Test Definition: CBC

Complete Blood Cell Count (CBC) with Differential, Blood

Reporting Title: CBC with Differential, B
Performing Location: Mayo Clinic Laboratories - Rochester Main Campus

Specimen Requirements:

Container/Tube: Lavender top (EDTA)
Specimen Volume: 3 mL
Collection Instructions: Send whole blood specimen in original tube. **Do not aliquot**.

Specimen Type	Temperature	Time	Special Container
Whole Blood EDTA	Refrigerated (preferred)	48 hours	
	Ambient	24 hours	

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
HGB	Hemoglobin	Numeric	g/dL	718-7
HCT	Hematocrit	Numeric	%	4544-3
RBC	Erythrocytes	Numeric	x10(12)/L	789-8
MCV	MCV	Numeric	fL	787-2
RDW	RDW	Numeric	%	788-0
WBC	Leukocytes	Numeric	x10(9)/L	6690-2
NEUAA	Neutrophils, Abs	Numeric	x10(9)/L	751-8
LYMAA	Lymphocytes, Abs	Numeric	x10(9)/L	731-0
MONAA	Monocytes, Abs	Numeric	x10(9)/L	742-7
EOSAA	Eosinophils, Abs	Numeric	x10(9)/L	711-2
BASAA	Basophils, Abs	Numeric	x10(9)/L	704-7
PLTC	Platelet Count	Numeric	x10(9)/L	777-3

LOINC® and CPT codes are provided by the performing laboratory.

Supplemental Report:

No

CPT Code Information:

85025
85007 (if appropriate)
85060 (if appropriate)

Reflex Tests:

Test Id	Reporting Name	CPT Units	CPT Code	Always Performed	Available Separately
DIFFR	Morphology Eval (special Smear)	1	85007	No	No

PINTP	Peripheral Smear Interpretation	1	85060	No	No

Result Codes for Reflex Tests:

Test ID	Result ID	Reporting Name	Type	Unit	LOINC®
DIFFR	LYMPH	Lymphocytes	Numeric	%	26478-8
DIFFR	MONOC	Monocytes	Numeric	%	26485-3
DIFFR	EOS	Eosinophils	Numeric	%	714-6
DIFFR	BASO	Basophils	Numeric	%	707-0
DIFFR	META	Metamyelocytes	Numeric	%	740-1
DIFFR	MYEL	Myelocytes	Numeric	%	749-2
DIFFR	PROMY	Promyelocytes	Numeric	%	783-1
DIFFR	UBLS	Blasts	Numeric	%	709-6
DIFFR	PLSM	Plasma Cells	Numeric	%	79426-3
DIFFR	NUCL	Nucleated RBC	Numeric	/100 WBC	19048-8
DIFFR	MANC	Absolute Neutrophil	Numeric	x10(9)/L	753-4
DIFFR	INT01	Interpretation	Alphanumeric		59466-3
DIFFR	REV96	Reviewed by:	Alphanumeric		18771-6
DIFFR	SEGBA	Neutrophilic Segs and Bands	Numeric	%	23761-0
DIFFR	UNID	Unclassified cells	Numeric	%	44097-4
DIFFR	SEGBD	Neutrophilic Segs and Bands	Numeric	%	23761-0
DIFFR	ALYM	Absolute Lymphocyte	Numeric	x10(9)/L	732-8
DIFFR	AMONO	Absolute Monocyte	Numeric	x10(9)/L	743-5
DIFFR	AEOS	Absolute Eosinophil	Numeric	x10(9)/L	712-0
DIFFR	ABASO	Absolute Basophil	Numeric	x10(9)/L	705-4
PINTP	71442	Participated in the Interpretation	Alphanumeric		No LOINC Needed
PINTP	71443	Report electronically signed by	Alphanumeric		19139-5
PINTP	71447	Interpretation	Alphanumeric		14869-2
PINTP	71832	Case Number	Alphanumeric		80398-1

Reference Values:

Red blood cell count (RBC)
Males:
0-14 days: 4.10-5.55 x 10(12)/L
15 days-4 weeks: 3.16-4.63 x 10(12)/L
5 weeks-7 weeks: 3.02-4.22 x 10(12)/L
8 weeks-5 months: 3.43-4.80 x 10(12)/L
6 months-23 months: 4.03-5.07 x 10(12)/L
24 months-35 months: 3.89-4.97 x 10(12)/L
3-5 years: 4.00-5.10 x 10(12)/L
6-10 years: 4.10-5.20 x 10(12)/L
11-14 years: 4.20-5.30 x 10(12)/L

15-17 years: 4.30-5.70 x 10(12)/L
> or =18 years: 4.35-5.65 x 10(12)/L

Females:
0-14 days: 4.12-5.74 x 10(12)/L
15 days-4 weeks: 3.32-4.80 x 10(12)/L
5 weeks-7 weeks: 2.93-3.87 x 10(12)/L
8 weeks-5 months: 3.45-4.75 x 10(12)/L
6 months-23 months: 3.97-5.01 x 10(12)/L
24 months-35 months: 3.84-4.92 x 10(12)/L
3-5 years: 4.00-5.10 x 10(12)/L
6-10 years: 4.10-5.20 x 10(12)/L
11-14 years: 4.10-5.10 x 10(12)/L
15-17 years: 3.80-5.00 x 10(12)/L
> or =18 years: 3.92-5.13 x 10(12)/L

Hemoglobin
Males:
0-14 days: 13.9-19.1 g/dL
15 days-4 weeks: 10.0-15.3 g/dL
5 weeks-7 weeks: 8.9-12.7 g/dL
8 weeks-5 months: 9.6-12.4 g/dL
6 months-23 months: 10.1-12.5 g/dL
24 months-35 months: 10.2-12.7 g/dL
3-5 years: 11.4-14.3 g/dL
6-8 years: 11.5-14.3 g/dL
9-10 years: 11.8-14.7 g/dL
11-14 years: 12.4-15.7 g/dL
15-17 years: 13.3-16.9 g/dL
> or =18 years: 13.2-16.6 g/dL

Females:
0-14 days: 13.4-20.0 g/dL
15 days-4 weeks: 10.8-14.6 g/dL
5 weeks-7 weeks: 9.2-11.4 g/dL
8 weeks-5 months: 9.9-12.4 g/dL
6 months-35 months: 10.2-12.7 g/dL
3-5 years: 11.4-14.3 g/dL
6-8 years: 11.5-14.3 g/dL
9-10 years: 11.8-14.7 g/dL
11-17 years: 11.9-14.8 g/dL
> or =18 years: 11.6-15.0 g/dL

Hematocrit

Males:
0-14 days: 39.8-53.6%
15 days-4 weeks: 30.5-45.0%
5 weeks-7 weeks: 26.8-37.5%
8 weeks-5 months: 28.6-37.2%
6 months-23 months: 30.8-37.8%
24 months-35 months: 31.0-37.7%
3-7 years: 34-42%
8-11 years: 35-43%
12-15 years: 38-47%
16-17 years: 40-50%
> or =18 years: 38.3-48.6%

Females:
0-14 days: 39.6-57.2%
15 days-4 weeks: 32.0-44.5%
5 weeks-7 weeks: 27.7-35.1%
8 weeks-5 months: 29.5-37.1%
6 months-23 months: 30.9-37.9%
24 months-35 months: 31.2-37.8%
3-7 years: 34-42%
8-17 years: 35-43%
> or =18 years: 35.5-44.9%

Mean corpuscular volume (MCV)
Males:
0-14 days: 91.3-103.1 fL
15 days-4 weeks: 89.4-99.7 fL
5 weeks-7 weeks: 84.3-94.2 fL
8 weeks-5 months: 74.1-87.5 fL
6 months-23 months: 69.5-81.7 fL
24 months-35 months: 71.3-84.0 fL
3-5 years: 77.2-89.5 fL
6-11 years: 77.8-91.1 fL
12-14 years: 79.9-93.0 fL
15-17 years: 82.5-98.0 fL
> or =18 years: 78.2-97.9 fL

Females:
0-14 days: 92.7-106.4 fL
15 days-4 weeks: 90.1-103.0 fL
5 weeks-7 weeks: 83.4-96.4 fL
8 weeks-5 months: 74.8-88.3 fL
6 months-23 months: 71.3-82.6 fL

24 months-35 months: 72.3-85.0 fL
3-5 years: 77.2-89.5 fL
6-11 years: 77.8-91.1 fL
12-14 years: 79.9-93.0 fL
15-17 years: 82.5-98.0 fL
> or =18 years: 78.2-97.9 fL

Red cell distribution width (RDW)
Males:
0-14 days: 14.8-17.0%
15 days-4 weeks: 14.3-16.8%
5 weeks-7 weeks: 13.8-16.1%
8 weeks-5 months: 12.4-15.3%
6 months-23 months: 12.9-15.6%
24 months-35 months: 12.5-14.9%
3-5 years: 11.3-13.4%
6-17 years: 11.4-13.5%
> or =18 years: 11.8-14.5%

Females:
0-14 days: 14.6-17.3%
15 days-4 weeks: 14.4-16.2%
5 weeks-7 weeks: 13.6-15.8%
8 weeks-5 months: 12.2-14.3%
6 months-23 months: 12.7-15.1%
24 months-35 months: 12.4-14.9%
3-5 years: 11.3-13.4%
6-17 years: 11.4-13.5%
> or =18 years: 12.2-16.1%

White blood cell count (WBC)
Males:
0-14 days: 8.0-15.4 x 10(9)/L
15 days-4 weeks: 7.8-15.9 x 10(9)/L
5 weeks-7 weeks: 8.1-15.0 x 10(9)/L
8 weeks-5 months: 6.5-13.3 x 10(9)/L
6 months-23 months: 6.0-13.5 x 10(9)/L
24 months-35 months: 5.1-13.4 x 10(9)/L
3-5 years: 4.4-12.9 x 10(9)/L
6-17 years: 3.8-10.4 x 10(9)/L
> or =18 years: 3.4-9.6 x 10(9)/L

Females:
0-14 days: 8.2-14.6 x 10(9)/L

15 days-4 weeks: 8.4-14.4 x 10(9)/L
5 weeks-7 weeks: 7.1-14.7 x 10(9)/L
8 weeks-5 months: 6.0-13.3 x 10(9)/L
6 months-23 months: 6.5-13.0 x 10(9)/L
24 months-35 months: 4.9-13.2 x 10(9)/L
3-5 years: 4.4-12.9 x 10(9)/L
6-17 years: 3.8-10.4 x 10(9)/L
> or =18 years: 3.4-9.6 x 10(9)/L

Platelet count
Males:
0-14 days: 218-419 x 10(9)/L
15 days-4 weeks: 248-586 x 10(9)/L
5 weeks-7 weeks: 229-562 x 10(9)/L
8 weeks-5 months: 244-529 x 10(9)/L
6 months-23 months: 206-445 x 10(9)/L
24 months-35 months: 202-403 x 10(9)/L
3-5 years: 187-445 x 10(9)/L
6-9 years: 187-400 x 10(9)/L
10-13 years: 177-381 x 10(9)/L
14-17 years: 139-320 x 10(9)/L
> or =18 years: 135-317 x 10(9)/L

Females:
0-14 days: 144-449 x 10(9)/L
15 days-4 weeks: 279-571 x 10(9)/L
5 weeks-7 weeks: 331-597 x 10(9)/L
8 weeks-5 months: 247-580 x 10(9)/L
6 months-23 months: 214-459 x 10(9)/L
24 months-35 months: 189-394 x 10(9)/L
3-5 years: 187-445 x 10(9)/L
6-9 years: 187-400 x 10(9)/L
10-13 years: 177-381 x 10(9)/L
14-17 years: 158-362 x 10(9)/L
> or =18 years: 157-371 x 10(9)/L

Neutrophils, absolute
Males:
0-14 days: 1.60-6.06 x 10(9)/L
15 days-4 weeks: 1.18-5.45 x 10(9)/L
5 weeks-7 weeks: 0.83-4.23 x 10(9)/L
8 weeks-5 months: 0.97-5.45 x 10(9)/L
6 months-23 months: 1.19-7.21 x 10(9)/L
24 months-35 months: 1.54-7.92 x 10(9)/L

3-5 years: 1.60-7.80 x 10(9)/L
6-16 years: 1.40-6.10 x 10(9)/L
17 years: 1.80-7.20 x 10(9)/L
> or =18 years: 1.56-6.45 x 10(9)/L

Females:
0-14 days: 1.73-6.75 x 10(9)/L
15 days-4 weeks: 1.23-4.80 x 10(9)/L
5 weeks-7 weeks: 1.00-4.68 x 10(9)/L
8 weeks-5 months: 1.04-7.20 x 10(9)/L
6 months-23 months: 1.27-7.18 x 10(9)/L
24 months-35 months: 1.60-8.29 x 10(9)/L
3-5 years: 1.60-7.80 x 10(9)/L
6-14 years: 1.50-6.50 x 10(9)/L
15-17 years: 2.00-7.40 x 10(9)/L
> or =18 years: 1.56-6.45 x 10(9)/L

Lymphocytes, absolute
Males:
0-14 days: 2.07-7.53 x 10(9)/L
15 days-4 weeks: 2.11-8.38 x 10(9)/L
5 weeks-7 weeks: 2.47-7.95 x 10(9)/L
8 weeks-5 months: 2.45-8.89 x 10(9)/L
6 months-23 months: 1.56-7.83 x 10(9)/L
24 months-35 months: 1.13-5.52 x 10(9)/L
3-5 years: 1.60-5.30 x 10(9)/L
6-11 years: 1.40-3.90 x 10(9)/L
12-17 years: 1.00-3.20 x 10(9)/L
> or =18 years: 0.95-3.07 x 10(9)/L

Females:
0-14 days: 1.75-8.00 x 10(9)/L
15 days-4 weeks: 2.42-8.20 x 10(9)/L
5 weeks-7 weeks: 2.29-9.14 x 10(9)/L
8 weeks-5 months: 2.14-8.99 x 10(9)/L
6 months-23 months: 1.52-8.09 x 10(9)/L
24 months-35 months: 1.25-5.77 x 10(9)/L
3-5 years: 1.60-5.30 x 10(9)/L
6-11 years: 1.40-3.90 x 10(9)/L
12-17 years: 1.00-3.20 x 10(9)/L
> or =18 years: 0.95-3.07 x 10(9)/L

Monocytes, absolute
Males:

0-14 days: 0.52-1.77 x 10(9)/L
15 days-4 weeks: 0.28-1.38 x 10(9)/L
5 weeks-7 weeks: 0.28-1.05 x 10(9)/L
8 weeks-5 months: 0.28-1.07 x 10(9)/L
6 months-23 months: 0.25-1.15 x 10(9)/L
24 months-35 months: 0.19-0.94 x 10(9)/L
3-5 years: 0.30-0.90 x 10(9)/L
6-17 years: 0.20-0.80 x 10(9)/L
> or =18 years: 0.26-0.81 x 10(9)/L

Females:
0-14 days: 0.57-1.72 x 10(9)/L
15 days-4 weeks: 0.42-1.21 x 10(9)/L
5 weeks-7 weeks: 0.28-1.21 x 10(9)/L
8 weeks-5 months: 0.24-1.17 x 10(9)/L
6 months-23 months: 0.26-1.08 x 10(9)/L
24 months-35 months: 0.24-0.92 x 10(9)/L
3-5 years: 0.30-0.90 x 10(9)/L
6-17 years: 0.20-0.80 x 10(9)/L
> or =18 years: 0.26-0.81 x 10(9)/L

Eosinophils, absolute
Males:
0-14 days: 0.12-0.66 x 10(9)/L
15 days-4 weeks: 0.08-0.80 x 10(9)/L
5 weeks-7 weeks: 0.05-0.57 x 10(9)/L
8 weeks-5 months: 0.03-0.61 x 10(9)/L
6 months-23 months: 0.02-0.82 x 10(9)/L
24 months-35 months: 0.03-0.53 x 10(9)/L
3-11 years: 0.00-0.50 x 10(9)/L
12-17 years: 0.10-0.20 x 10(9)/L
> or =18 years: 0.03-0.48 x 10(9)/L

Females:
0-14 days: 0.09-0.64 x 10(9)/L
15 days-4 weeks: 0.06-0.75 x 10(9)/L
5 weeks-7 weeks: 0.04-0.63 x 10(9)/L
8 weeks-5 months: 0.02-0.74 x 10(9)/L
6 months-23 months: 0.02-0.58 x 10(9)/L
24 months-35 months: 0.03-0.46 x 10(9)/L
3-11 years: 0.00-0.50 x 10(9)/L
12-17 years: 0.10-0.20 x 10(9)/L
> or =18 years: 0.03-0.48 x 10(9)/L

Basophils, absolute
Males:
0-14 days: 0.02-0.11 x 10(9)/L
15 days-7 weeks: 0.01-0.07 x 10(9)/L
8 weeks-35 months: 0.01-0.06 x 10(9)/L
3-17 years: 0.00-0.10 x 10(9)/L
> or =18 years: 0.01-0.08 x 10(9)/L

Females:
0-14 days: 0.02-0.07 x 10(9)/L
15 days-4 weeks: 0.01-0.06 x 10(9)/L
5 weeks-7 weeks: 0.01-0.05 x 10(9)/L
8 weeks-5 months: 0.01-0.07 x 10(9)/L
6 months-35 months: 0.01-0.06 x 10(9)/L
3-17 years: 0.00-0.10 x 10(9)/L
> or =18 years: 0.01-0.08 x 10(9)/L