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Red Blood Cell Transfusion Thresholds

A Hematology-Oncology Patient's Guide

This handout explains the changes being made to the standard blood transfusion guidelines for inpatients at the Fred Hutch Cancer Center and University of Washington Medical Center. The material is meant to be a supplement to the discussions you will have with your treatment team.

What are red blood cells?

Red blood cells (RBC) deliver oxygen from the lungs to all the organs and tissues in your body. Red blood cells are usually measured in two different ways:

- **Hemoglobin (Hgb)** – This measures the amount of oxygen your red blood cells can carry. This measurement varies in individuals but a normal range is usually between 11.5 – 15.5 g/dL.
- **Hematocrit (Hct)** – This measures how much of your blood is made up of red blood cells. This also varies in individuals, but a normal range is usually between 36% and 45%.

Your body is constantly working to make these important cells. However, chemotherapy and radiation therapy can slow down the body's ability to do this. When the body cannot make enough of these cells on its own, you may need a blood transfusion.

What are the indications for a red blood cell transfusion?

Common reasons for red blood cell transfusions are:

- **Fatigue**: If your red blood count is low (anemic), it may cause you to feel more tired.
- **Bleeding**: Red blood cell transfusions are a fast way to replace the red blood cells lost during bleeding.

When will I get a red blood cell transfusion?

Your clinical treatment team will work with you to set a hemoglobin or hematocrit threshold. Your team will often recommend that you receive a transfusion when you drop below these thresholds. However, it is important to note that these thresholds are just a guide and can be adjusted depending on your individual needs.

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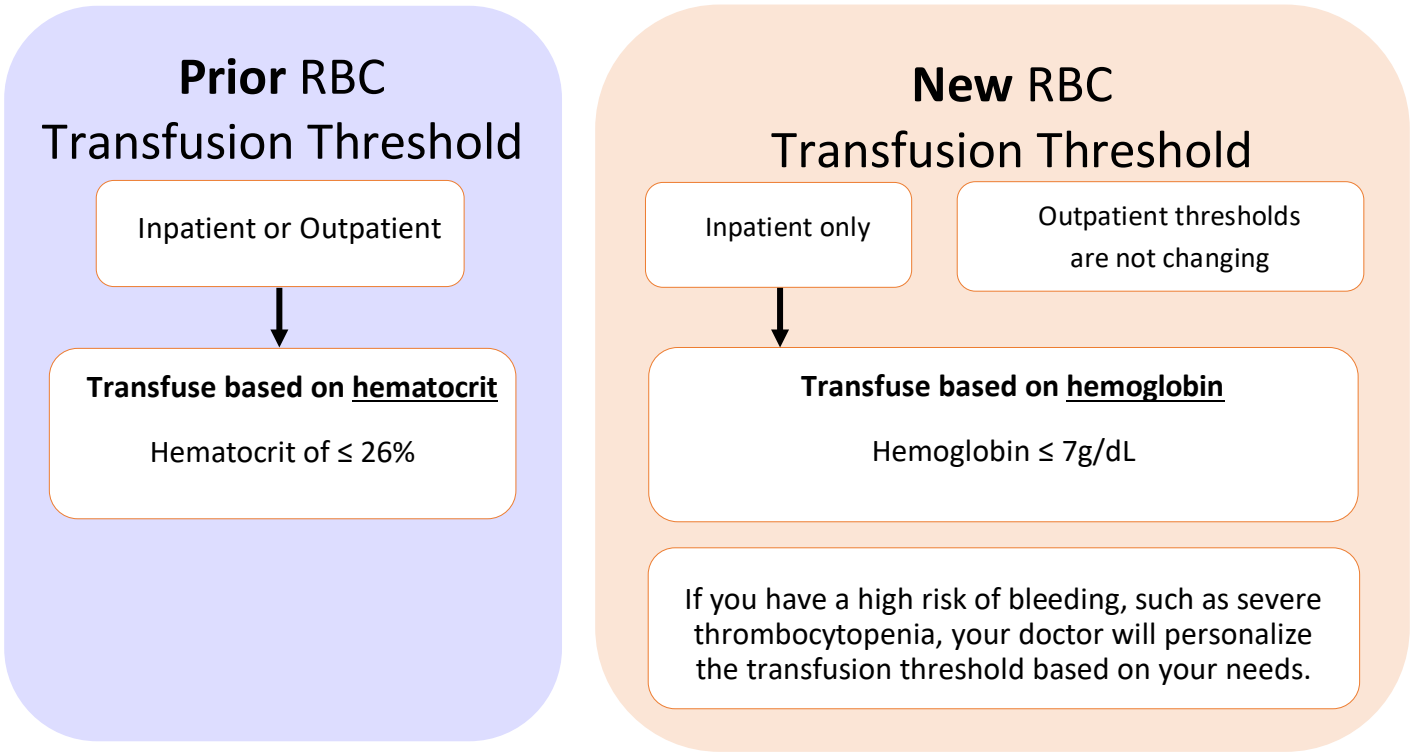
Some patients may need to receive a transfusion even before they drop below these thresholds. Other patients may be able to postpone a transfusion even after they drop below the threshold. Your red cell transfusion threshold may change during your treatment, depending on the clinical situation.



What were the previous red cell transfusion thresholds?

For most patients who were either seen in the outpatient clinic or hospitalized, the previous threshold for a red blood cell transfusion was a hematocrit less than or equal to 26%. This approximately corresponds to a hemoglobin of 8.6 g/dL.

What are the new red cell transfusion thresholds?

- **Inpatient**: For patients who are hospitalized (inpatient), we are now using a threshold hemoglobin of less than or equal to 7g/dL. For some patients, this threshold might not be the appropriate and other values might be used.

- **Outpatient**: We will continue with the current threshold of hematocrit less than or equal to 26% or as agreed between the patient and the physician.

Why has the threshold changed?

Blood transfusions have benefits and risks. By lowering the transfusion threshold, we decrease the number of transfusions patients receive. Since hospitalized patients are usually less active than outpatients, a lower hemoglobin or hematocrit threshold may be more appropriate for them. The possible benefits of lowering the transfusion threshold include less risk of:

1. transfusion-related fevers
2. swelling from excess fluid volume
3. build-up of excess iron in the body

There is a risk that a lower hemoglobin can lead to symptoms of fatigue. If you and your team think that you have fatigue because of low hemoglobin or hematocrit levels, your threshold for transfusion can be increased.

What else should I know?

This document discusses only the standard threshold used but your treatment team may decide on another threshold based on your diagnosis, symptoms, and risk factors.

If you have any concerns about the changes in the hemoglobin thresholds, please discuss your concerns with your treatment team. You will decide together what is best for your treatment.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

Name _____

Number _____

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