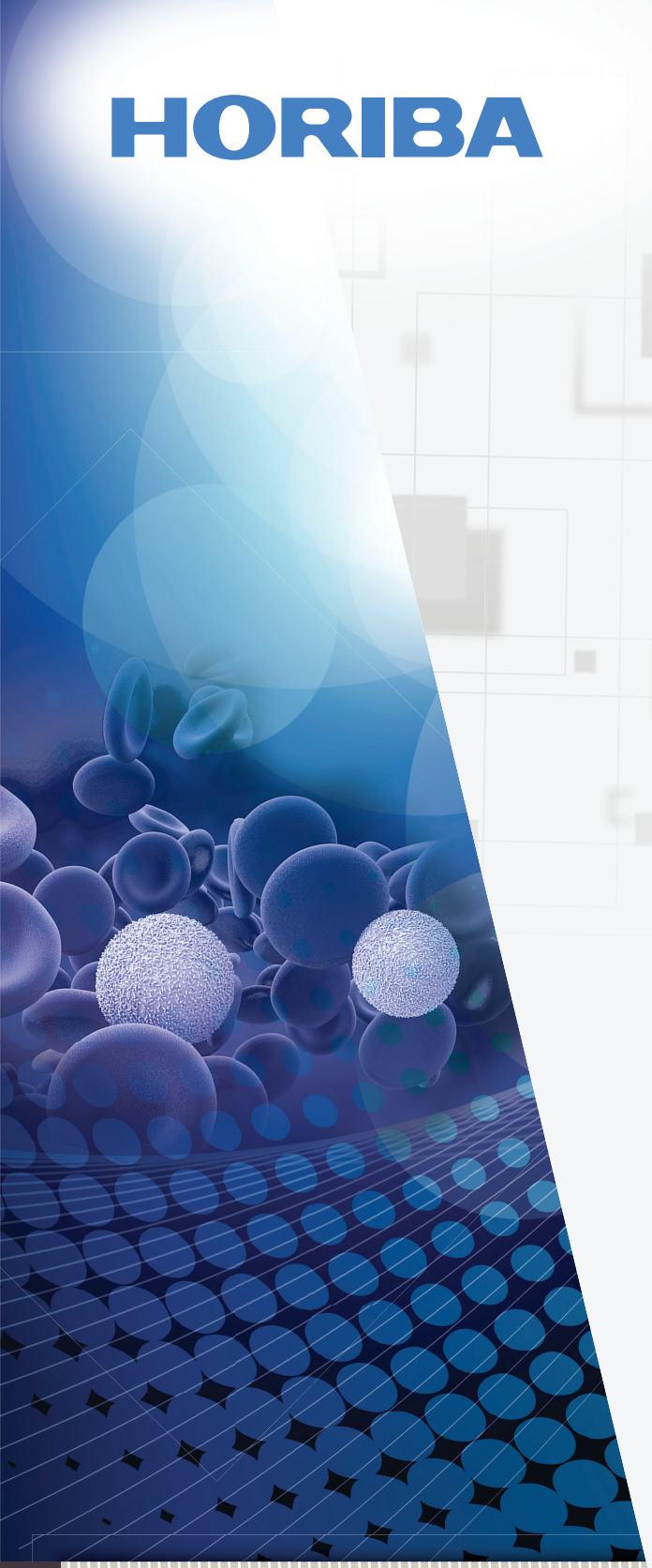
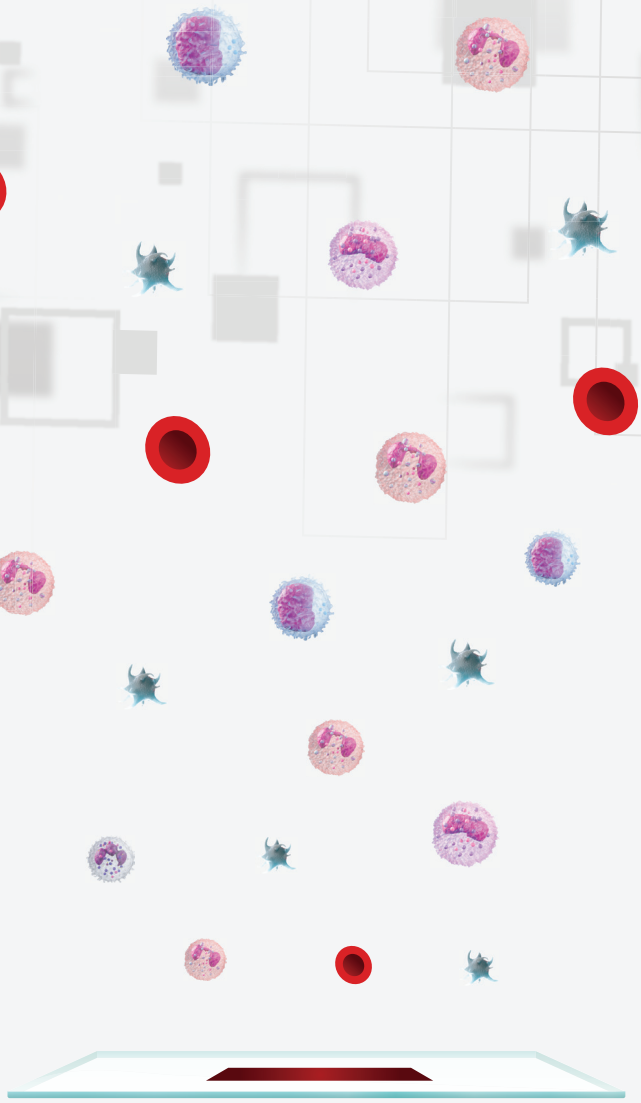
HORIBA





Explore the hidden
secrets of Digitalization

Analyzation by Digitalization

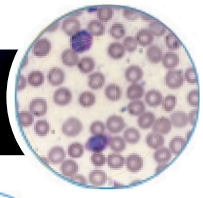
Yumizen D20

A complete automated solution for urine sedimentation and peripheral blood smear

One Device, Multiple Tests!



Inter observer variability in reporting of smear



Limitation in expert opinion due to accessibility



Emergency report in odd hours



Data storage and report retrieval



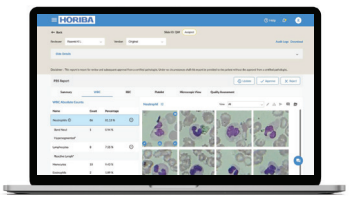


Yumizen D20

- AI-based device designed to automate manual microscopy in a diagnostic laboratory
- Decrease TAT of reporting smear with accuracy and efficiency
- Cloud based software for enormous data storage and report retrieval
- AI-based self maintenance and troubleshooting

Urine {SHRAVA}™

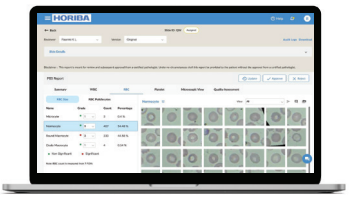




- Easy processing of sample with minimal human interventions
- Pre-classification on 7 different types of urine microscopic particles
- Centrifuge of urine sample is not required
- Real time view of sediment particle
- Increase the efficiency of urine analysis with visual evidence for reporting

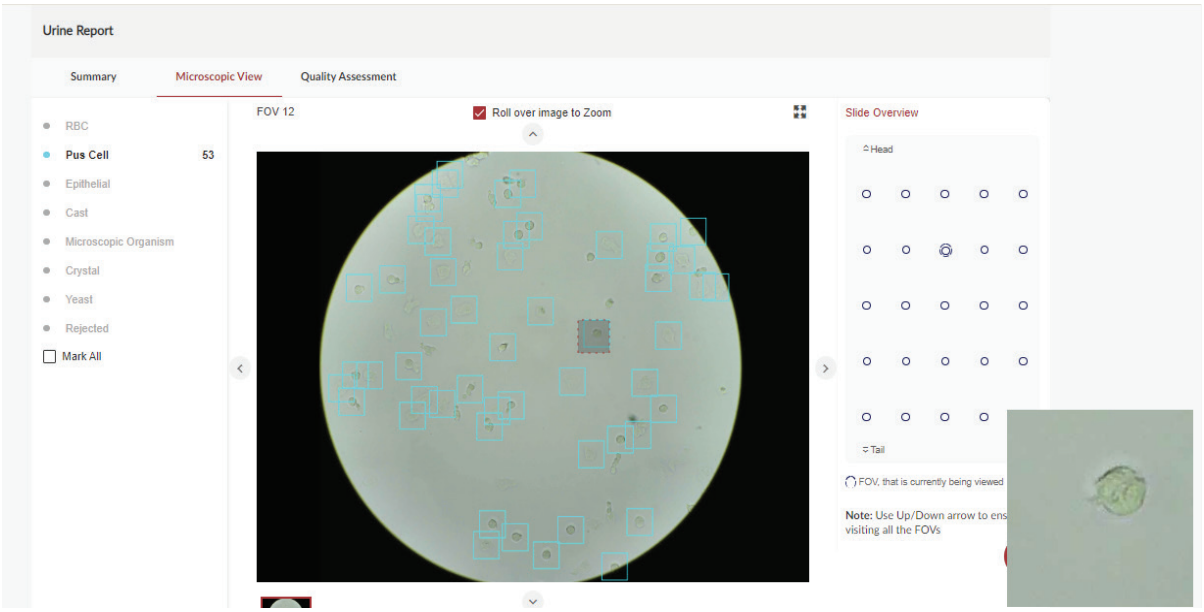
Blood {SHONIT}™



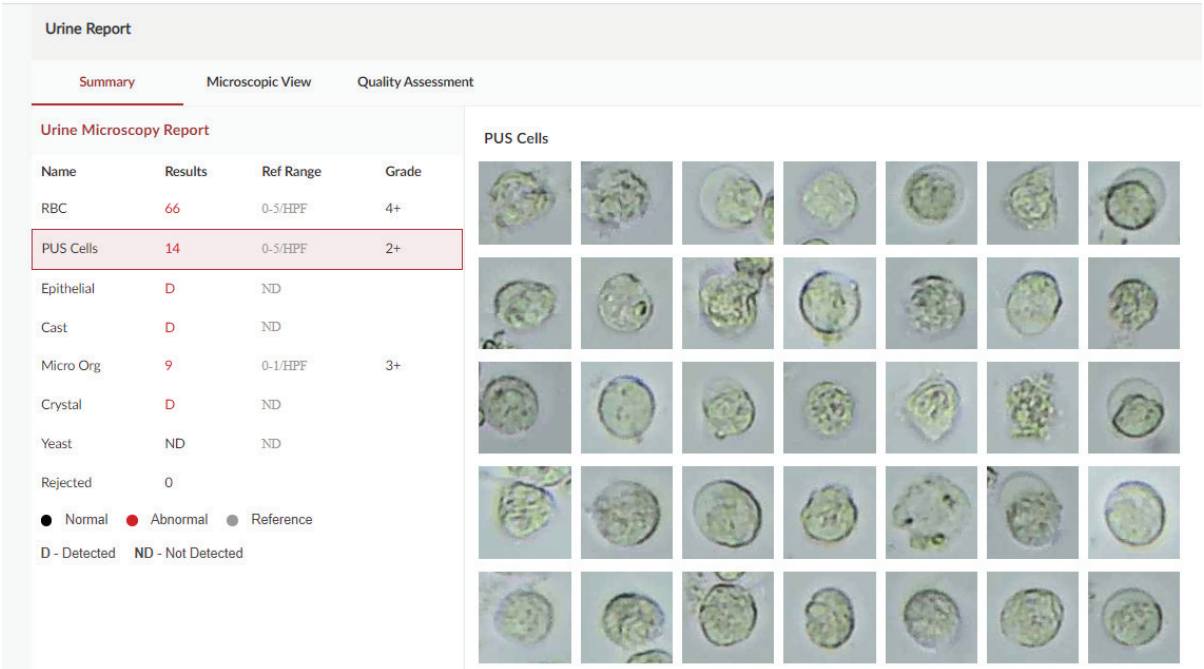


- Selection of monolayer through algorithm for peripheral blood smear
- Pre-classification of WBC, RBC and Platelet
- Selection of 100, 200 or 120 FOV for WBC identification
- Grading of RBC based on ICHS guidelines
- Identification of Platelets based on 10 FOV
- Identification of Malaria with visual evidence

Scaling the Digitalization in Urine sedimentation

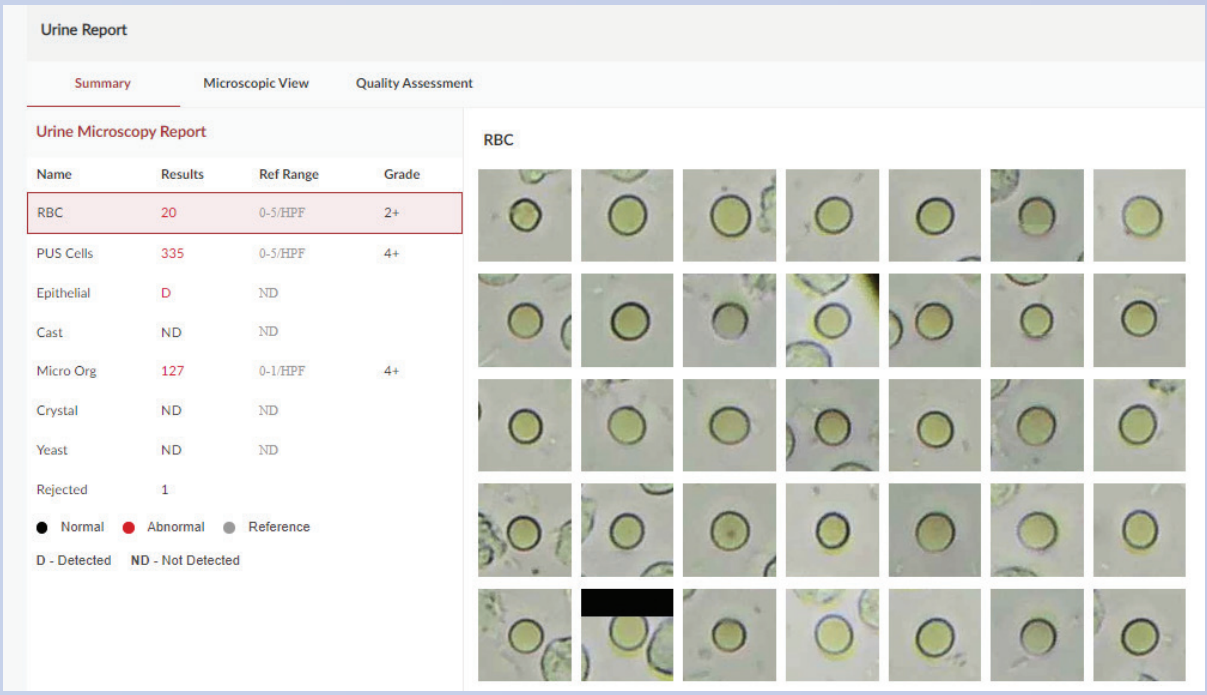


Microscopic view for real time view of sediments in urine

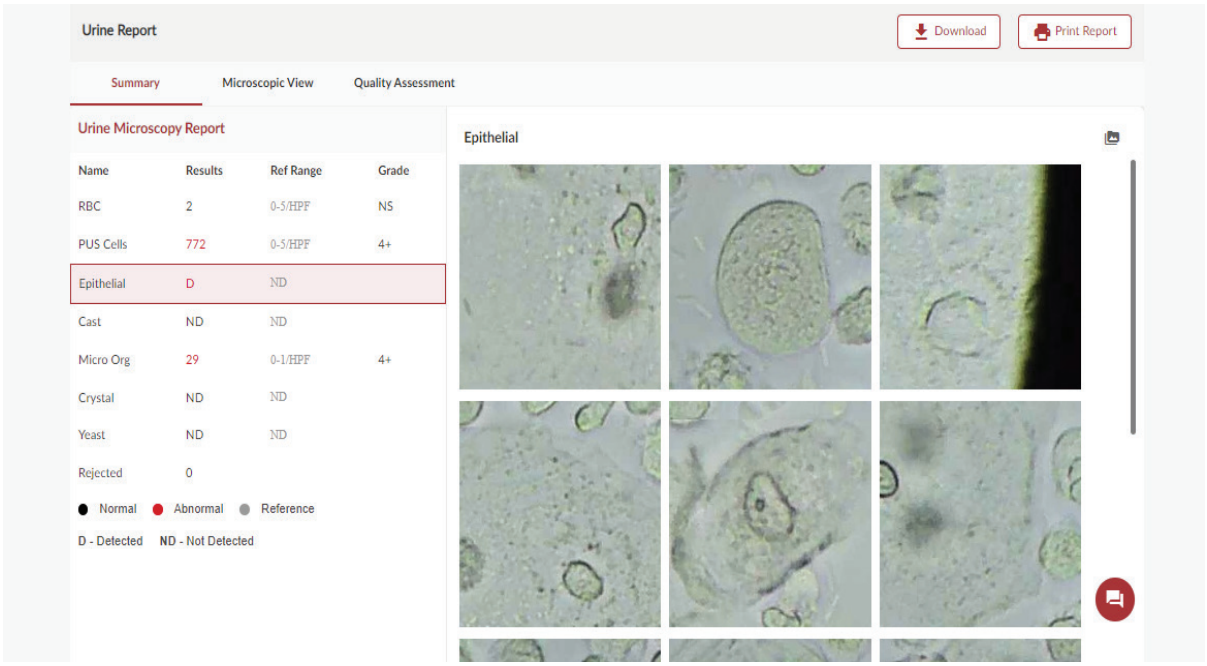


Identification of urine particles and pre-classification
of 7 types of morphology detection based on AI

Scaling the Digitalization in Urine sedimentation



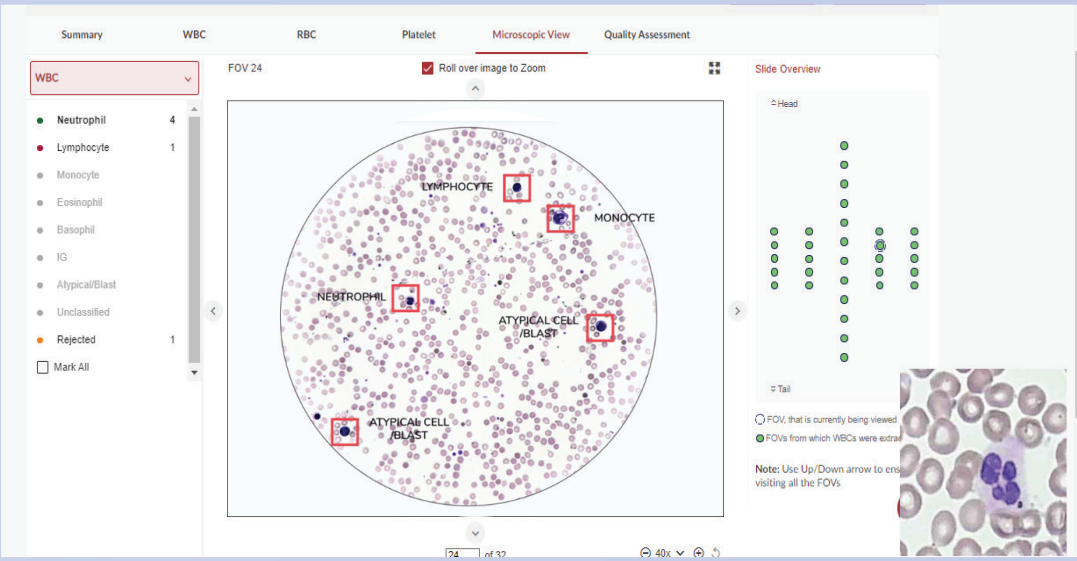
Pre-classification of sediment with result and grading as per guidelines



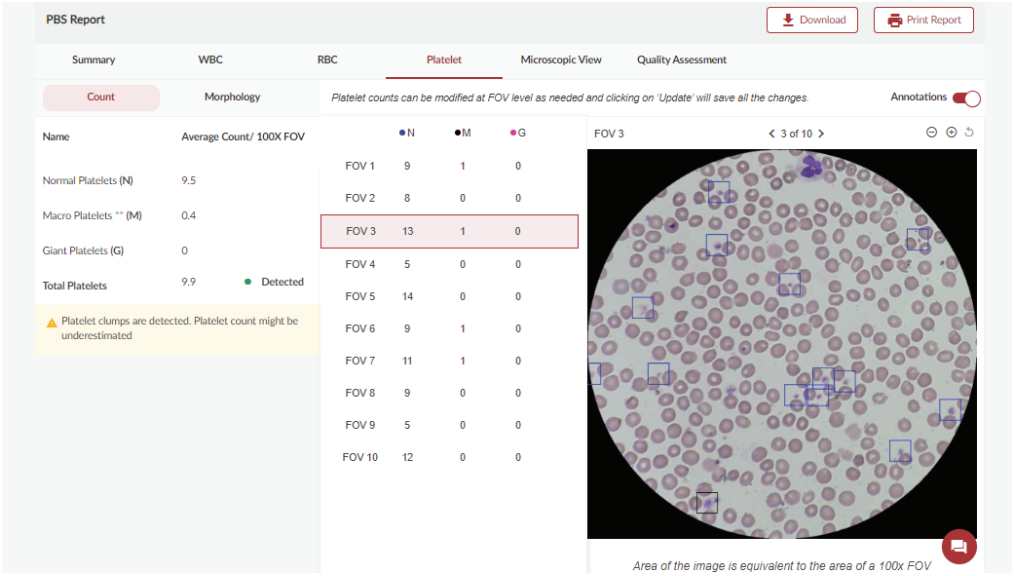
Visual evidence of sedimentation with grading of cell

Clinically validated to aid in cell detection

Microscopic View

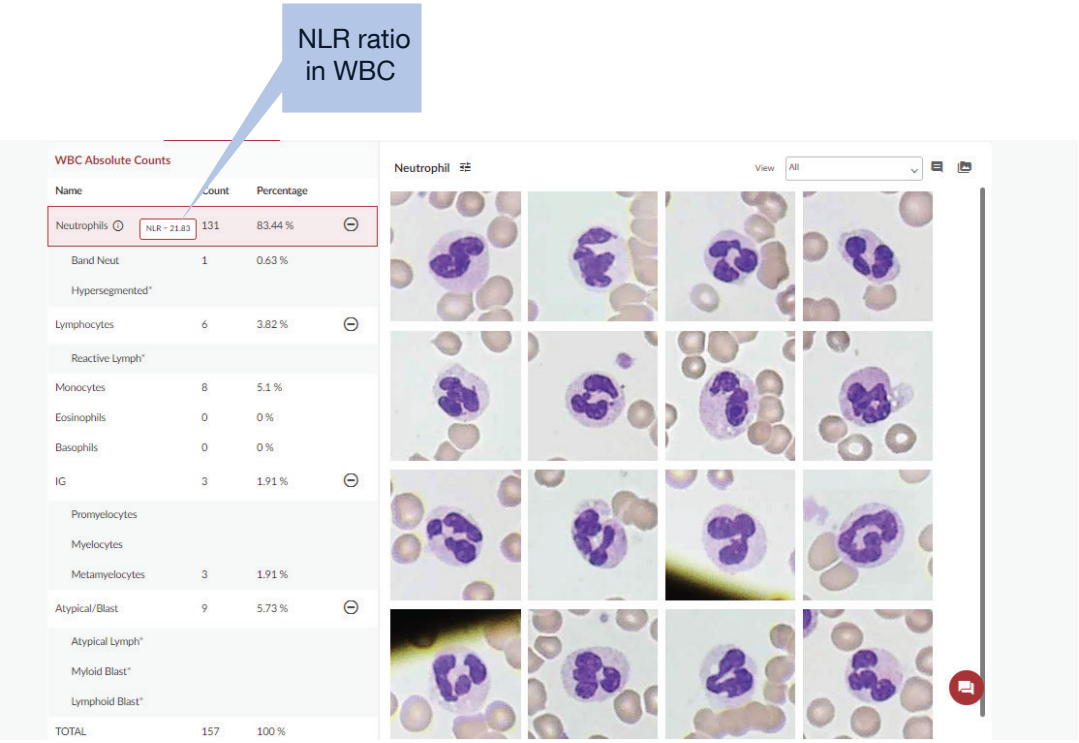


Microscopic view to elaborate cell identified in
FOV with color code to access the identified cell

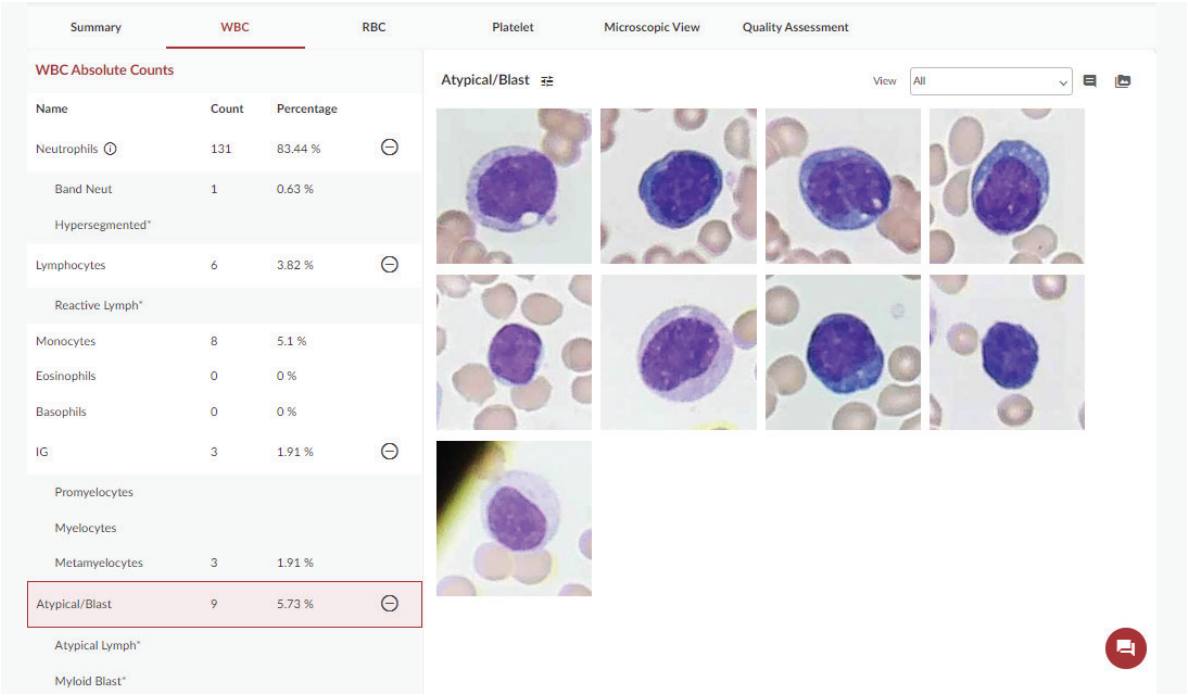


Platelet count with 10 FOV, can identify
Giant platelet, Macro platelet and Platelet clumps

WBC Identification

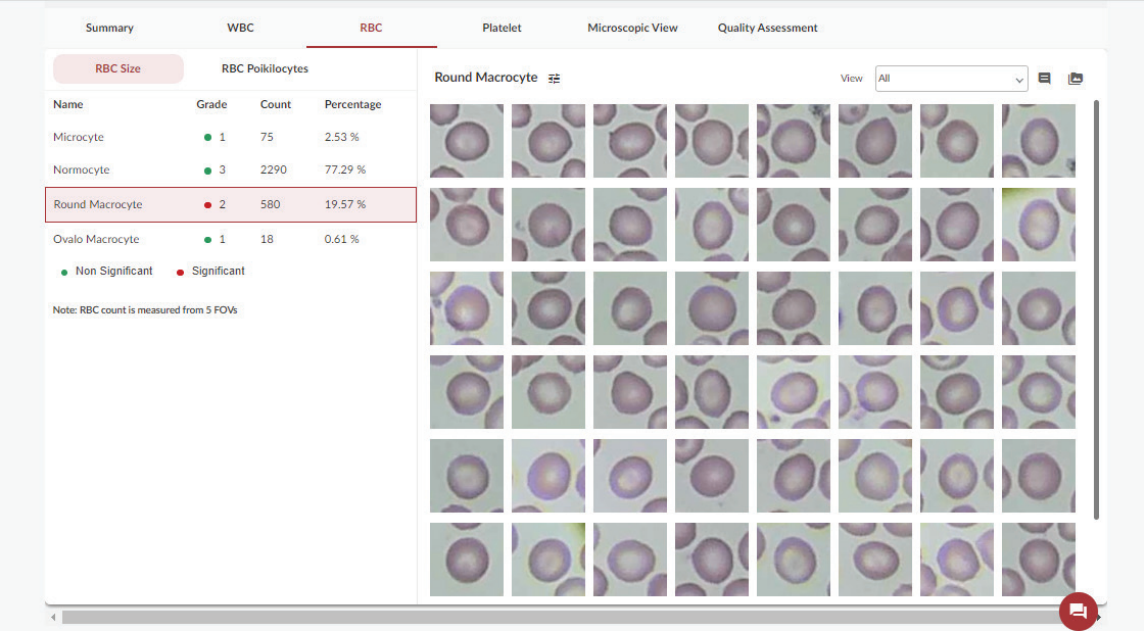


13 classification and sub-classification of WBC

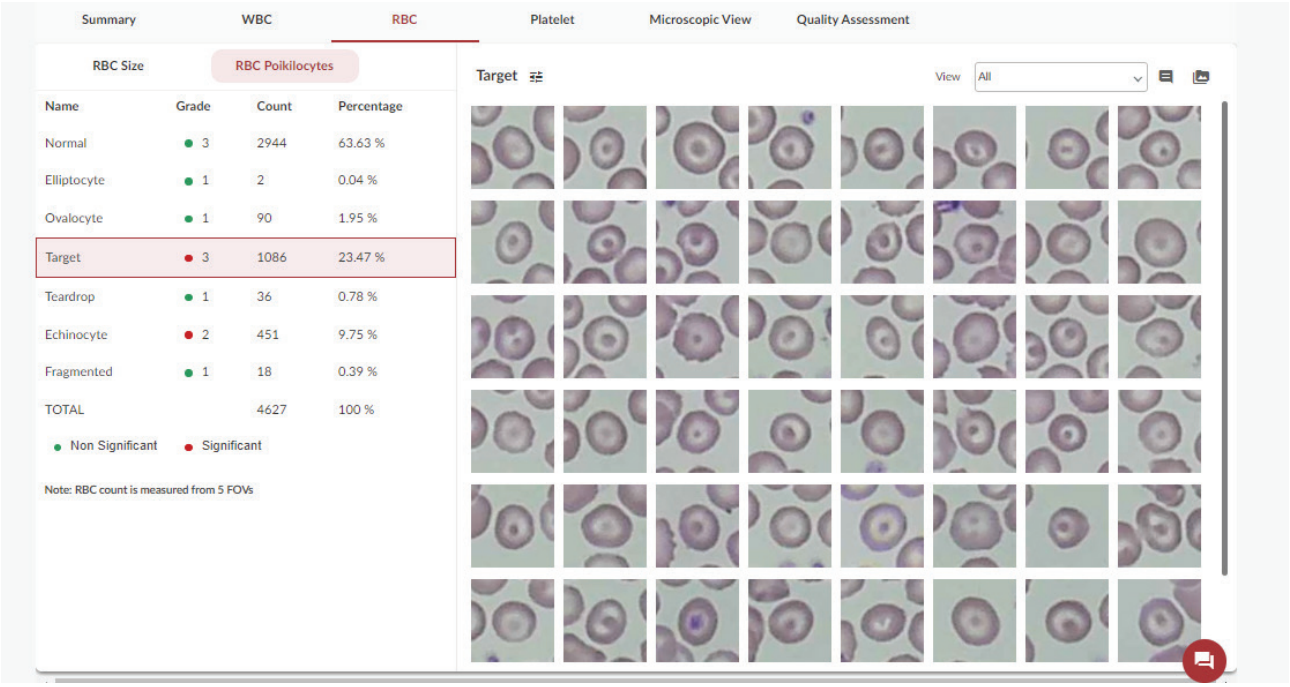


Identification of Blast in WBC module with visual evidence

RBC Identification



11 types of RBC pre-classification with ICSH guidelines for grading



Identification of Target cell, Echinocytes, Elliptocytes, Ovalocytes, Fragments



Yumizen D20

A complete automated solution for urine sedimentation and peripheral blood smear



Prepare: Prepare the slide. The system is stain and smear agnostic

Insert: Insert the slide in Yumizen D20

Scan: Scan the slide on Yumizen D20; choose number of WBCs to count or number of images to capture

View: Review the pre-classified WBC, RBC and platelets report on any web-connected device from anywhere

Verify: Check and confirm the results from the AI with the help of the visual evidence

Report: Publish peripheral smear report with images

TECHNICAL SPECIFICATIONS

Slides
- Patient ID can be put manually
- One Slide at one time
- AI-driven scanning at 400X
- Dedicated cartridge for urine sample

Stain
- Any Romanowsky stain for Peripheral blood smear
- 1 cartridge, 3 urine samples can be processed

Quality Control
- Performance Qualification once a day
- OQ needs run once in 3 months

Yumizen D20 classification
- **Urine Classification:** Pus Cells, RBC, Epithelial cell, Yeast cell, Micro organism, Cast and Crystal
- **Peripheral blood smear**
  - **WBC:** 7 Part DC including Neutrophil, Lymphocytes, Monocytes, Eosinophils, Basophils, Immature Granulacytes
  - **RBC:** Microcytes, Normocytes, Round Macrocytes and Ovalo Macrocytes
  - **Platelets:** Presence of Platelets, Macro Platelets, Giant Platelets and Platelet Clumps

Throughput
- For Peripheral blood smear - 20 slides/hour
- For urine - 40 sample/hour

Maintenance
- Objective lens cleaning daily

Electrical Specification
- Power : 96W, 100-294 V AC, 50/60 Hz

Weight
- 40 kg
- Size : (W* D* H) 485 mm X 572 mm X 485 mm

Certificate
- CE Certified (IVDR)

Printer
- Laser/Inkjet Printer

Storage
- Cloud based software (Unlimited)

Yumizen D20 with Shrava (Urine): Performance metrics

FORMED ELEMENTS IN URINE	RBC	WBC	BACTERIA	EPITHELIAL CELL	CRYSTAL	YEAST
SENSITIVITY%	82.00	60.00	87.00	82.00	65.00	0.84
SPECIFICITY%	96.00	97.00	78.00	81.00	99.00	0.87

Yumizen D20 with Shonit (Blood): Performance metrics

PATCH LEVEL ANALYSIS (n=>2000 Cells)	NEUTROPHILIS	LYMPHOCYTES	MONOCYTES	EOSINOPHILIS	BASOPHILIS
SENSITIVITY%	99.74	90.41	95.56	91.26	100
SPECIFICITY%	98.39	99.96	99.90	99.83	99.87

HORIBA India Private Limited

246, Okhla Industrial Estate Phase III, New Delhi - 110020, India

Tel : +91 (11) 4646 5000 / 46695001 | **Fax :** +91 (11) 4646 5020 / 4669 5010, https://www.horiba.com | **E-mail :** service.in@horiba.com