

**Rule Category**

AMGL OP

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NIL

Complete Blood Count (CBC)

Guidelines

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HEALTHCARE MANAGEMENT

CBC, is the blood test to check overall health and range of conditions including (anemia, infection, leukemia) is major routine investigation

CBC TEST Measure the following:

1. Red blood cell (oxygen carrier)
2. White blood cell (fight infection)
3. Hemoglobin (oxygen Carrey protein in red blood cell)
4. Hematocrit (amount of red blood cell in blood)
5. Platelet (blood clotting)

Indication:

1. Anemia (Hematolytic and Acquired)
2. Infection
3. Leukemia
4. Patient on medication and radiation

Anemia:

Symptoms

Depends on the type of anemia and severity

1. Fatigue
2. Irregular heart beat
3. Weaknaess
4. Shortness of breath
5. Dizziness

Lab Findings:

Low HB, low MCV, Low MCH, low MCHC

(approval every month to check medication effectiveness)

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CBC

Leukemia:

Symptoms:

1. Fatigue is not improving by rest
2. Recurrent infection
3. Fever
4. Lymphadenopathy
5. Weightloss
6. Breathlessness

Lab Findings:

Low HB, Low WBCS, low HCT, LOW MCV ,
LOW neutrophil, High platelet, High RDW

Approval

(every month if patient on medication,
on chemotherapy after every session, if patient admitted every day)

Infection

Symptoms:

1. Fever
2. Sorethroat
3. Upper respiratory tract infection
4. Body pain & weakness
5. Abdominal pain
6. Arthritis

Lab Findings:

In case of infection we find

High WBCS

Indicated one time

If patient is not improving and still symptomatic we
can approve after 1 week

CBC normal range:

Red blood cell count

Male: 4.35 trillion to 5.65 trillion cells/L

Female: 3.92 trillion to 5.13 trillion cells/L

Increase: can be a sign of: Dehydration. Heart disease.
Polycythemia vera, a bone marrow disease.

Decrease: Anemias

Hemoglobin

Male: 13.2 to 16.6 grams/dL (132 to 166 grams/L)

Female: 11.6 to 15 grams/dL (116 to 150 grams/L)

Increase: Bone marrow disease that causes abnormal
increase in red blood cells (polycythemia vera)
Congenital heart disease.

Decrease: Aplastic anemia. Cancer.

Certain medications, such as antiretroviral drugs for
HIV infection and chemotherapy drugs for cancer and
other conditions

Hematocrit

Male: 38.3% to 48.6%

Female: 35.5% to 44.9%

Increase: Polycythemia vera, Congenital heart disease,
Exposure to high altitude, Failure of the right side of
the heart, Low levels of oxygen in the blood, Scarring or
thickening of the lungs.

Decrease: infection, leukemia or lymphoma. Vitamin or
mineral deficiencies

White blood cell count

3.4 billion to 9.6 billion cells/L

Increase: Infection, Reaction to a medicine, bone
marrow disease, immune system issue, Sudden stress
such as hard exercise, Smoking.

Decrease: cancer treatment, like radiotherapy, antipsy-
chotic medicines, medicine for an overactive thyroid,
some cancers, like leukemia, infections such as HIV or
hepatitis, autoimmune disorders, like rheumatoid
arthritis.

Platelet count

Male: 135 billion to 317 billion/L

Female: 157 billion to 371 billion/L

Increase: can be a sign of: Dehydration. Heart disease.
Polycythemia vera, a bone marrow disease.

Decrease: inherited condition, Vit-B12 deficiency,
protozoa infection,

CBC

Red blood cell count

CPT :85025. Frequency: depends on the condition Ex: Severe hemorrhage may requires a CBC every hour and general check up requires CBC every year

Reference

1. Complete blood count (CBC) (2023) Mayo Clinic. Mayo Foundation for Medical Education and Research. Available at: <https://www.mayoclinic.org/tests-procedures/complete-blood-count/about/pac-20384919> (Accessed: March 31, 2023).