

LAB1748 Heme Profile with Automated Differential (CBCA)

BMC, CRH, LFH, HRK, OCH, FTT, FOX, FCC



Important Note

This test can be added on to a previously run GHGB if specimen meets the CBCA criteria.
This test can **NOT** be added on to a previously run BNP.

Performing Location(s)

BMC, CRH, LFH, HRK, OCH, FTT, FOX, FCC

Specimen Type

Whole Blood

Preferred Container

Lavender top tube

Minimum Volume

3.0 mL Whole blood

Multiple test can be performed from this volume.

For question please contact the lab at 547-3975

Transportation Needs

Deliver to the laboratory within 12 hours at room temperature

Storage Requirements

Refrigerate up to 24 hours

DO NOT FREEZE

Causes for Rejection

Mislabeled or unlabeled specimens

Less than 50% draw for vacutainer tubes

Clotted

Macroscopic clot detected with wooden sticks

Fibrin strands with platelet involvement on peripheral smear

Less than 50% draw for vacutainer tubes

Less than 250µL of sample for microtainer tubes

Collection in 6.0 mL pink or purple top vacutainer

Collection in any anticoagulant other than K2EDTA

> 24 hours refrigerated for CBC and/or differential

> 12 hours at room temp

> 24 hours refrigerated for reticulocytes

Grossly hemolyzed

Samples drawn above an IV line

Contaminated line draws

Reference Values

Parameter	Population	Reference Range	High Critical	Low Critical
WBC	Newborn - 1 month	9.0 - 30.0 x 10 ³ cells /uL	30.0 x 10 ³ cells /uL	< 2.0 x 10 ³ cells /uL
	1 month - 5 month	5.0 - 19.5 x 10 ³ cells /uL	25 x 10 ³ cells /uL	< 1.0 x 10 ³ cells /uL
	5 month - 2 years	6.0 - 17.5 x 10 ³ cells /uL		
	2 years - 6 years	5.0 - 15.5 x 10 ³ cells /uL		
	6 years - 12 years	4.5 - 13.5 x 10 ³ cells /uL		
	Greater than 12 years	3.7 - 10.6 x 10 ³ cells /uL		
RBC	Female (< 12 years)	4.10 - 5.10X10 ⁶ cells/uL		
	Female (> 12 years)	3.70 - 5.10X10 ⁶ cells/uL		
	Male (< 12 years)	4.50 - 5.90X10 ⁶ cells/uL		
	Male (> 12 years)	3.70 - 5.90X10 ⁶ cells/uL		
HGB	<1 month	13.0 - 19.0 g/dL		< 7.0 g/dL
	1 month - 5 month	11.0 - 17.0 g/dL		
	5 month - 2 years	11.0 - 14.0 g/dL		
	2 years - 6 years	11.0 - 13.0 g/dL		
	6 years - 12 years	11.0 - 15.0 g/dL		
	Female > 12 years	11.5 - 15.5 g/dL		
	Male > 12 years	11.5 - 18.0 g/dL		
HCT	<1 month	42.0 - 60.0%	60%	< 35%
	1 month - 5 month	33.0 - 55.0%		<21%
	5 month - 2 years	31.0 - 41.0%		
	2 years - 6 years	34.0 - 40.0%		
	6 years - 12 years	35.0 - 45.0%		
	Female > 12 years	34.0 - 46.0%		
	Male > 12 years	35.0 - 50.0%		
MCV	<1 month	98.0 - 118.0 fL		
	1 month - 5 month	91.0 - 111.0 fL		
	5 month - 2 years	68.0 - 84.0 fL		
	2 years - 6 years	75.0 - 87.0 fL		
	6 years - 12 years	77.0 - 95.0 fL		
	12 years	81.0 - 99.0 fL		
MCH	< 1 month	27.0 - 33.0 pg		
	1 month	27.0 - 33.5 pg		
MCHC	< 1 month	32.0 - 35.0 g/dL		
	1 month	31.5 - 35.5 g/dL		

RDW	All Populations	37.3 - 49.0 fL		
PLT	< 12 years	140 - 350 x 10 ³ cells/uL	1,000,000	< 20,000
	12 years	140 - 425 x 10 ³ cells/uL		
MPV	All Populations	8.0 - 12.0 fL		
IPF %	All Populations	1.2-8.6 %		
IPF #	All Populations	3.6-20 x 10 ³ cells/uL		

Parameter	Test Code	Population	% Count	Absolute Count
Neutrophils: Segmented	SEG	< 1 month	32.0-62.0	1600 - 6115 cells/uL
		1 month - 5 months	15.0 - 35.0	750 - 3452 cells/uL
		5 months - 2 years	13.0 - 33.0	650 - 3255 cells/uL
		2 years - 6 years	15.0 - 35.0	750 - 3452 cells/uL
		6 years - 12 years	32.0 - 54.0	1600 - 5326 cells/uL
		12 years	40.0 - 70.0	1500 - 7400 cells/uL
Neutrophils: Band	BAND	< 1 month	10.0 - 18.0	
		1 month - 5 months	7.0 - 13.0	
		5 months - 2 years	6.0 - 12.0	
		2 years - 12 years	5.0 - 11.0	
		12 years	0.0 - 8.0	

Lymphs: Normal	LYMP	<1 month	26.0 - 36.0	1235 - 2864 cells/uL
		1 month - 5 months	41.0 - 71.0	1948 - 5648 cells/uL
		5 months - 2 years	46.0 - 76.0	2185 - 6045 cells/uL
		2 years - 6 years	44.0 - 74.0	2090 - 5886 cells/uL
		6 years - 12 years	27.0 - 57.0	1283 - 4534 cells/uL
		12 years	12.0 - 50.0	950 - 3500 cells/uL
Lymphs: Reactive	LYMR	All Populations	0.0-6.0	
Monocytes	MONO	< 1 month	1.0 - 11.0	75 - 862 cells/uL
		1 month - 5 months	2.0 - 12.0	150 - 940 cells/uL
		5 months - 12 years	0.0 - 10.0	0 - 783 cells/uL
		12 years	2.0 - 14.0	150 - 940 cells/uL
Eosinophils	EOS	< 12 years	0.0 - 7.0	0 - 642 cells/uL
		>12 years	0 .0- 6.0	0 - 550 cells/uL
Basophils	BASO	All Populations	0.0-3.0	0 - 175 cells/uL
Immature Granulocytes	IG	All Populations	0.0 - 3.0	0 - 150 cells/uL
Blasts	BLAS	All Populations	0.0	0

Nucleated RBC's	NRBC	All Populations	0.0	0

Reflex Testing

The Heme Profile, Automated WBC Differential and RBC Morphology (CBCA) are reported directly from the analyzer and CPT 85025 is billed whenever a CBCA is ordered and the results received are within established limits (see criteria delineated below).

The Heme Profile and a manually performed WBC Differential (CBCM) is reported and billed (CPT 85027 and 85007) when the ordered.

Criteria used to determine whether a manual differential or slide review is performed	
Note: Criteria is based on the International Society for Laboratory Hematology (ISLH) consensus rules for reflexing automated differentials to a manual differential.	
Condition Noted	Action
Abnormal Cell Count (except as noted below)	No Smear Review or manual differential performed
All Neonates	Lab will perform and report a manual WBC differential
WBC >30,000 cells/uL	Lab will perform and report a manual WBC differential
Abnormal WBC flags (includes left shift, blast and/or atypical/variant lymphocytes)	Lab will perform and report a manual WBC differential
Automated Differential shows: 5% Basophils (or) >20% Eosinophils (or) >20% Monocytes (or) 5% IG	Lab will perform and report a manual WBC differential
The first time any of following conditions is noted: Platelet Count <100 or >1 million MCV <65 or >110 fl RDW-SD >65 fl	Lab will perform a smear review and note any abnormalities observed
Abnormal RBC Flags (includes NRBC flag)	Lab will perform a smear review and note any abnormalities observed
Abnormal Platelet Flags	Lab will perform a smear review and note any abnormalities observed

Available STAT

Yes

Methodology

Automated; flow cytometry

CPT Code

85025