Understanding Your Lab Test Results

When you have cancer, you will probably need regular lab, imaging, or other tests. Blood tests are done to help watch your body's response to treatment. They can show small changes before problems get serious. Keeping track of your lab results lets your doctor take action as soon as your blood counts change to help prevent many cancer-related problems and cancer treatment side effects. The two most common types of lab tests are the **complete blood count (CBC)** and the **chemistry panel** or **metabolic profile.**

or Getting your lab test results

Sometimes, you might see your lab test results before you have a chance talk about what they mean with your health care team. This can cause worry, especially if the results are unclear or seem to show something abnormal. Talking to the health care provider who is ordering the tests ahead of time might help. Here are some things you might ask about:

- What results you might expect, where you can get them, and when they might be available
- What a normal or abnormal result is and what it might mean for you
- When and how they will contact you to discuss your results
- Who to call if you see results first and have concerns about them

Complete blood count (CBC)

The most common lab test that you'll have done during treatment is called a complete blood count, or CBC. Blood is made up of water, proteins, nutrients, and living cells. A CBC tells your cancer care team about the cells in your blood. It measures 3 basic types of blood cells:

- Red blood cells
- White blood cells
- Platelets

Each of these cells has a special purpose. And each can be harmed by cancer and cancer treatments.

Red blood cells (RBCs)

RBCs carry oxygen to and carbon dioxide away from the cells in your body. The normal range for RBCs is between 4.2 and 6.1 million/mcL (4.2-5.4 million/mcL for women and 4.7-6.1 million/mcL for men).

The CBC measures red blood cells in many ways. On your lab report, you might also see values for:

- **Hemoglobin (Hgb)**, the part of each RBC that carries iron (the normal range is 12-18 g/dL)
- **Hematocrit (Hct)**, the percent of RBCs in the blood (the normal range is 37-52%)

When the Hgb and Hct values fall too low, it's called anemia[1]. When you have anemia, your body is not able to get enough oxygen to all of your cells. This can cause a fast heart beat, tiredness (fatigue), trouble breathing, and other symptoms.

White blood cells (WBCs)

WBCs fight infection[2]. There are many types of white blood cells and each fights infection in a special way.

The most important infection-fighting WBC is the**neutrophil**. The number doctors look at is called your **absoluteneutrophil count** (ANC). For a healthy person, the normal range for an ANC is between 2,500 and 6,000.

The ANC is found by d your

RBC (red blood cells)	x 1,000,000/mm^3	4.2–6.1	Number of RBCs
Hgb (hemoglobin)	g/dL	12–18	Measure of RBCs, which carry oxygen and carbon dioxide
Hct (hematocrit)	%	37–52	Percentage of blood made up of RBCs
Plt (platelets)	x 1,000/mm^3	150–450	Number of platelets. This number helps show risk of bleeding

RBC (red blood cells)	4.4 x 1,000,000/mm^3	4.2–6.1	4.4M/mm^3 or 4,400,000/ mm^3 4.4M/µL or 4,400,000/µL
Hgb (hemoglobin)	9 g/dL (L)	12–18	
Hct (hematocrit)	28% (L)	37–52	
Plt (platelets)	178 x 1000/mm^3	150–450	178K/mm^3 or 178,000/mm^3 178K/µL or 178,000/µL

These number ranges vary somewhat among labs.

Results that are high or low might have the letter (H) or (L) after the number, or may be printed to the side or in a different column to call attention to the abnormal result.

Again, getting a copy of your lab results lets you compare your numbers to the normal ranges and makes it easier to ask questions about the results and what they mean.

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/side-effects/low-blood-counts/anemia.html
2. www.cancer.org/cancer/managing-cancer/side-effects/low-blood-counts/infections.html
3. www.cancer.org/cancer/managing-cancer/side-effects/low-blood-counts/neutropenia.html
4. www.cancer.org/cancer/managing-cancer/side-effects/low-blood-counts/bleeding.html
5. www.cancer.org/cancer/managing-cancer/side-effects/eating-problems/nausea-

and-vomiting.html
6. www.cancer.org/cancer/managing-cancer/side-effects/stool-or-urine-changes/diarrhea.html
7. www.govinfo.gov/content/pkg/FR-2020-05-01/pdf/2020-07419.pdf

References

Department of Health and Human Services Office of the Secretary. 21st Century Cures Act: Interoperability, Information Blocking, and the ONC Health IT Certification Program. 2020. Accessed at https://www.govinfo.gov/content/pkg/FR-2020-05-01/pdf/2020-07419.pdf[8] on October 18, 2021.

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