

FACT SHEET

Reticulocyte Hemoglobin Equivalent

What is The Reticulocyte Hemoglobin Equivalent?

The Reticulocyte Hemoglobin Equivalent (RET-He) is a parameter available on Sysmex XN-Series™ and some XN-L Series™ analyzers that measures the hemoglobin content of newly formed RBCs, called reticulocytes. Measuring the hemoglobin content of reticulocytes, along with other RBC indices, may provide a better understanding of the pathophysiological mechanism of anemia in a patient.

Reticulocytes and Anemia

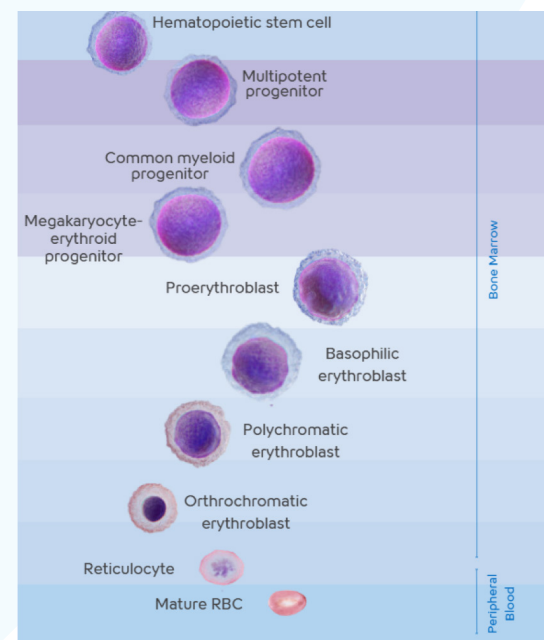
When a patient is anemic, there may not be enough hemoglobin to effectively transport oxygen through the body. When this happens, signals are sent to the bone marrow to increase production and release of RBCs into the peripheral blood. If the patient does not have adequate iron stores, the newly-formed RBCs will have less hemoglobin than is appropriate because RBCs rely on iron to synthesize hemoglobin.

The RET-He represents the amount of hemoglobin in the reticulocytes. Knowing the hemoglobin status of these immature cells helps clinicians assess the functional availability of iron in the bone marrow, which may offer additional clinical information for managing these challenging patients.

Sysmex Hematology Analyzers and RET- He

When a reticulocyte test is ordered, Sysmex analyzers utilize the Fluorocell™ RET reagent to evaluate and differentiate mature RBCs from reticulocytes.

- **Detection Point:** The RET-He can be reported as an individual test parameter or as part of a comprehensive reticulocyte panel.
- **Cell Types Detected:** Sysmex analyzers identify the reticulocytes in the in the RET channel and calculate the RET-He.
- **Technology Used:** Utilizing fluorescence flow cytometry, specialized reagents and proprietary algorithms, Sysmex's XN-Series and select XN-L Series analyzers can evaluate the hemoglobin content of reticulocytes.



Taken from Hematopoiesis cell poster, Sysmex America, Inc.

Advantages of Sysmex RET- H_e Measurement

- **Automated Analysis:** The RET-H_e can be automatically performed through direct orders from the LIS as a billable test. (All billing and reimbursement decisions should be made in consultation with the site's coding and billing departments.)
- **Direct measurement:** RET-H_e testing requires no pre-treatment or manual dilution and can be performed with routine CBC testing. The RET-H_e can be reported as an individual test parameter or as part of a comprehensive reticulocyte panel.
- **Availability:** Sysmex XN-Series and some XN-L Series analyzers have reticulocyte and RET-H_e testing onboard and no additional reagents or software are required.

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