Scopio

Shaping the future of digital hematology

There's a universe of data inside our blood cells. Tiny diagnostic gateways into the human condition that enable clinicians to detect abnormalities, diagnose diseases, and provide life-saving care when it matters most.

Blood tests are the most common first-line lab tests, with billions of blood counts conducted each year. All clinically relevant cases go to a peripheral blood smear analysis (600 million times a year) however these tests are limited by the number of cells a person can review on a manual microscope.

The Vision

Going beyond the boundaries of human capabilities, Scopio Labs will enable dramatically faster, earlier and more accurate detection and diagnosis of blood related cancers, anemia, infections, and other hematological medical conditions, expediting access to life-saving treatment and improved patient outcomes.

A Historical Tradeoff Solved

For decades, hematology lab professionals have relied on manual microscopy to manually count cells and view blood samples in order to assess blood cell abnormalities, forced to compromise between a large field of view and high resolution. While these laboratory hematological tests are ubiquitous and crucial, the manual microscopy process is time consuming, labor intensive and requires expertise.

Scopio Labs, developer of breakthrough **Full-Field Cell Morphology™**, is the first company to solve the historical tradeoff between field-of-view and resolution propelling the field of diagnostics into a new era and fueling the digital transformation of hematology laboratories worldwide.

Scopio provides a suite of digital platforms that eliminate the need for manual microscopy. The company's combination of innovative high-resolution imaging and AI-powered decision support enhances diagnostic clinical workflows, reduces lab review turnaround times, and drastically improves lab efficiency.

Use of Scopio led to a 60% improvement in **workflow efficiency** due to faster review time per PBS case, compared with manual microscopy. [1]

Turnaround time

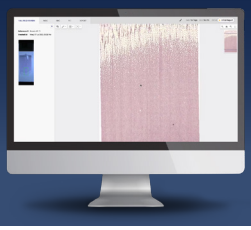
Morphology turnaround time in the hematology laboratory improved up to 59.1% due to **remote review** of peripheral blood smears using Scopio.[2]

Breakthrough Technology

Scopio uses **computational photography** to capture high resolution large scan areas of the blood sample at **100X magnification**, giving lab scientists and pathologists a digital image of "all regions of clinical interest". A move away from the heavy lifting of accurate mechanics and expensive optics, Scopio applies a unique, physics-based model to compute a sharp, high-quality image which captures the big picture and the smallest details at the same time. For the first time, lab practitioners have a digital copy of the slide at 100X resolution which allows them to see the scan in full context or pan and zoom in on the intra-cellular details, both of which are **vital for confident clinical decision-making**.

A powerful **AI-driven decision support system** speeds up interpretation and digital reporting of results by automatically analyzing the blood sample, supporting lab experts in cell detection, pre-classification, and quantification.

Click here to view a scan



The combination of Full Field imaging and AI eliminates the need for additional manual microscopic examination.

Full-Field technology opens the door to endless opportunities

Tele-Hematology

Full-Field Cell Morphology enables professional interactions to take place remotely, facilitating consultation and collaboration across multiple geographical sites over the secure network. Hospital and lab networks can now operate seamlessly across multiple facilities of all sizes, with workload balancing, remote consultations, addressing personnel shortages and more. Taken together, these can contribute to faster diagnosis and treatment initiation, while enhancing the patient experience.

Timely detection can improve clinical outcomes

Significant clinical findings including schistocytes, blasts and mature lymphocytes, that indicate diseases like leukemia and lymphoma, can be **detected in a timely manner due to remote weekend sample review.**[2]

Efficiency

As demonstrated in recent research published in the International Journal of Hematology, using Scopio's Full-Field Peripheral Blood Smear (FF-PBS) Application reduces turnaround time for sample reviews by upwards of 50%[1], representing a significant value to labs and patients. The FF-PBS Application has been clinically proven to accelerate PBS analysis, substantially reduce workload, and increase workflow efficiency (by 60%).[2]

End-to-End Digitization

Two platforms. One end-to-end digital workflow. Infinite possibilities.

Scopio Labs' digital platforms cater to labs and lab networks of all sizes, providing laboratory professionals and clinicians a true workflow benefit.

The Full-Field Peripheral Blood Smear™ (FF-PBS) Application

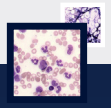
Peripheral Blood Smear (PBS) review is a powerful diagnostic tool that provides clinicians with information about a variety of blood related disorders and other life-threatening medical conditions, making the accuracy and timeliness of PBS results critically important for early diagnosis and effective treatment initiation. It is conducted hundreds of millions of times a year, yet the majority of these tests are still performed manually.

Scopio's Full-Field Peripheral Blood Smear™ morphology is the first solution which completely eliminates the need for manual microscopic examination

Full-Field Bone Marrow Aspirate™ (FF-BMA) Application

The BMA review is a notoriously complex and intricate analysis routinely performed to detect blood disorders, such as leukemias, multiple myeloma, myelodysplastic syndrome and more. With Full-Field Cell Morphology, Scopio's FF-BMA platform provides an enhanced hematopathology workflow to augment the clinician's capabilities.

Scopio's Full-Field Bone Marrow Aspirate™ application is the first to enable a complete end-to-end digital review of the sample at 100X and represents a true digital transformation in hematopathology



Looking Ahead

Scopio believes it is crucial that diagnostic excellence and innovation are placed at the forefront of healthcare. Leveraging **Full-Field Cell Morphology™** and major advances in AI, Scopio is proud to be the pioneer of full-field digital cell morphology, focused on an important mission to raise the standard of healthcare and accelerate the digital transformation of hematology laboratories. This is the promise of digital cell morphology at scale.

Scopio's Full-Field Peripheral Blood Smear™ Application is FDA-cleared and CE-marked on both the X100 and X100HT. The Full-Field Bone Marrow Aspirate™ Application is CE-marked on the X100 and X100HT. The BMA Application is available for research use only in the US. Not available in all markets.

References:

1. Katz BZ, et al. Remote Digital Microscopy Improves Hematology Laboratory Workflow by Reducing Peripheral Blood Smear Analysis Turnaround Time. Appl Clin Inform. 2022 Oct; https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9683999/
2. Katz B-Z, et al. Evaluation of Scopio Labs X100 Full Field PBS: The first high-resolution full field viewing of peripheral blood specimens combined with artificial intelligence-based morphological analysis. *Int J Lab Hematol.* 2021;00:1–9. https://doi.org/10.1111/ijlh.13681