PLATELET MANAGEMENT

Know more.
Decide with confidence.
Act faster.

Get the best platelet result for each sample without delay

Accurate and precise platelet counting is a challenge. With abnormalities and low counts, standard analysers struggle to deliver the needed results. Sysmex's new platelet management concept delivers significant advances on existing systems so that a laboratory can report reliably, while still streamlining their entire platelet workflow and reducing turnaround time. Should a measurement channel detect an inaccurate count caused by abnormalities, the analyser notifies the user or automatically performs a reflex measurement. The diagram shown overleaf depicts the workflows for analysers equipped with various measuring channels (PLT-I only, PLT-I/F or PLT-I/O). Below, you will find a short overview for each type of platelet analysis we offer.

XN-CBC

- Default, routine automated method (DC sheath flow detection, impedance measurement principle) – part of the complete blood count (CBC).
- Accurate count for the majority of samples.
- Possible interferences with all particles with a volume similar to platelets (e.g. microcytes, RBC fragments).
- Falsely low counts due to giant platelets and platelet clumps are detected in the WNR channel (part of XN-CBC) and pointed out by the analyser.
- Lower precision at very low PLT counts (≤ 20 x 10^9/L) – the lower the count, the greater the imprecision.

PLT-I

RET

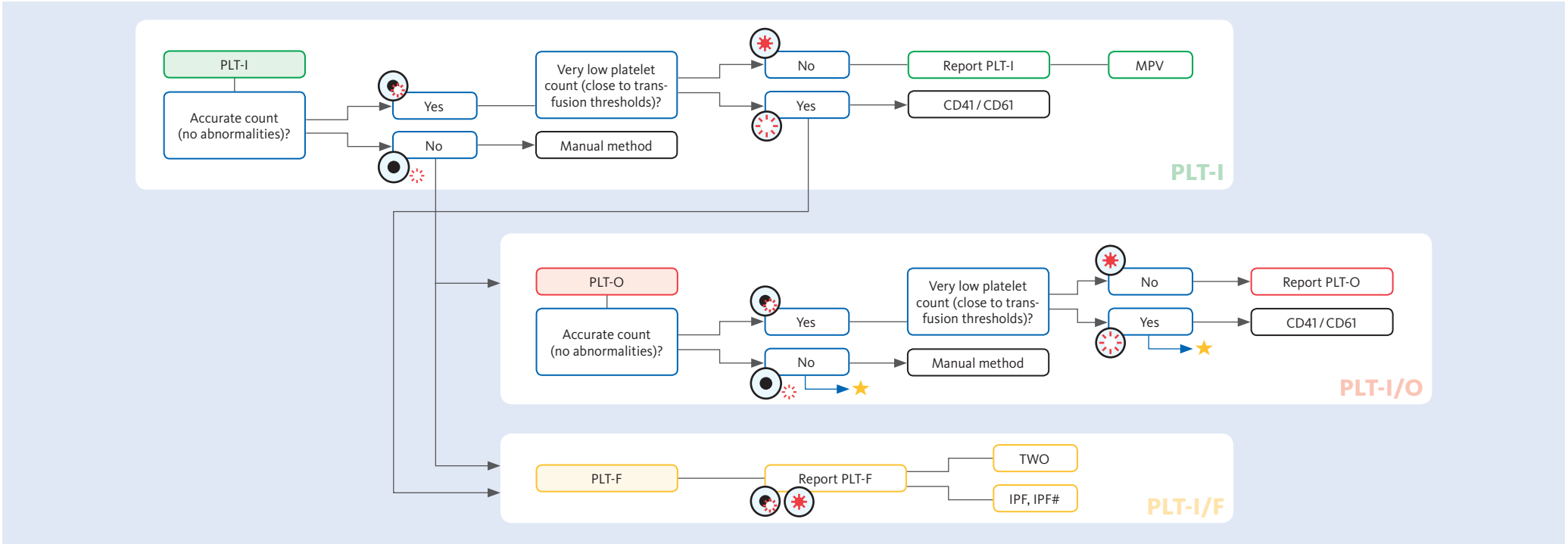
- Automated reflex method for samples with unreliable PLT-I counts – the optical platelet count is part of reticulocyte analysis (RET channel) using fluorescence flow cytometry (FFC).
- Resolves many PLT-I interferences.
- Possible interferences with RBC and WBC fragments.
- Falsely low counts due to platelet clumps are detected in the WNR channel and pointed out by the analyser.
- Lower precision at very low PLT counts (≤ 20 x 10^9/L) – the lower the count, the greater the imprecision.

PLT-O

PLT-F

- Automated reflex method for samples with inaccurate or very low PLT-I counts – a dedicated channel for the PLT count (PLT-F channel).
- High precision also at platelet transfusion thresholds, due to the fluorescence technology and 5-fold higher counting volume – enables confident clinical decisions (Hummel K *et al.*, Transfusion. 2018, 58(10): 2301).
- Results directly comparable to the reference method CD41 / CD61 (Tanaka Y *et al.*, J Clin Lab Anal. 2014, 28(5): 341; Park S *et al.*, Ann Lab Med. 2014, 34(6): 471).
- Resolves most PLT-I interferences as the fluorescence marker specifically labels platelets – so no interference even in the presence of fragmented red blood cells.
- Falsely low counts due to platelet clumps are detected in the PLT-F channel and pointed out by the analyser.
- **IPF:** The immature platelet fraction supports the differential diagnosis of thrombocytopenia (for more information: Sysmex white paper '*Differential diagnosis of thrombocytopenia*').
- **IPF#:** The immature platelet count enumerates the platelets most recently produced in bone marrow (for more information: Sysmex white papers '*Managing immune thrombocytopenia (ITP) treatment effectively*' and '*Identifying poor antiplatelet drug response and its risks early on*').
- **TWO:** Thrombopoiesis Workflow Optimisation: the optional module embedded in the *Extended* IPU supports the monitoring of thrombocytopenic patients and optimises PLT-F triggers (ask for the PLT-F card to obtain more information).

PLT-F



★ To avoid having to do manual PLT or CD41/CD61 testing, you can upgrade your XN analyser(s) with PLT-F and replace PLT-O altogether.

- **An inaccurate count is caused by abnormalities,** such as interferences as with the PLT-I or PLT-O method. This is detected by the analyser, and the user is notified.

Accurate count

Inaccurate count

- **An imprecise count is caused by lower measurement precision** for the PLT-I or PLT-O method **at very low platelet counts** (PLT ≤ 20 x 10^9/L). The lower the count, the greater the imprecision.

Precise count

Imprecise count

Benefit from more background information in our freely accessible white papers:
www.sysmex-europe.com/whitepapers

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