



The Urgent Need for Full-Field Cell Morphology and the All-Digital Workflow

A Growing Crisis in the Lab



Clinical laboratories are an essential part of the healthcare and medical sector⁶, but they are stretched to the **breaking point**.



Labs face serious **staff shortages** and **tight budgets**, yet many routine tasks such as blood cell differentials are still done **manually**, which is **time-consuming** and makes remote collaboration and information sharing slow and cumbersome.



Manual reviews are **labor-intensive** and require trained personnel on-site. They are also **highly subjective**, resulting in inter- and intra-user variability that can lead to **inaccurate diagnoses**.



This need for more **diagnostic capacity** and **qualified personnel** is only increasing.



13B+
Clinical lab tests performed in the U.S. each year²

70%
of medical decisions depend on laboratory test results³

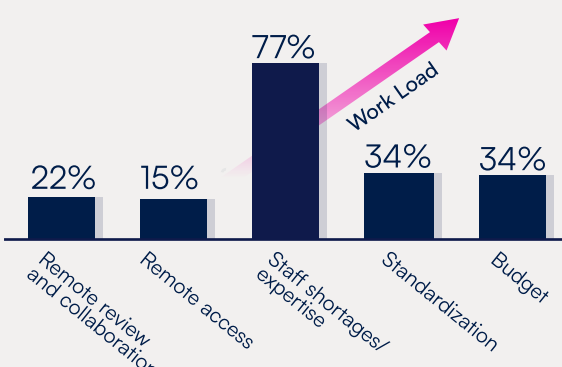
25%
of the US population will be aged **65+** by 2050

50%
of the U.S. population has at least **one chronic illness**

Inside Today's Hematology Lab

We surveyed 700+ lab professionals and clinicians to understand their biggest challenges. Here's what they told us.

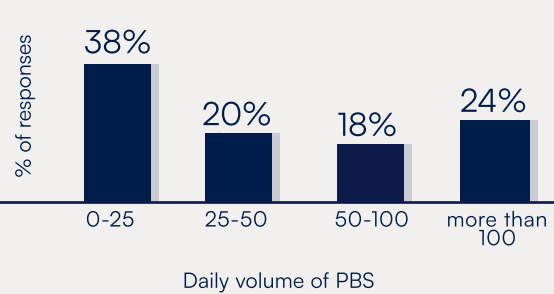
What are the top challenges?



Labs report **ever-increasing workloads**, a critical **shortage of lab personnel**, **budget constraints**, and the need for improved efficiency and accuracy as key problems.

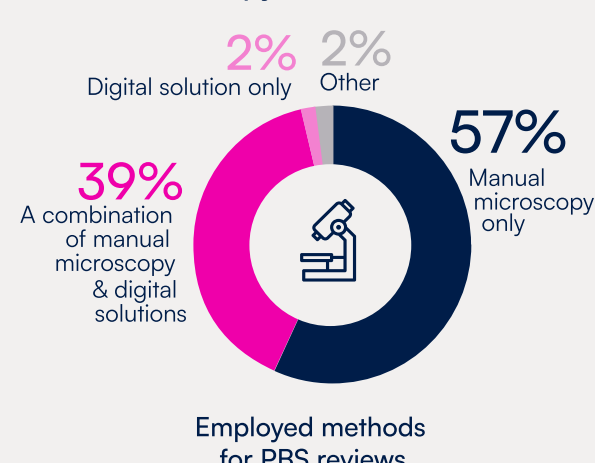
A closer look: peripheral blood smears

The daily volume of peripheral blood smears prepared and reviewed



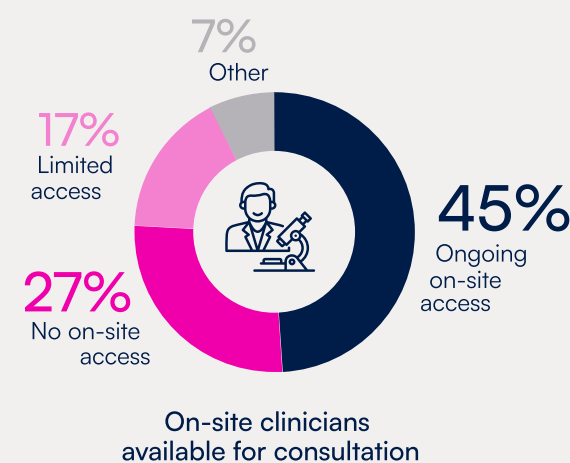
The peripheral blood smear (PBS) is one of the most commonly ordered lab tests¹ and constitutes a **significant proportion of the lab expert's workload**.² **Yet most are still conducted manually.**

Manual microscopy still dominates



A stunning **57%** of lab professionals **still rely on a purely manual review of PBS**, which involves an expert looking at a sample under a microscope, **manually classifying and counting cells** by type, and visually hunting for abnormalities that could mean cancer, infections, inflammation, or other diseases.

A gap in remote access



In addition to over-reliance on manual processes, more than half of laboratories have either **limited or no on-site access** to expert consultation for PBS reviews, which can **significantly delay diagnosis**.

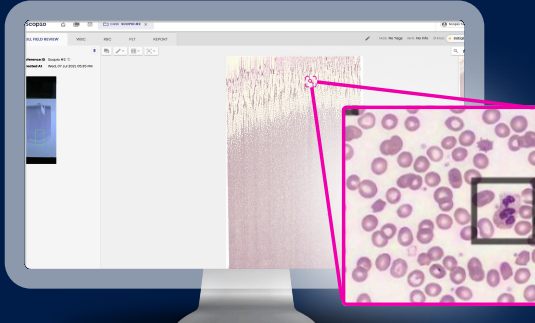
It's Time for a Digital Revolution

Digitization has the potential to improve both the quality and efficiency of **Bone Marrow Aspirate (BMA) and Peripheral Blood Smear reviews (PBS)**, provide much-needed consistency and standardization in lab processes,⁵ and create economic benefits for laboratories.³

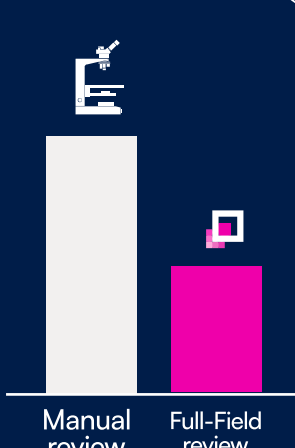
What is Full-Field Cell Morphology™?

Scopio Labs' Full-Field Digital Cell Morphology platforms offer a fully digital, remote-capable solution for BMA and PBS evaluation, interpretation, and review.

By digitizing the sample and the entire process, it fundamentally improves laboratory practice, efficiency, standardization, and remote collaboration through the secure hospital network.^{3, 8}



60% Faster



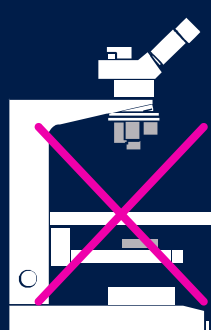
Full-Field Cell Morphology enables a **60% improvement in workflow efficiency and TAT** vs. manual PBS reviews.⁸

The Full-Field Difference



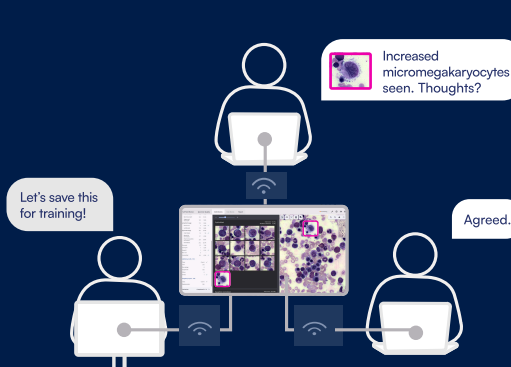
Full-Field imaging enables experts to capture both the **general slide context and zoom in on the smallest details of a single cell**, which is critical for confident laboratory decision-making.

100x Resolution



100x oil-immersion equivalent resolution captures all clinically relevant areas - monolayer to feathered edge for PBS, whole slide for BMA - in a single digital scan. Every case starts and ends on screen, no tradeoff between magnification and field of view. **The microscope stays in the cabinet, forever.**

100% Remote-Capable



100% remote-capable means every case can be reviewed from anywhere on your secure hospital network. **Experts access slides in real-time** without manual microscopy - enabling collaboration, workload balancing, and coverage flexibility that **accelerate diagnosis and treatment**.

NEW: Autonomous analysis Complete Blood Morphology (CBM)

Complete Blood Morphology (CBM) takes the human out of the loop for routine morphology review. By analyzing **10x** more cells than today's standard - 1,000 WBCs, 10,000+ RBCs - CBM is designed to autonomously analyze **90%** of cases, releasing results directly to your LIS. **Your experts only see what actually needs their attention.**

10x More Cells. One New Standard.

About Scopio Labs

Leveraging Full-Field Cell Morphology™ and AI, Scopio is leading the digital transformation of hematology laboratories worldwide - going beyond the limitations of the human eye and manual microscopy.



Disclaimers

- Full-Field Peripheral Blood Smear Application: CE marked and FDA-cleared, commercially available across the U.S., UK and Europe and other territories.
- Full-Field Bone Marrow Aspirate Application: CE-marked cleared for sales in additional regions. Not commercially available in the US for in vitro diagnostic procedures.
- Complete Blood Morphology Analyzer (CBM): In development, not yet available for in vitro diagnostic use.

References

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4. Kratz A, et al. Digital morphology analyzers in hematology: ICSH review and recommendations. Int J Lab Hematol. 2019;41:437-447
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