Further classification of WBC abnormalities
Focus on reactive conditions once malignant conditions have been excluded

Optimise your workflow
Detection of white precursor and pathological cells
Highly specific exclusion of malignant conditions
Multi-parametric assessment of reactive conditions
Optional XN Stem Cells mode
Decrease unnecessary smear reviews by reducing the number of false-positive malignant samples and by correct classification of reactive samples.

Characterise the patient’s immune response status
The Extended Inflammation Parameters support the differentiation between viral and bacterial infections and between acute and subsiding infections.

Your benefits in daily routine
- WPC analysis minimises the number of false-positive suspected malignant samples from the XN-DIFF. This streamlines and accelerates the diagnostic pathway as it reduces the need to perform time-consuming and expensive follow-up tests that are required when a malignant condition is suspected.
- The combination of XN-DIFF and WPC allows optimal differentiation between malignant and reactive samples and deeper insight into the immune response status once malignant conditions have been excluded.
- Confidence that the right smears are performed and that no time is wasted on false-positive samples
- Increased walk-away time thanks to automatic reflex testing
### Optional diagnostic parameters

- **HPC%**, **HPC#**: Haematopoietic progenitor cell count (only available with XN Stem Cells licence)
- **RE-LYMP%**, **RE-LYMP#**: (reactive lymphocyte count)
- **AS-LYMP%**, **AS-LYMP#**: (antibody-synthesizing lymphocyte count; highly fluorescent)
- **NEUT-GI** (neutrophil granularity intensity)
- **NEUT-RI** (neutrophil reactivity intensity) (only available with Extended Inflammation Parameters licence)

### Diagnostic information

- **HPC%**: Haematopoietic progenitor cell count (only available with XN Stem Cells licence)
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### Reflex testing

- **Dual-level flagging system**
- **Workflow impact**

WPC analysis is interesting for samples with certain abnormal WBC populations, therefore it is triggered automatically as a reflex test after initial analysis in the CBC+DIFF profile, whenever the “Blasts/Abn Lympho?” flag has been triggered.

- **Dual-level flagging system**

Depending on the patient collective that is usually analysed, smear review rates can be lowered significantly – without compromising the diagnostic quality. This speeds up diagnosis and follow-up of true pathological samples – by focusing on specific cell types in smear reviews.

### Technologies for the detection of pathological WBC (fluorescence flow cytometry)

- **‘Blasts?’ flag**: Indicates a suspected acute malignant disorder (e.g. acute leukaemias).
- **‘Abn Lympho?’ flag**: Points to a suspected malignant disorder of lymphocytes (e.g. chronic leukaemias and lymphomas).
- **‘Atypical Lympho?’ flag**: Points to a reactive disorder (e.g. infections or inflammations, allowing the characterisation of the state of the immune system).
- **‘Negative’**: The high specificity of WPC analysis further filters out false-positive suspected malignant samples.

The first stage of the reagent reaction depends specifically on the composition of the membrane lipids. Mature white blood cells have a membrane lipid composition different to immature or reactive cells, so they are affected to a greater extent, leaving the cells in a less native stage. This makes the membrane more permeable for the proprietary fluorescence marker that labels the cells in the second stage of the reaction. The signals corresponding to cell volume and fluorescence are therefore directly related to the functionality of the cells.

Due to their membrane lipid composition, immature cells such as blasts are not permeated very strongly by the lysis reagent. Consequently, they show relatively low fluorescence signals and high signals for cell volume because they remain mostly intact. Neoplastic lymphocytes are more mature and their membranes are more readily permeated, causing higher fluorescence signals and smaller volume signals due to cell shrinking. These differences allow a reliable identification of such malignant cells.