0	0 - 0.7	0 - 0.3	0 - 0.1	0
1 year	1.5 - 8.5	4.0 - 10.5	0 - 1.0	0 - 0.7	0 - 0.3	0 - 0.1	0
2 - 3 years	1.5 - 8.5	3.0 - 9.5	0 - 1.0	0 - 0.7	0 - 0.3	0 - 0.1	0
4 - 5 years	1.5 - 8.5	2.0 - 8.0	0 - 1.0	0 - 0.7	0 - 0.3	0 - 0.1	0
6 - 7 years	1.5 - 8.0	1.5 - 7.0	0 - 1.0	0 - 0.7	0 - 0.3	0 - 0.1	0
8 - 9 years	1.5 - 8.0	1.5 - 6.8	0 - 1.0	0 - 0.7	0 - 0.3	0 - 0.1	0
10 - 15 years	1.8 - 8.0	1.5 - 6.5	0 - 1.0	0 - 0.7	0 - 0.3	0 - 0.1	0
16 - 17 years	1.8 - 8.0	1.2 - 5.2	0 - 1.0	0 - 0.7	0 - 0.3	0 - 0.1	0
≥18 years	1.8 - 7.5	1.0 - 4.5	0 - 1.1	0 - 0.7	0 - 0.3	0 - 0.1	0

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Page 3 of 3