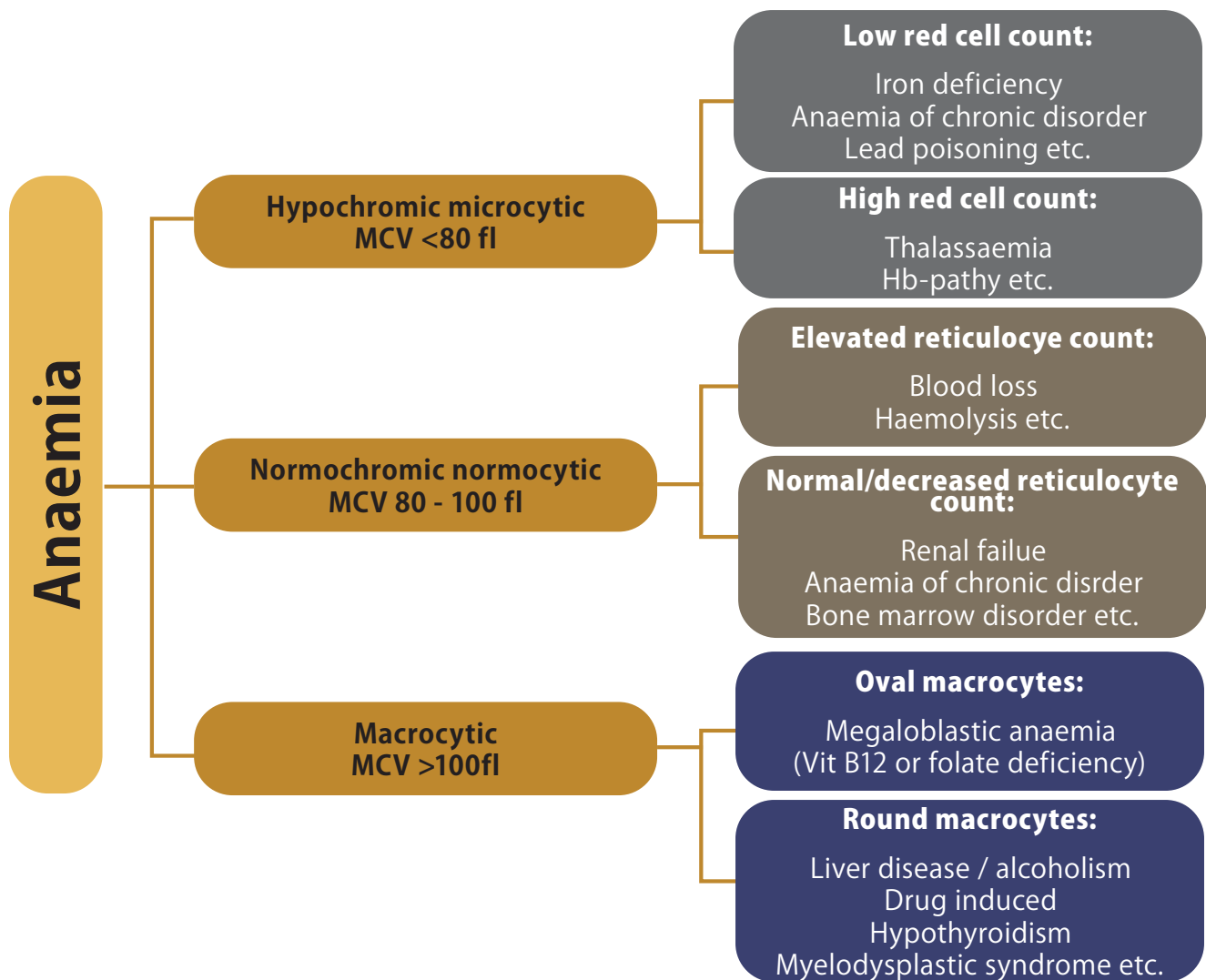


# THE PATHCARE NEWS

## THE MCV VALUE IS ADDED WHEN JUST A HAEMOGLOBIN IS REQUESTED, AT NO ADDITIONAL COST

Anaemia is defined as a reduced haemoglobin level in the peripheral blood. When blood does not contain enough haemoglobin, cells do not receive enough oxygen and symptoms may arise.

A diagnostic approach to anaemia is often based on the initial MCV findings. The MCV (mean corpuscular volume) measures the average size of the red cells. In case of a low Hb, it helps diagnose which type of anaemia is present. The MCV value is therefore added by Pathcare when just a Hb is requested at no extra cost.



Based on these initial Hb and MCV results more specifically directed investigations can be requested. Please note that the MCV reference range is age dependant.

## Iron deficiency anaemia:

Worldwide iron deficiency anaemia (IDA) remains the most common type of microcytic anaemia. Although classified as a nutritional anaemia, blood loss rather than a low dietary intake is usually the primary cause. A faecal occult blood test is very helpful if positive, but negative results do not exclude GIT blood loss. s-Iron is influenced by recent dietary intake; therefore s-Ferritin is most useful to check for depleted iron stores.

Another useful diagnostic test to aid in diagnosing IDA is the Reticulocyte Haemoglobin content test (Ret-He). Reticulocytes are the precursors of mature red blood cells and are swept into the bloodstream from the bone marrow. They mature in circulation over the course of approximately two days. Measuring the haemoglobin content of the reticulocytes means you can look at the current iron supply to erythropoiesis. It is often used together with s-Ferritin. Since s-Ferritin is increased during the acute phase of diseases, inflammation should be ruled out, e.g., by CRP.

### Classic IDA

- **Low s-Ferritin**
- **Low Ret-He**

### Possible/ early IDA

- **Normal / high s-Ferritin**
- **Low Ret-He**

### Response to treatment

- **Rising Ret-He within days**
- **Rising Ferritin**
- **Rising Hb and reticulocyte count**

Where Ret-He is less than 28 pg, it can aid in diagnosing iron deficiency earlier than other standardised tests.

## Megaloblastic anaemia:

Initially the presence of vitamin B12 or folate deficiency must be confirmed as treatment may have a rapid effect on both the morphology and on these blood tests. Unconjugated hyperbilirubinaemia and elevated s-LDH are usually also present due to ineffective erythropoiesis. The underlying disease/cause responsible should also be investigated. In the case of a low s-Vit B12 level, please check for antibodies directed to intrinsic factor and/or parietal cells as seen with pernicious anaemia.

## When in doubt:

A "shot-gun" approach to an anaemic patient is not only uneconomical, but also runs the risk of failing to achieve a definite diagnosis. Diagnostic possibilities, e.g., a bone examination may be helpful and therefore, if the diagnostic cause is not apparent, communication with a haematologist is advised.

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