

Comprehensive diagnostics in haemato-oncology



Providing value from
screening to monitoring

Sysmex solutions in haemato-oncology – explore the patient’s clinical pathway beyond the smear

Haematologic neoplastic diseases represent, as a whole, the fourth most common cancer-related cause of death in the world [1]. Fortunately, the improvement in the knowledge of these diseases has made it possible to offer an improvement in the survival of these patients thanks to advances such as molecular techniques, targeted therapies and cell treatments.

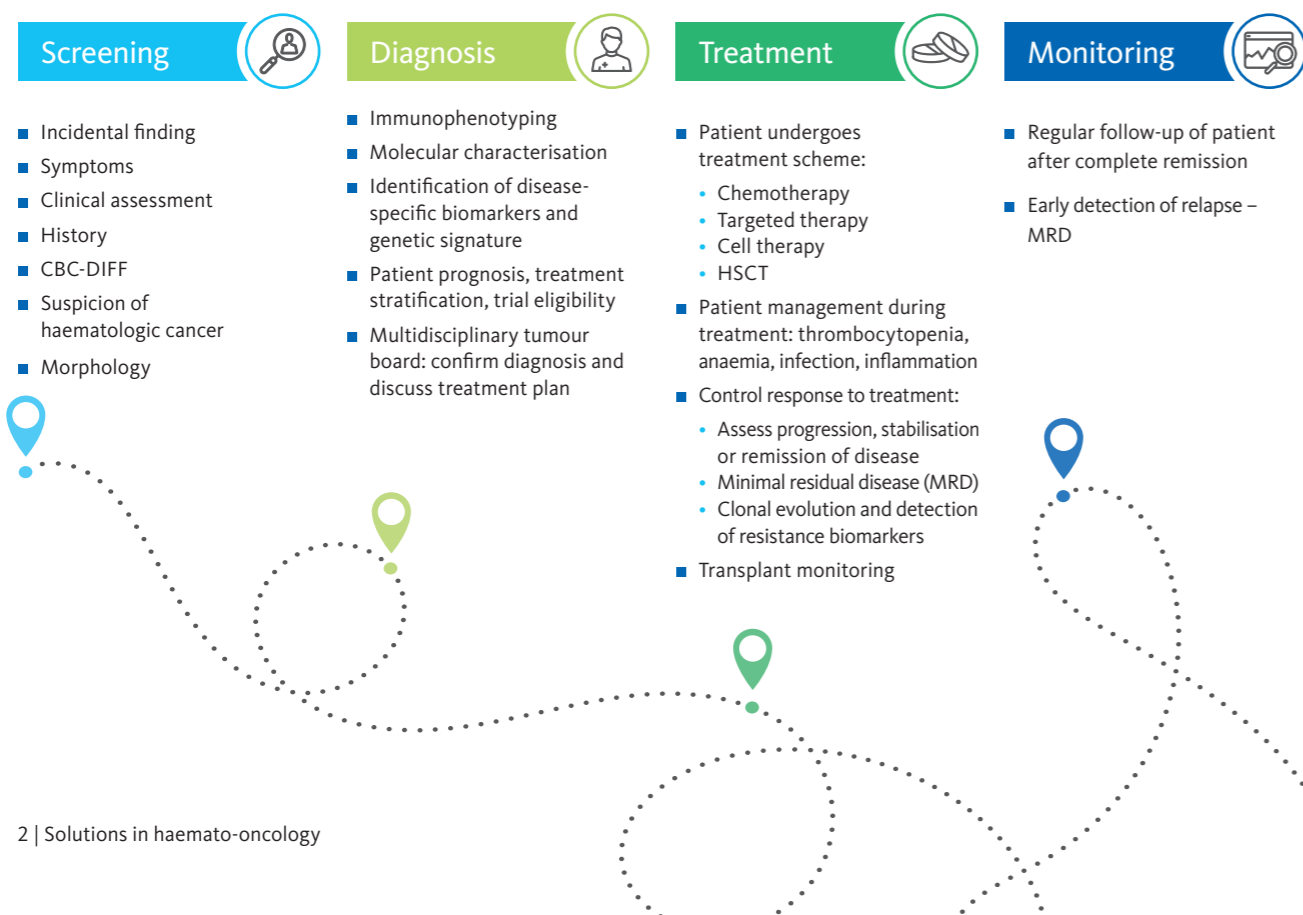
The counterpart to this situation is that a greater number of available therapeutic options entails greater complexity in decision-making. Therefore, the haematologist needs to know the state of the disease and the patient at all times and in greater detail. Comprehensive diagnosis is the tool that offers such information. And it has become increasingly necessary to make therapeutic decisions that optimise the management of haemato-oncology patients in all phases of the disease.

For more than 50 years, we have been building our solutions of blood-related diagnostics, growing together with the needs of medical experts across the globe. On the one hand, our world-leading haematology analysers have long been providing detailed and reliable blood cell characterisation. On the other hand, we are expanding our solutions with other technologies that are required in the present haemato-oncology disease management, fulfilling our vision of Sysmex as a comprehensive solution provider for blood-related diseases.

During recent years, technologies like antibody-based flow cytometry or FISH have been incorporated into our developmental capabilities. These bring a new wide range of diagnostic tools into the market and complement our state-of-the-art haematology analysers. Now, we aim to offer a complete diagnostic solution to support clinicians in haematologic cancer management, provide complete information during each phase of the disease, allow a personalised approach and contribute to the improvement of patient outcomes.

[1] Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries, <https://acsjournals.onlinelibrary.wiley.com/doi/full/10.3322/caac.21660>

The patient pathway



Haematologic malignancies: Get more out of routine diagnostics



Sysmex is the global leader in offering best-in-class haematology analysers based on fluorescence flow cytometry. With our XN-Series analysers, you can achieve the following:

Incidental finding of haematologic malignancies

- ✓ Sensitive detection of pathologic cells
- ✓ Suspicious samples immediately directed for follow-up

Engraftment after stem cell transplantation

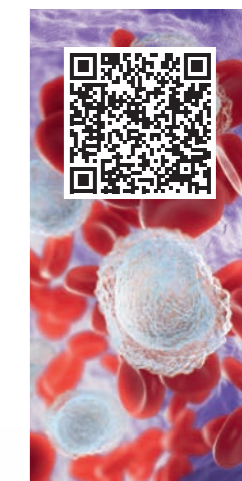
Use the blood cell count to get reliable information and closely monitor your patients:

- ✓ The presence of immature cells indicates haematopoiesis in the bone marrow:
 - This information can aid in the decision whether to give a transfusion.
- ✓ Identify bone marrow toxicity due to chemotherapy:
 - Check if the blood counts have reached a critically low level due to chemotherapy.

Anaemia in patients with haematologic malignancies

A routine blood count can aid in assessing the availability of iron in patients with haematologic malignancies:

- ✓ Be confident even under inflammatory or infectious conditions
- ✓ The haemoglobin content of reticulocytes reflects the bioavailability of iron for erythropoiesis over the previous two to four days, independent of the acute-phase reaction and unlike TSAT and ferritin
 - Measure RET-Hb in the RET channel
 - Early indication of the response to iron therapy and/or erythropoiesis-stimulating agents



Clinical flow cytometry (cFCM)



Specialised flow cytometry laboratories today are facing several challenges: the number of requests and the complexity of analyses are increasing, while at the same time, the requirements for documentation are growing, and achieving the required traceability of reagents and processes is a complicated feat. To add to this, the number of skilled staff and resources is declining. Building on our experience in helping clinical laboratories in the areas of haematology, haemostasis and urinalysis – by adding automation to increase productivity and innovative analysis capabilities to enhance diagnostic quality – we have now embarked on a journey to address the needs of clinical flow cytometry laboratories.

We support the creation of an integrated clinical flow cytometry analysis system that helps increase the workflow efficiency of flow cytometry laboratories, allowing labs to deliver services with confidence in the results. We optimise and standardise your workflow by on-site consultancy and automating sample preparation, thus helping reduce errors and increase efficiency.

This new level of workflow efficiency is obtained by:

- | | | | |
|--|---|---|--|
| <h4>Flexibility</h4> <ul style="list-style-type: none"> ✓ Large portfolio of CE IVD CyFlow™ antibody reagents | <h4>Automation</h4> <ul style="list-style-type: none"> ✓ PS-10 sample preparation and cocktailing system ✓ Cell wash centrifuge | <h4>Performance</h4> <ul style="list-style-type: none"> ✓ XF-1600 flow cytometer | <h4>Data management</h4> <ul style="list-style-type: none"> ✓ Integrated software solutions |
|--|---|---|--|



OGT's integrated product portfolio – complete solution for molecular genetics



Genetic testing plays a critical role in the patient pathway in haematologic disorders. As a Sysmex Group company, OGT's portfolio includes an extensive range of FISH probes designed to target all important rearrangements seen in haematologic malignancy.

CytoCell® – fluorescence *in situ* hybridisation probes (IVD*)

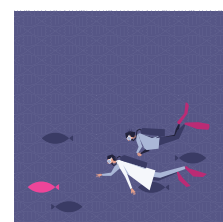
Highly specific CytoCell® FISH probes are capable of detecting genetic changes in a variety of sample types *in situ*.

Developed by scientists and for scientists, OGT understands the real-world application of this technology:

- ✓ High quality, reliable and easy-to-use DNA probes for fluorescence *in situ* hybridisation (FISH)
- ✓ Robust, strong signals and highly sensitive and specific probes
- ✓ Save time and minimise mixing errors with easy-to-use, pre-mixed probes

We are pleased to offer a range of CytoCell® FISH probes optimised for haematologic malignancies as well as the assessment of genetic aberrations in solid tumour samples.

*IVD: in vitro diagnostic medical device



CytoCell

OGT products for Research Use Only (RUO*)

Pre-optimised NGS custom cancer panel content available for research into a number of conditions (RUO)

An expanding portfolio of NGS panels for research into haematologic cancers as well as library preparation kits for the accurate detection of a wide range of genetic aberrations. SureSeq™ NGS panels have been designed in collaboration with recognised cancer experts to detect key aberrations implicated in a wide range of haematological cancers.

Hybridisation-based panels delivering unparalleled coverage uniformity

- ✓ Detect difficult-to-sequence, low-frequency variants consistently and with confidence

Pre-optimised content that meets your exact requirements

- ✓ No more laborious in-house optimisation, decreasing assay development time

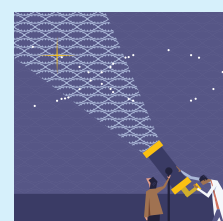
Bespoke panel content

- ✓ Create your ideal NGS panel and sequence only what's relevant for your research

Complimentary Interpret NGS data analysis software

- ✓ Easy-to-use analysis solution for accurate detection of all variants

*Not for use in diagnostic procedures.



SureSeq

CytoCell® FISH probes: For laboratory professional use only. Not intended for use as stand-alone diagnostics or companion diagnostics. Therapeutic action should not be initiated on the basis of the FISH result alone. CytoCell® is a registered trade mark of CytoCell Limited.

SureSeq™: For Research Use Only. Not for diagnostic procedures. OGT™ and SureSeq™ are trade marks of Oxford Gene Technology IP Limited.

CyFlow™ is a trade mark of Sysmex Partec GmbH.

XF-1600, PS-10 and Rotolavit II-S: compliant with CE IVD.

Distributor EMEA: Sysmex Europe SE

Bornbarch 1, 22848 Norderstedt, Germany · Phone +49 40 52726-0 · Fax +49 40 52726-100 · info@sysmex-europe.com · www.sysmex-europe.com

Manufacturer XN-Series, PS-10 and XF-1600: Sysmex Corporation

1-5-1 Wakinohama-Kaigandori, Chuo-ku, Kobe 651-0073, Japan · Phone +81 78 265-0500 · Fax +81 78 265-0524 · www.sysmex.co.jp

Manufacturer CyFlow™ antibodies: Sysmex Partec GmbH

Arndtstraße 11 a-b, 02826 Görlitz, Germany · Phone +49 3581 8746-0 · Fax +49 3581 8746-70 · info@sysmex-partec.com · www.sysmex-partec.com

Manufacturer Rotolavit II-S: Hettich AG

Seestrasse 204a · 8806 Bäch · Switzerland

Manufacturer CytoCell®: CytoCell Limited

Oxford Gene Technology, 418 Cambridge Science Park, Milton Road, Cambridge, CB4 0PZ, UK

Manufacturer SureSeq™: OGT

Begbroke Science Park, Begbroke Hill, Woodstock Road, Begbroke, Oxfordshire, OX5 1PF, UK

You will find your local Sysmex representative's address under www.sysmex-europe.com/contacts

The products listed may not be available for sale in all countries. Please contact your Sysmex representative for availability.