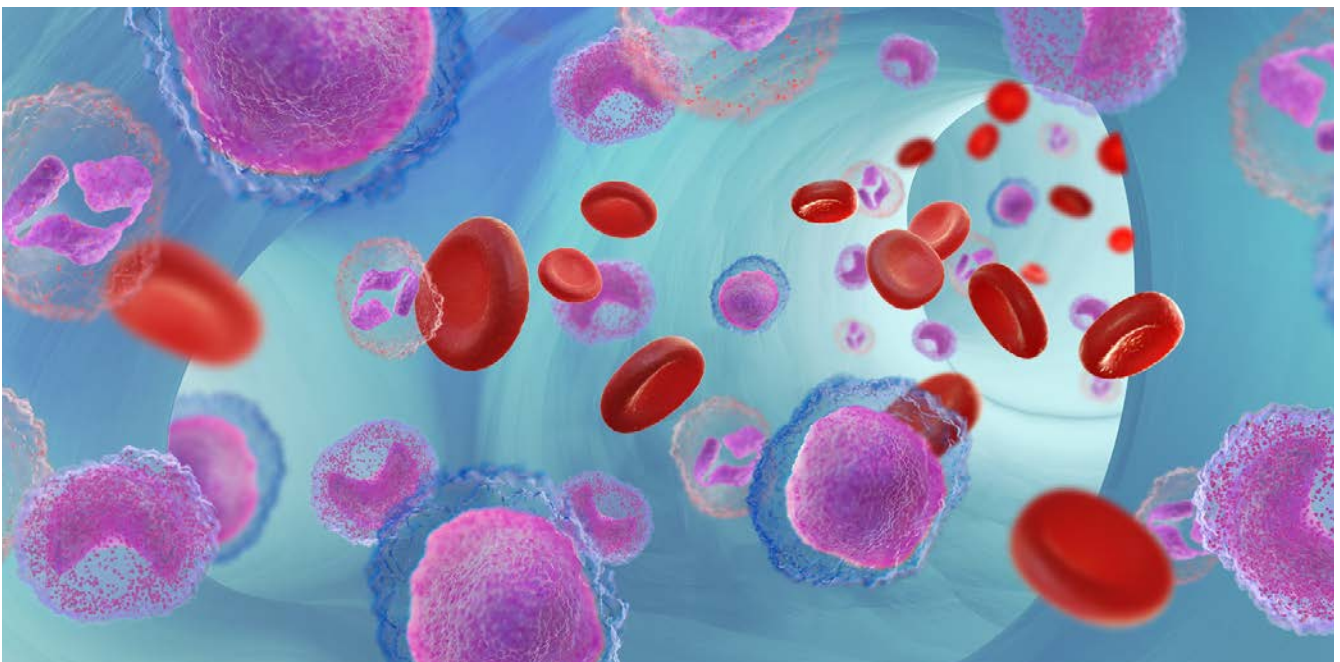


CASE REPORT

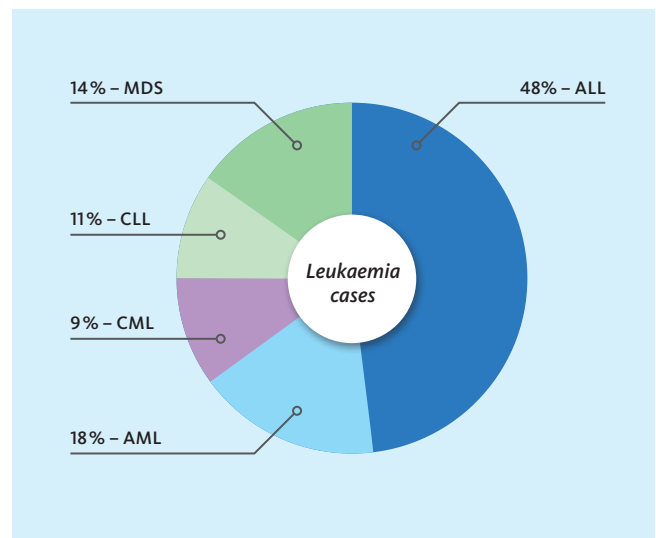
World Leukaemia Day 2021

A patient case of chronic myeloid leukaemia (CML)



Leukaemia and chronic myeloid leukaemia (CML)

- CML causes an increased production of granulocytes and their precursor cells in the bone marrow. It is a common type of leukaemia making up around 9% of all leukaemia cases globally.
- CML typically begins in the chronic phase and progresses over time to an accelerated phase, finally leading to a blast crisis. The blast crisis is the terminal phase of CML and clinically behaves like an acute leukaemia.
- A bone marrow biopsy is often performed as part of the diagnostic path towards CML.
- Drug treatment will usually stop CML progression if started early. However, if the patient is not treated in a timely manner, CML quickly leads to lethality.



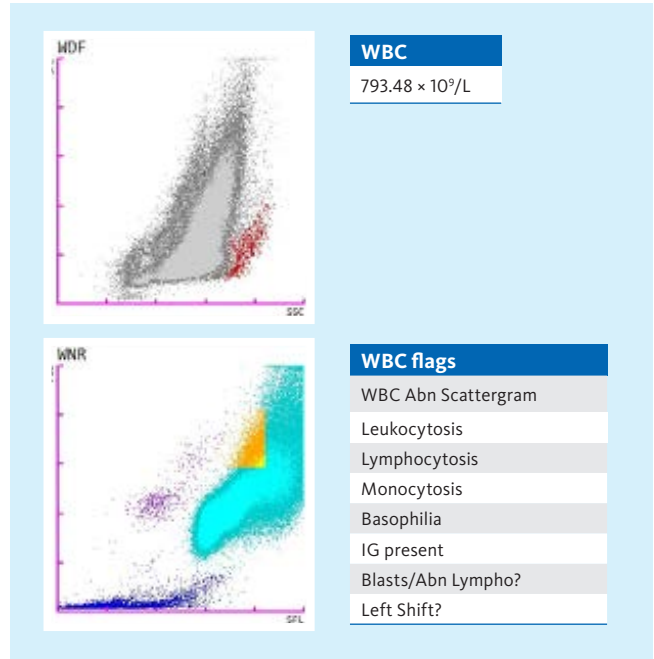
Percentage of leukaemia cases by type

Myelodysplastic syndromes (MDS), acute lymphocytic leukemia (ALL), chronic lymphocytic leukemia (CLL), chronic myeloid leukemia (CML), acute myeloid leukemia (AML)

Clinical case information

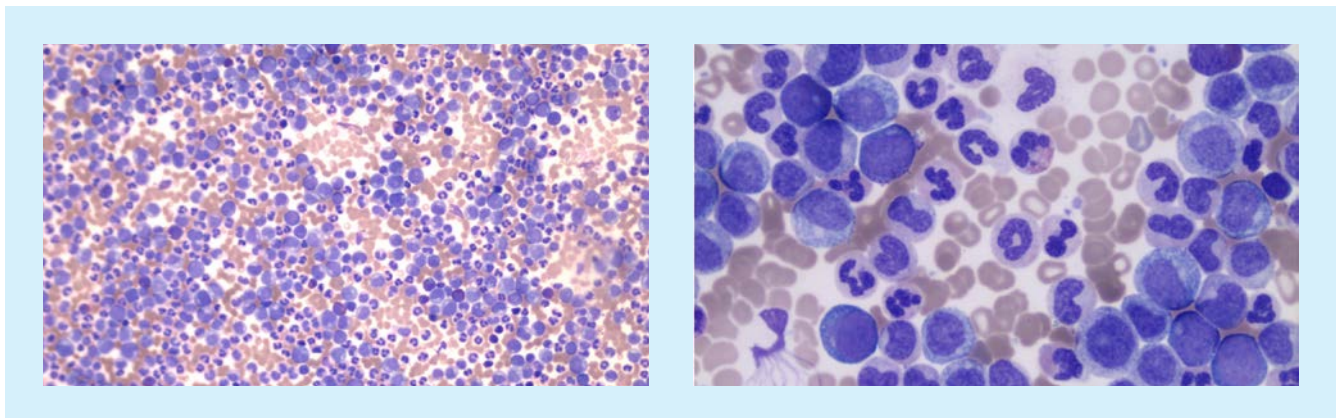
In this patient case, a 49-year-old male presented with acute symptoms at the doctor's office.

- The CBC+DIFF showed extremely high WBC counts, which were out of the linearity range of the analyser.
- This indicated a severe leukocytosis.
- In the WNR and WDF scattergrams of the XN-Series analyser the position of the cell populations could not be properly differentiated.
- Consequently, the scattergrams were identified as abnormal and multiple flags appeared.
- Further on, a blood smear and digital imaging analysis was performed.



Peripheral blood smear – microscopic overview

The microscopic images confirmed a severe leukocytosis.



Microscopic images showing neutrophils and immature granulocytes (IG)

- Digital imaging analysis of the patient's peripheral blood smear showed massive numbers of neutrophils and IG.
- The overproduction of IG is characteristic of CML.
- Consequently, further investigations confirmed the CML diagnosis.

