Complete Blood Count

The Complete Blood Count (CBC) is a commonly ordered laboratory test, providing an extremely useful survey of the cellular components of blood. The three main cell lines of blood are red cells, white cells, and platelets. In a healthy person, all three-cell lines are produced predominantly in the bone marrow.

A complete outline of the CBC and its abnormalities is not possible, but brief tabulation is provided below. Refer to the Medical Underwriting Manual for additional details about each item (for example, thrombocytopenia vs. thrombocytosis) and for ranges of normal. Normal ranges vary with age, gender and ethnicity. They also vary between testing laboratories.

The CBC is often ordered as a screening test in apparently healthy patients (including pregnant women and children) as part of routine health maintenance. The test is so useful that it is also part of the initial evaluation of most acute or chronic illnesses, especially trauma, infectious processes, malignancies, and bleeding and clotting events.

Each factor is considered individually as well as the CBC in its entirety. One or more factors may be abnormal in acute illness (such as acute infection or trauma) that resolve upon recovery. In such cases, the underwriting process may continue. Counts that persist (or worsen) outside the normal range are postponed for a definitive diagnosis as to the cause. If two or more cell lines are affected, it is a worrisome clue to intrinsic bone marrow disease, such as aplastic anemia or myelodysplasia.

On a final note, whole blood does not travel well through the mail; the cells break up so the counts are incorrect. All counts are affected including the white count, differential, indices, and platelet count. The only component of the whole blood sent through the mail that is reliable is the hemoglobin. If follow-up counts are needed for risk assessment, they should be ordered by the client's treating physician and done in the local facility. It is advised not to order the insurance laboratory to perform platelet counts or white counts.

Your Success Matters.

{Name
Phone Number
E-mail Address
Website Address}

Prudential

Cell line	Test	High	Low	Comments
Red (aka erythrocyte) cells contain hemoglobin which carries oxygen.	Hemoglobin (Hgb) and hematocrit (Hct)	Polycythemia: reactive vs vera.	Anemia	Any anemia is further classified as macrocytic, microcytic, or normocytic based on red cell indices (see MCV).
	Retic count	A rise indicates active production of red cells by the bone marrow: hemolysis, replacement of iron or vitamin in deficient patients.	Bone marrow failure due to intrinsic disease or lack of building blocks such as iron.	Reticulocytes are immature red cells.
	Mean corpuscular volume (MCV)	Macrocytosis: folate and/or B12 deficiency, drug effects, bone marrow disease, alcohol	Microcytosis: iron deficiency, thalassemia, lead toxicity	Combinations (such as alcohol abuse and iron deficiency) are common and confuse the assessment of red cell indices such as MCV.
White (aka leukocyte) cells fight infection.	Total count	Leukocytosis: infection, stress, leukemia, inflammation, steroids	Leukopenia: bone marrow disease, viral infection, malnutrition, normal variant, Hypersplenism.	
	Differential - Each cell line is reported as a % of the total.			"Left shift" (meaning a shift towards a high neutrophil count and a low lymph count) is a sign of infection, stress, or leukemia.
	Neutrophil	Neutrophilia: infection, stress, leukemia, **steroids inflammations**	Neutropenia: bone marrow disease, viral infection, **normal variant**.	"Segs" or segmented cells are mature neutrophils. "Stabs" are immature.
	Lymphocytes	Lymphocytosis: infection, leukemia	Lymphopenia: bone marrow disease, malnutrition, viral infection, normal variant.	“Atypical” lymphocytes are seen in infections like mononucleosis or in leukemia
	Eosinophil	Eosinophilia: parasites, drug reaction, allergy	NA	
	Monocyte	Monocytosis: rare	NA	
	Myelocyte	Even one of these immature cells is significant.	NA	The appearance of any immature cell is evidence of a "left shift".
Platelets (aka thrombocyte) participate in clotting.		Thrombocytosis, thrombocythemia: stress, bone marrow disease (such as essential thrombocytosis), asplenia.	Thrombocytopenia: viral infection, ITP, TTP, bone marrow disease, hypersplenism	"Clumping" may lead to a falsely low count. Giants and megakaryocytes are immature platelets and may be a sign of stress or bone marrow disease.

To get an idea of how a client with a history of abnormal Complete Blood Counts would be viewed in the underwriting process, please feel free to use the attached Ask “Rx” pert underwriter for an informal quote.

Complete Blood Counts (CBC) Ask "Rx" pert underwriter
(ask our experts)

Producer _____ Phone _____ Fax _____

Client _____ Age/DOB _____ Sex _____

If your client has an abnormal CBC, please answer the following:

1. What is the diagnosis? _____
2. Please list date when first diagnosed: _____
3. Is your client on any medications?
   - ☐ yes, please give details including vitamins and iron _____
   - ☐ no
4. What are the following measurements?

   WBC _____ HCT _____

   Platelet count _____ Hb _____

   MCV _____
5. Has your client smoke cigarettes in the last 12 months?
   - ☐ yes
   - ☐ no
6. Please describe your client's alcohol consumption.

   _____
7. Please check if your client has had any of the following:
   - ☐ leukemia
   - ☐ myelodysplasia
   - ☐ aplastic anemia
   - ☐ ulcer disease
   - ☐ other anemia
   - ☐ chronic infection
   - ☐ chronic inflammatory disease
   - ☐ splenectomy
8. Does your client have any other major health problems (ex: cancer, etc.)?
   - ☐ yes, please give details _____
   - ☐ no

After reading the Rx for Success on Complete Blood Counts (CBC), please feel free to use this Ask "Rx" pert underwriter for an informal quote.