



NINGBO KONFOONG BIOINFORMATIN TECH CO.,LTD

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## PRODUCT BROCHURE

We Are Creating  
A Future Of Intelligent Pathology

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**FOCUS ON PATHOLOGY**  
扎根病理  
专注病理  
**DEDICATED TO PATHOLOGY**  
深耕病理  
服务病理

**SERVE FOR PATHOLOGY**  
深耕病理  
服务病理

## Company Introduction



## Company Introduction

KONFOONG BIOINFORMATION TECH CO.,LTD(KFBIO) established in Aug 2011, KFBIO aims to promote the development of digital pathology with the latest technology and concepts.

KFBIO, the innovative national high-tech enterprise, one of the few advocates of the end-to-end digital pathology solution in China, is devoted to digital pathology. KFBIO has been in the digital pathology industry for over ten years, and has developed five business segments including the digital pathology slide scanners, telepathology platform, pathology AI, routine pathology equipment and pathology diagnosis services, providing the most complete end-to-end digital pathology solution to meet different needs of customers.

## Milestones

- 2013** KFBIO digital pathology slide scanner registered as CDFA Class II Medical Devices Certificate
- 2014** KFBIO digital pathology slide scanner achieved CE
- 2016** Certificated as National hi-tech enterprise. Achieved A round financing
- 2018** Certificated by EN ISO 13485:2016 System
- 2019** Obtained the medical device registration certificate for Cervical Canner and 'TB AI Screening System'
- 2020** Achieved B round financing (**Intel Capital lead investment**)
- 2022** KFBIO digital pathology slide scanner upgraded **CE-IVDR** certificate
- 2024** The new factory building is completed and moved into, with a total area of 30,000 square meters

• • •

## Certificates



# KFBIO Scanner Series

## KF-PRO series

**High-quality model**  
for clinic and scientific research



KF-PRO-005

AI-assisted Analysis  
**High-matched Mode**



KF-PRO-020

**High stable model**  
for clinic, education and research



KF-PRO-040

**High-throughput model**  
for large hospitals and labs



KF-PRO-120

Full Digital Pathology Labs  
**Basic Model**



KF-PRO-400

**High Speed**  
25s scanning (15mm\*15mm,20x), rapid frozen section diagnosis, over 200,000 cases

**Z-stack Scanning**  
Support Z-stack scanning to fuse a high-quality slide, support single layer viewing

**Cloud Configuration**  
Provide free cloud for storage and one-click sharing

**Support Different Slides**  
Support precise scanning of light color staining, uneven thickness, small tissue slides

**Support Different Sizes**  
1\*3 inch, 2\*3 inch, 6\*8 inch, automatic recognize tray model to adjust parameter

**Batch Loading**  
Support tray loading and slide box loading

**High Stability**  
Electric condenser, strong light source and **high-sensitive camera** ensure excellent scanning performance

**High Flexibility**  
Support small and large batch scanning for remote consultation

**AI-enhanced Imaging**  
Slides recognition improvement, color contrast of cell nucleus enhancement, image recognition accuracy improvement

**Multi-site Management**  
Central archive management for different working scenarios and centralized AI analysis

**High Speed**  
15rnm\*15rnm, 20x, 15s only

**Stable Scanning**  
Magnetic suspension motor drive 99.85% slides scanned successfully

**High Fidelity**  
High resolution 0.25 um/pixel (20x), 0.125um / pixel(40x) WSI scanning

**Top Accessories**  
OLYMPUS top objective lens CHROMA narrow band filter

**High Precision**  
50nm positioning accuracy Support 80x magnification

**Professional Services**  
Customize products quickly, Provide in-time support

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**High Precision**  
50nm positioning accuracy Support 80x magnification

**Professional Services**  
Customize products quickly, Provide in-time support

**Full Automatic**  
One-click scanning, read slide bar code automatically, upload classified slides to storage server

**High Stability**  
Record: Scan 4600 continuously without errors

**Intelligent Scanning Mode Switch**  
Switch scanning parameter and mode automatically for different slides

**Automatic Image Quality Grade**  
Grade image quality automatically before archiving

**Slide Protection Programme**  
Push out or skip the nonstandard slides automatically to avoid getting stuck

**Big Data Efficient Management**  
Centralized data storage, efficient classification management, bind to patient information automatically graded **storage**

# KFBIO Scanner Series

## KF-FL series

Ultra-fast Scanning

5 Kinds of Scanning Flux

3 Colors Independent Processing

50nm Precise Control

80x Optical Imaging



▲ KF-FL-400



▲ KF-FL-120



▲ KF-FL-040



▲ KF-FL-020



▲ KF-FL-005

### Digital Pathology Slide Scanner Parameter

Model	KF-PRO-005	KF-PRO-020	KF-PRO-040	KF-PRO-120	KF-PRO-400
Capacity	5	20	40	120	400
Scanning Mode			Line Scanning		
Scanning Speed			25s (20X,15mm x15mm) 40s (40X,15mm x15mm)		
Objective Lens			Plan achromatic objective 20X, NA 0.8; 40X, NA 0.95		
Resolution			≤ 0.25 μm/pixel (20X) ≤ 0.125 μm/pixel (40X)		
Position Accuracy			50nm		
Z-stack	✓	✓	✓	✓	✓
AI Recognition	✓	✓	✓	✓	✓
Fluorescence Upgrade	✓	✓	✓	✓	✓
Image Format			KFB/TIFF/SVS		
Movement Mechanism			Magnetic suspension drive, no noise, no abrasion		

### Fluorescence Model Parameter

Acceptable Slides	Digital 5 Slides Scanner: 1*3inch, 2*3inch, 6*8inch, standard bright-field and fluorescence slides; Other models: 1*3inch, standard bright-field and fluorescence slides		
6 channels to choose, CHROMA filter			
Fluorescence Channel	Channel Name	EX	BS
	KF-DAPI	350/50	400
	KF-GREEN	495/25	515
	KF-ORANGE	546/10	556
	KF-RED	580/25	600
	KF-CY5	630/20	647
	KF-CY7	710/75	760
Fluorescence Scanning Speed	3 channels exposure time: 50ms; 10mm*10mm scanning time: 7min 6 channels exposure time: 50ms; 10mm*10mm scanning time: 14min		
Fluorescence Area	Select an area manually, recognize marked area automatically		
Fluorescence Camera Parameter	Active cooling 1.2 inch target surface sCMOS fluorescence camera.		
Z-Stack	Support Z-stack and image fusion function		

### Whole-slide Imaging Analysis System (for scientific research)

Acceptable Slides	H&E, IHC, ISH, FISH, IF slides, etc; Oncology, neurosciences, metabolism, transplantation, toxicological pathology;		
Analysis Speed	1.5cm*1.5cm WSI analysis, ≤1min		
Module	Choose module according to needs		

# KFBIO Scanner Series

## KF-PRX series

**KF-PRX-120**



**KF-PRX-480**



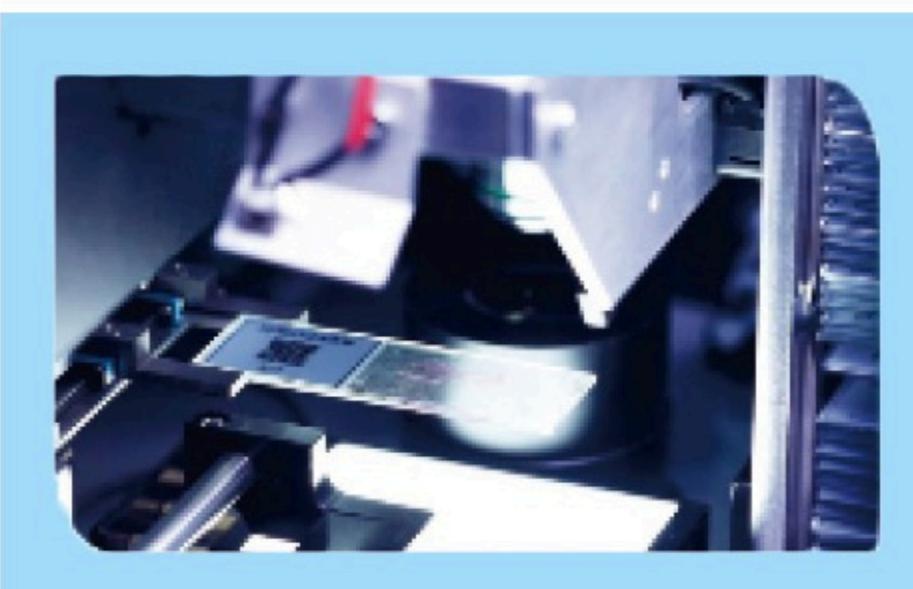
**KF-PRX-640**



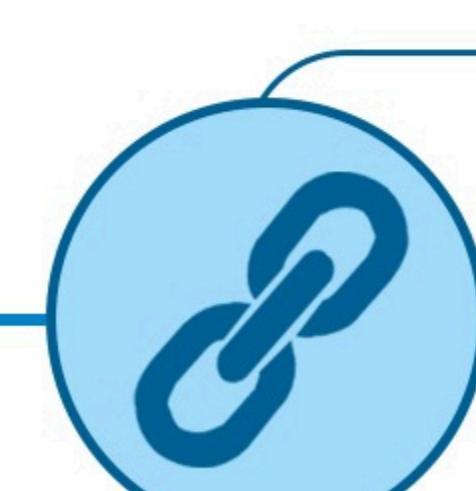
**KF-PRX-1200**



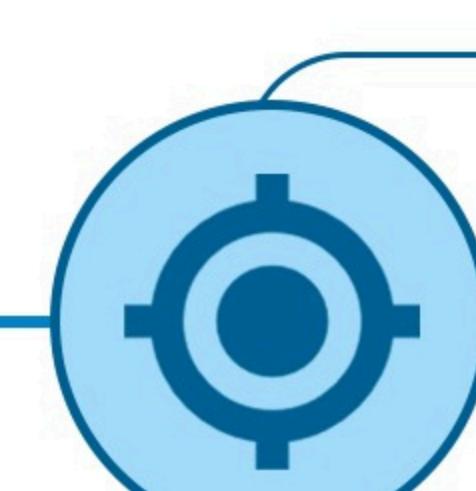
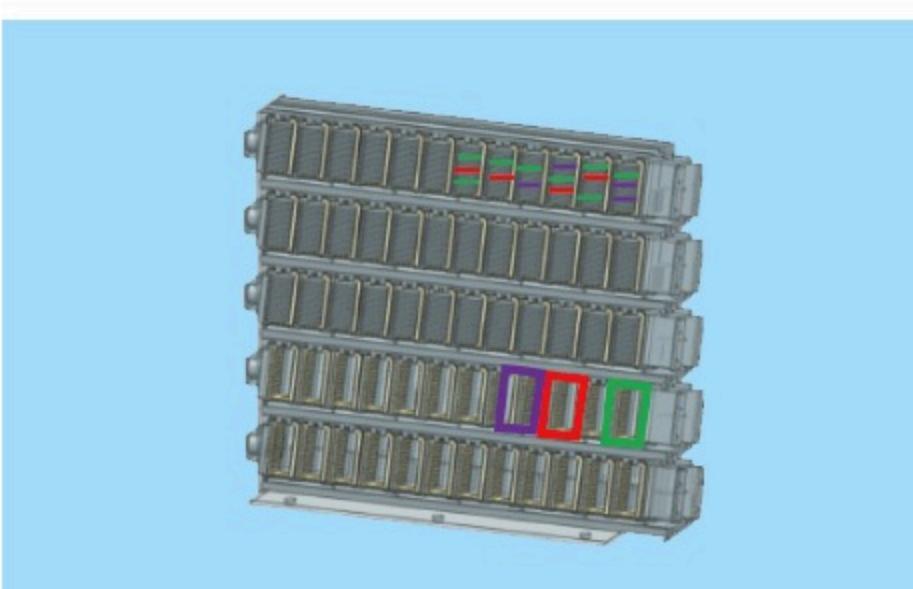
### Features



Adhere to the optical path design of classic microscopic imaging to restore the experience of reading slides under the microscope



Staining, scanning, and slicing ensure the seamless connection of the business workflow.



It supports second-level integrated prescanning and enables quick perception of the physical position of glass slides.

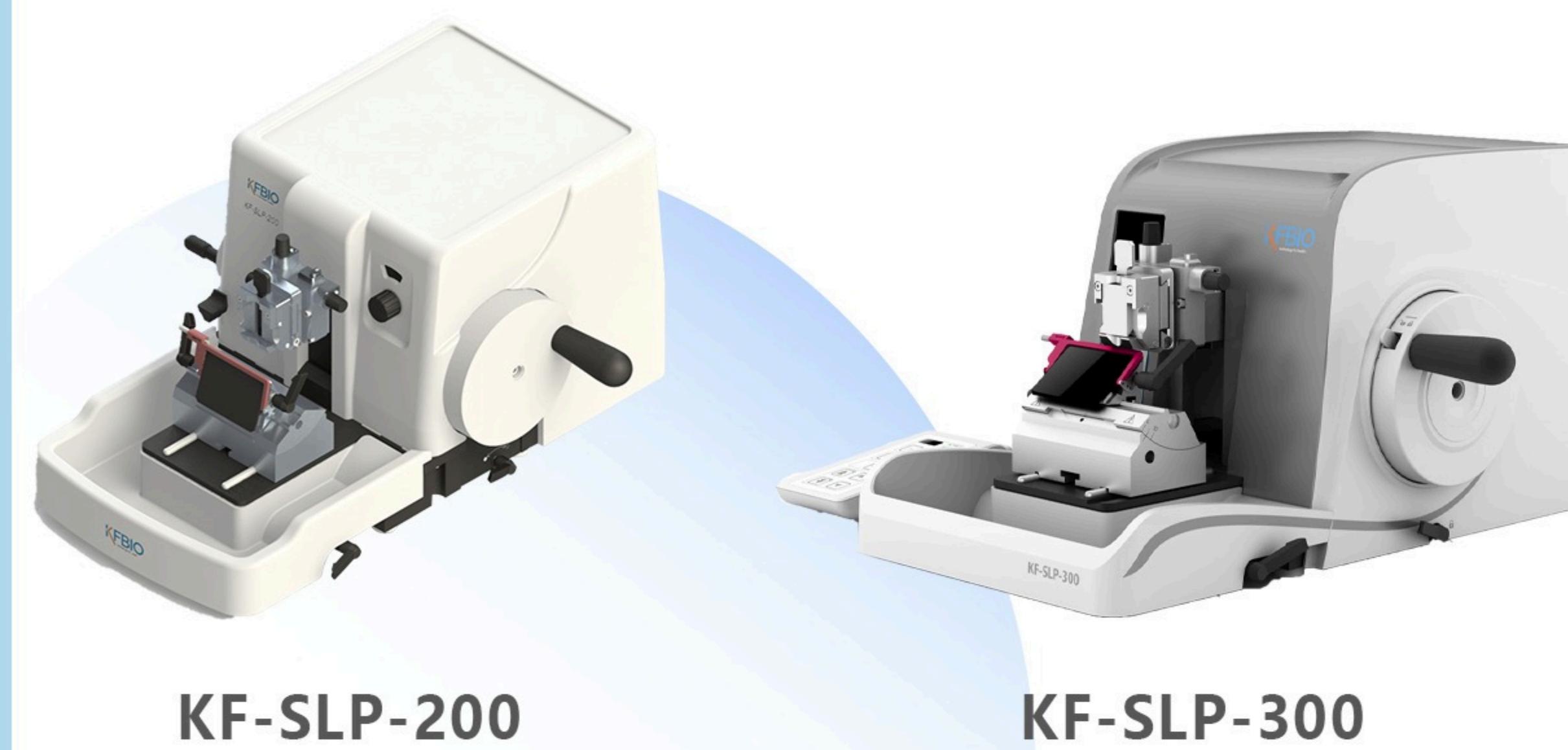
# Full Process Tracking And Quality Control Solutions



KF-GSC-100

## -01- Paraffin Rotary Microtome

- Rapid sample location
- High slicing precision
- Effortless operation experience



KF-SLP-200

KF-SLP-300

## -03- Printer Series

- High Speed
- High Resolution
- Compact Size
- High Stability



KF-UV-150

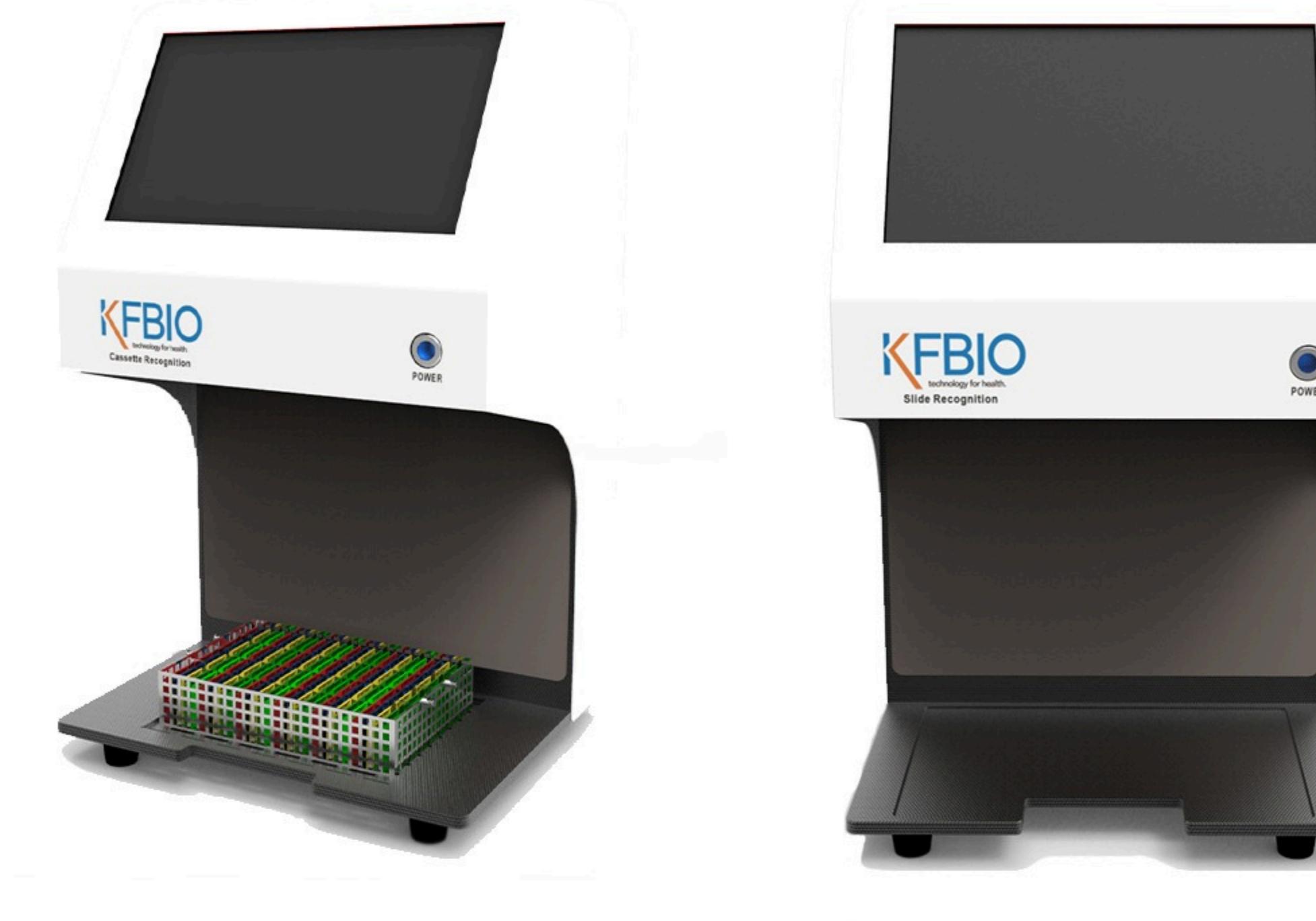
KF-UE-006

KF-UE-001

Interconnection Rating

EMR Rating

Innovation In Information Technology Application



KF-ARC-300

KF-ARS-300

## -04- Recognition System

- High-efficiency Identification
- Independent Software
- Convenient Design
- Strong Compatibility
- Intelligent Verification

## -05- Stainer and coversliper

- Fully automatic
- Easy to operate,
- High speed



KF-RF-III

KF-DRF-A

KF-RF-V

# Liquid-based cytology Integrated solution

## Cell Preservation Solution

- Effective fixation for sample cells
- Formaldehyde-free, environmentally friendly and safe
- Patented red blood cell lysis technology, 100% clean background, **fully preserves cells, long storage time, shelf life of 2 years**
- Supports HPV, P16, and other tests**

## Cleaning Solution

- Powerful removal** of residual cells and reagents
- Maintains cleanliness of the reaction system

## Papanicolaou Stain Solution

- AI-specific** staining solution
- Patented formula, **high staining saturation**, good sharpness
- High transparency, distinct spacing between cells and cell nuclei, **clear and distinct cell clusters**
- Effectively distinguishes between keratinized and non-keratinized cells
- Perfectly compatible with AI analysis and doctor's visual needs

## Sample Density Separation Solution

- For the separation of different components in samples
- Maintains cell morphology**, avoiding cell shrinkage caused by saline components
- Utilizes organic macromolecules to increase the density of sample suspension, reduce sedimentation speed, effectively remove blood cells and mucus, and **retain cells with diagnostic significance**

## Buffer Solution

- For providing or maintaining reaction environment
- Efficiently maintain PH values**

## Hematoxylin Staining Solution

- For nuclear staining
- Long preservation time
- Strong and long-lasting nuclear staining**

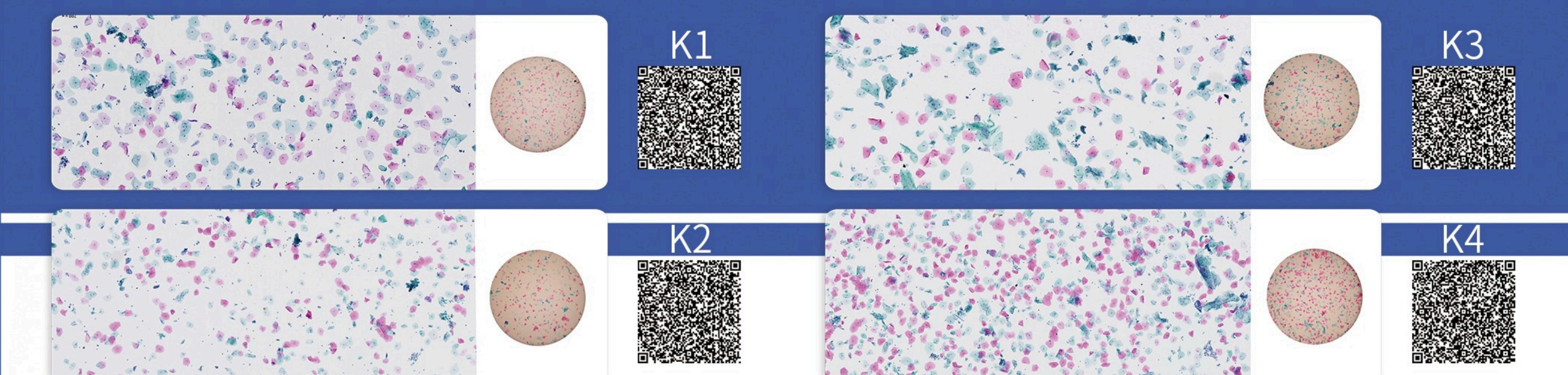


Model	KF-CT-3000Y	KF-CT-4000Y	KF-CT-024E	KF-CT-048E	KF-PD-1000L
<b>Main Advantages</b>	Suitable for small and medium medical institutionsOpen operation space, simple operation	Meet most users' requirements-Closed, high staining efficiencyIndependent stain reagent direct injection system, improve production efficiency	Following the traditional sedimentation slide-making principle, it allows one-click automatic operation, suitable for lab slide-making and cervical cancer cell screening		The circulating motion assembly line combines patient info input, full-auto slide-making, staining, dehydration, clearing, and coverslipping, reducing labor costs.
<b>Sample Quantity</b>	24	48	24	48	50
<b>Speed</b>	24slides/45min	48slides/45min	24slides/≤55min	48slides/≤110min	90slide/60min
<b>Production Technology</b>	Reaction chamber natural sedimentation technology	Reaction chamber natural sedimentation technology	Reaction chamber natural sedimentation technology	Reaction chamber natural sedimentation technology	Reaction chamber natural sedimentation technology
<b>Sample Load</b>	One sample load	Four sample load	Four sample load	Four sample load	Four sample load
<b>Stain Method</b>	Four channels liquid separation	Independent stain reagent direct injection technology	Independent stain reagent direct injection technology	Independent stain reagent direct injection technology	Independent stain reagent direct injection technology
<b>Waste Liquor Disposal</b>	Four channel confluence negative pressure suction	Independent waste liquor extraction and control technique	Independent waste liquor extraction and control technique	Independent waste liquor extraction and control technique	Independent waste liquor extraction and control technique
<b>Exhaust Gas Filter</b>	—	Closed passive exhaust gas filtration	—	—	Independent vacuum pump extraction technology
<b>Monitor Reagent and Consumable</b>	—	—	—	✓	—
<b>Sample Pre-process</b>	—	—	—	—	—
<b>Process Gynecological and Non-gynecological samples</b>	✓	✓	✓	✓	✓

## STAINING EFFECT

>EQUAL CELL DISTRIBUTION  
>SOFT AND BEAUTIFUL COLOR

>CLEAR CYTOPLASM  
>EASY DIAGNOSIS



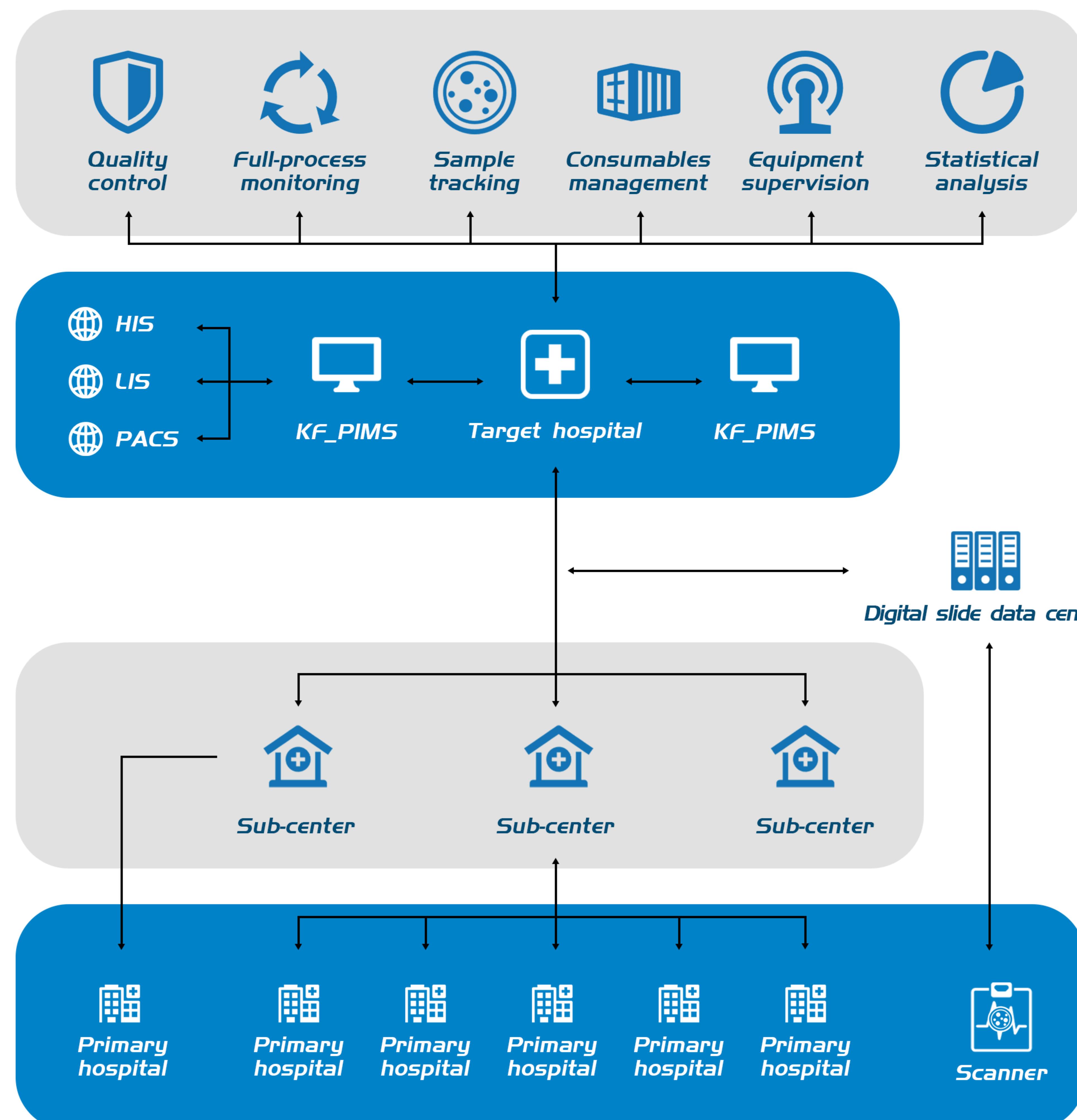
K1-K4 MEET VISUAL PREFERENCES OF DIFFERENT PATHOLOGISTS

SCAN QR CODE TO VIEW THE DIGITAL SLIDES.  
WHAT YOU SEE IS WHAT YOU GET.

# Pathology Information Management System

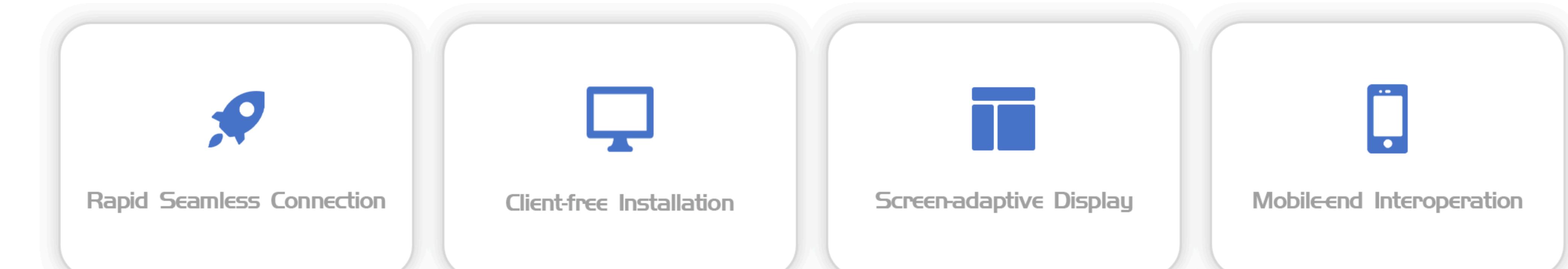
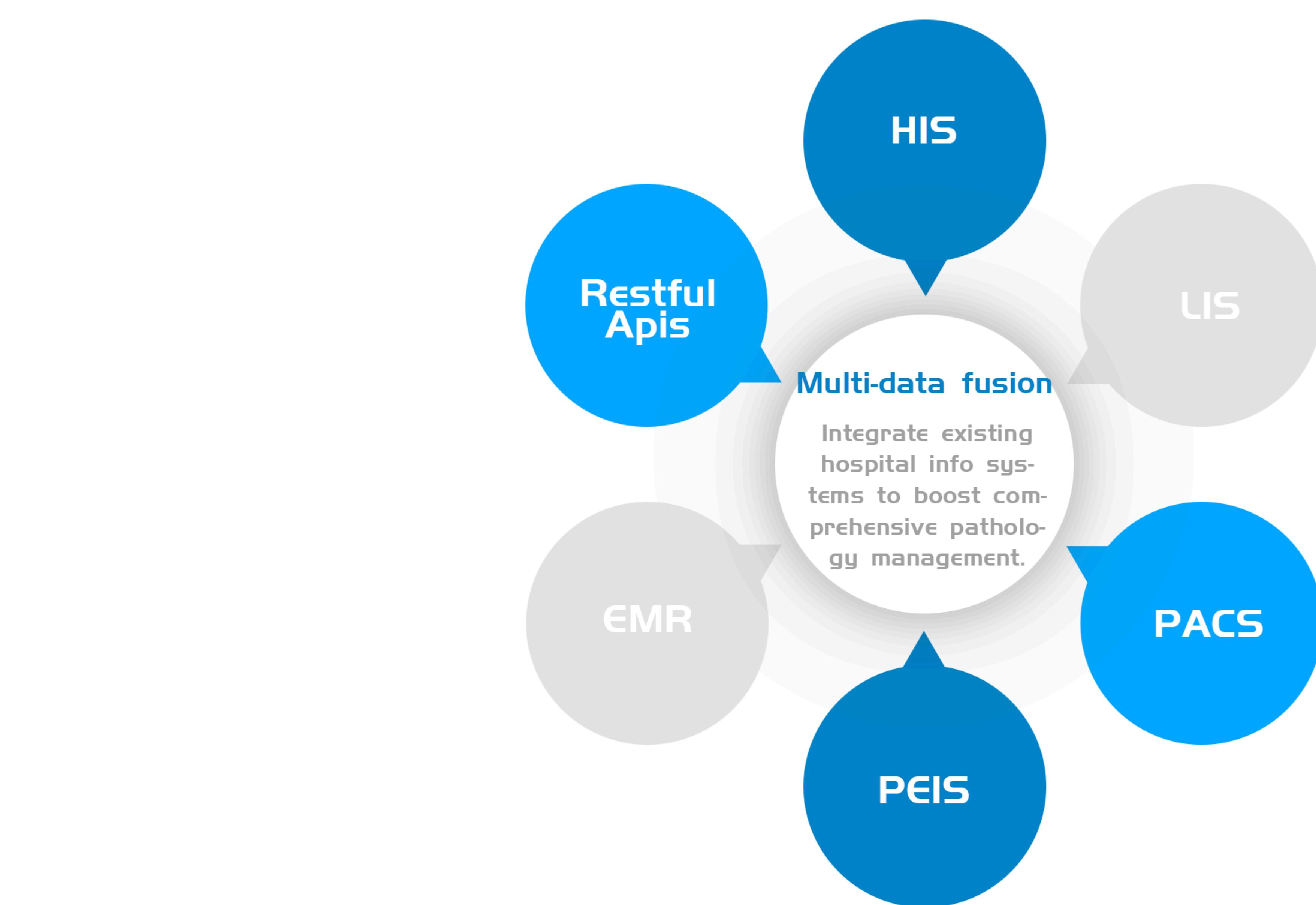
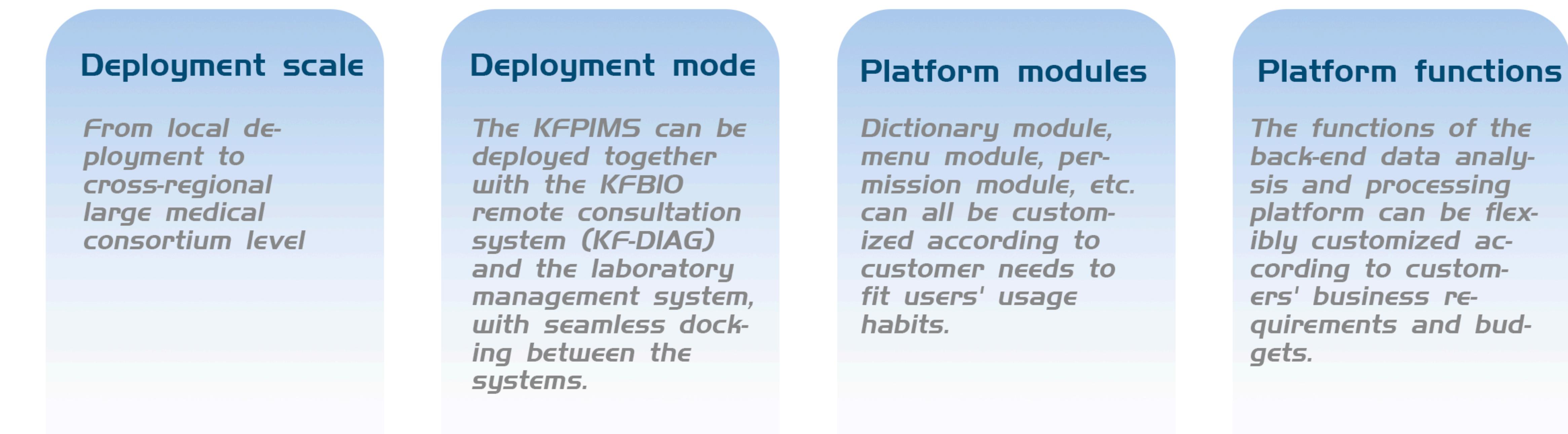
## Product Architecture

Seamlessly connect with various physical devices and systems



## KF-PIMS Features

Highly customizable



# KFBIO Digital Slide Management System

The Digital Slide Management Platform is an advanced healthcare IT solution that allows medical professionals, such as pathologists and researchers, to manage and analyze tissue slides digitally, providing more efficient and precise diagnostic and research methods for healthcare, education, clinical pathology, and scientific studies.



**B/S Arch**

- Quick upgrade
- Adapt to all kinds of screens
- Convenient operation and maintenance
- Scalability



**High Perf. & Availability**

- 99.99% availability
- Database capacity: Millions
- 3s data feedback



**Integration**

- OPEN for connect with other Information systems
- Scanner Integration - multiple File Format Support



**Permission control**

- Multi-level fine-grained access control based on users and roles

**120**

users can use DSMS simultaneously with its outstanding performance supported.

Dock and conduct data transmission with

**9**

scanners of different brands.

Connect with

**40+**

scanners for use by the clinical system in a single area.



**3000+**

There are global digital and intelligent pathology cooperation users.



The time for overall data retrieval and feedback shall not exceed **3s**

**OPEN**



different scanning formats and different systems.

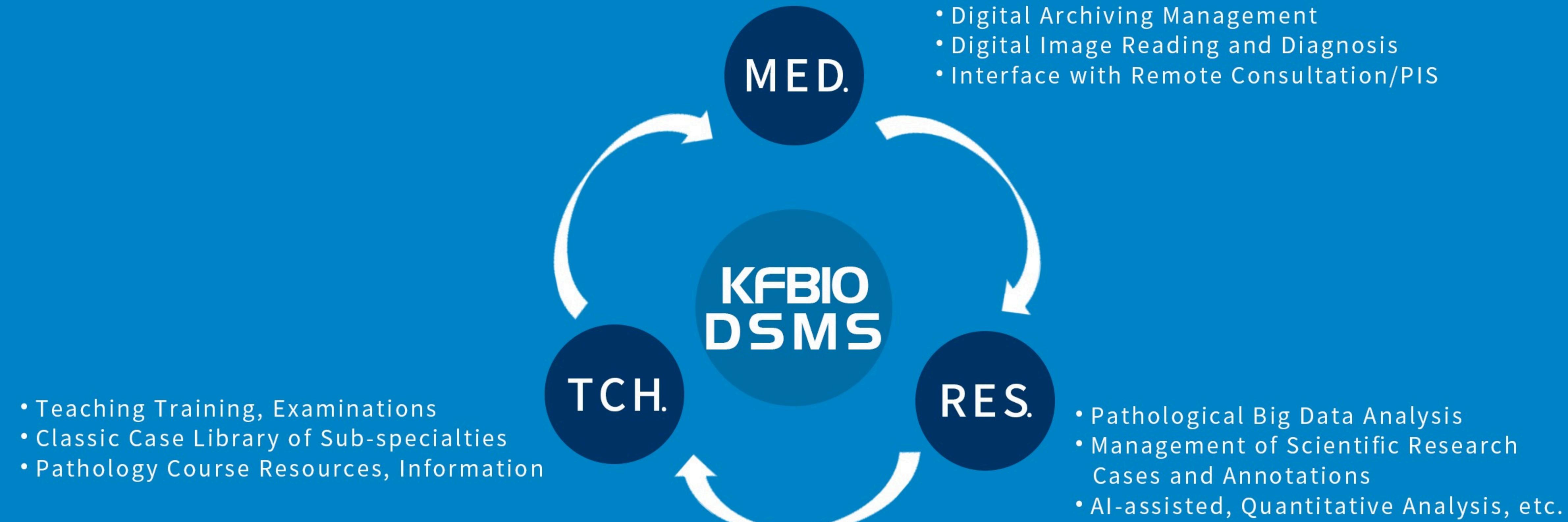
**26**

Cooperate to establish digital slide databases for specific diseases.

**2** **MILLION**

The monthly management volume of newly added digital slide data reaches pieces.

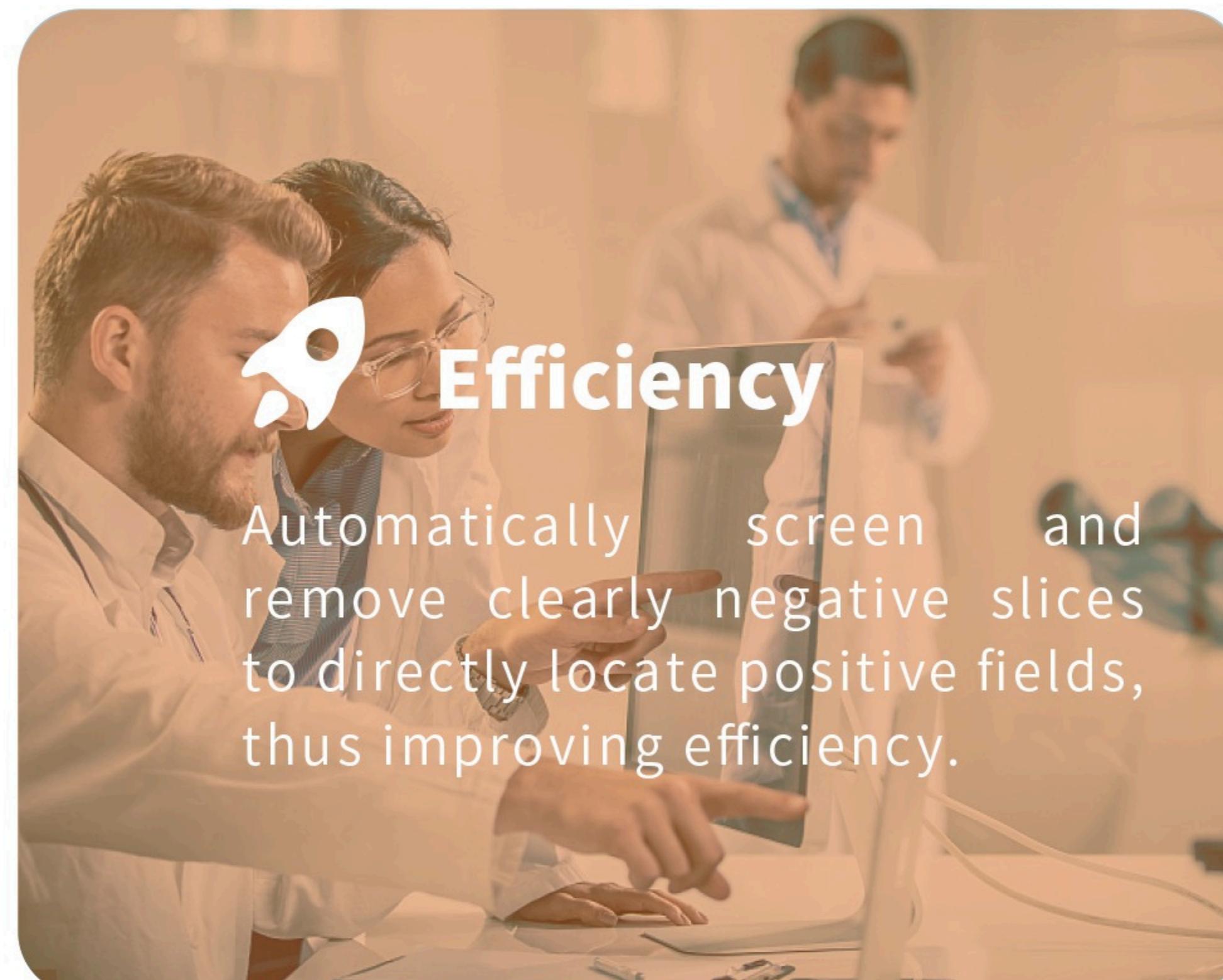
## Application Scenarios



# Artificial Intelligence Assisted Diagnosis Series Solutions

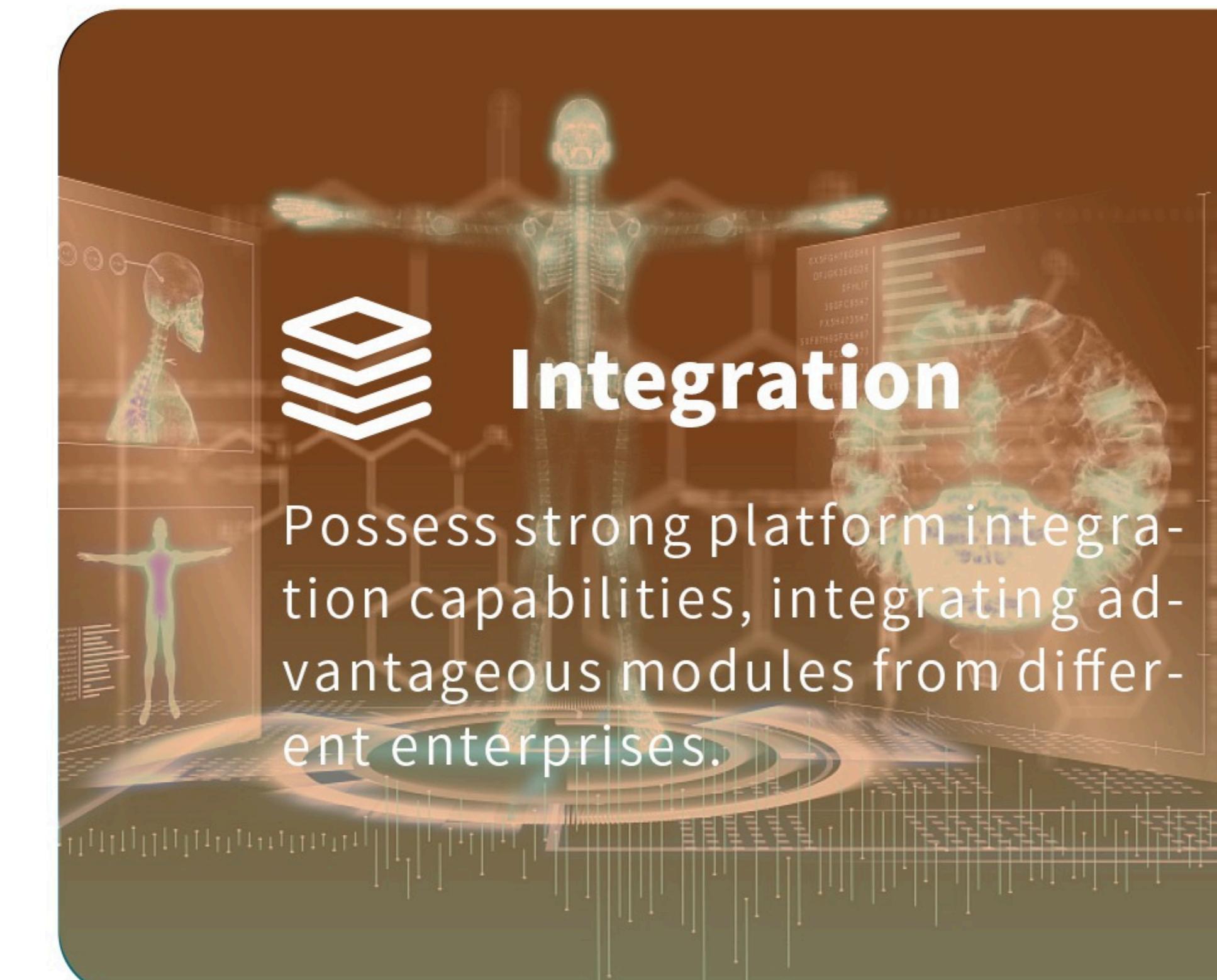
## 01 Liquid Based Cytology AI for Cervical Cancer

- One of the earliest diagnostic platforms with Class II certificate for pathological AI.
- Trained on high - quality sample library.
- Professional algorithm teams ensure system reliability.



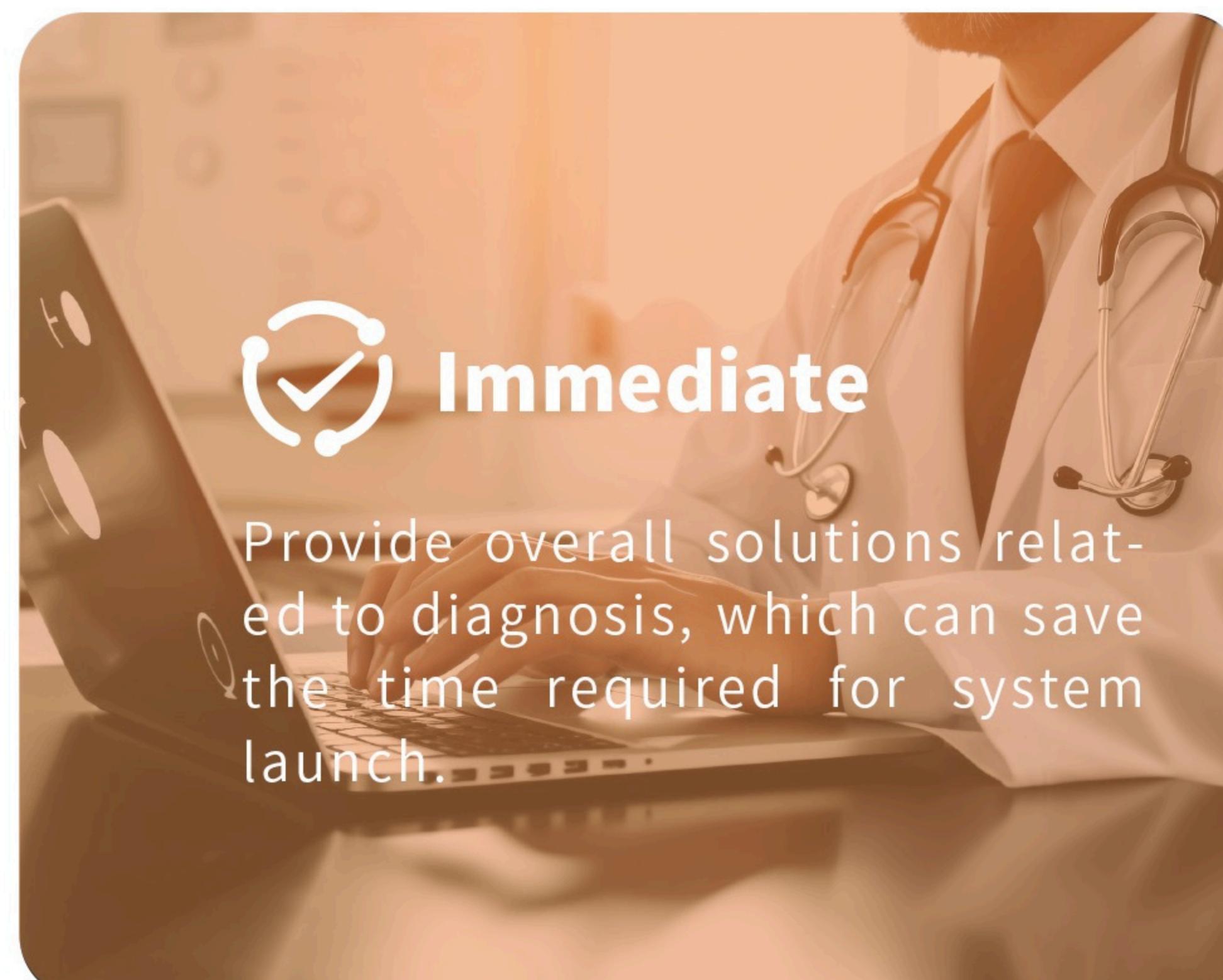
### Efficiency

Automatically screen and remove clearly negative slices to directly locate positive fields, thus improving efficiency.



### Integration

Possess strong platform integration capabilities, integrating advantageous modules from different enterprises.



### Immediate

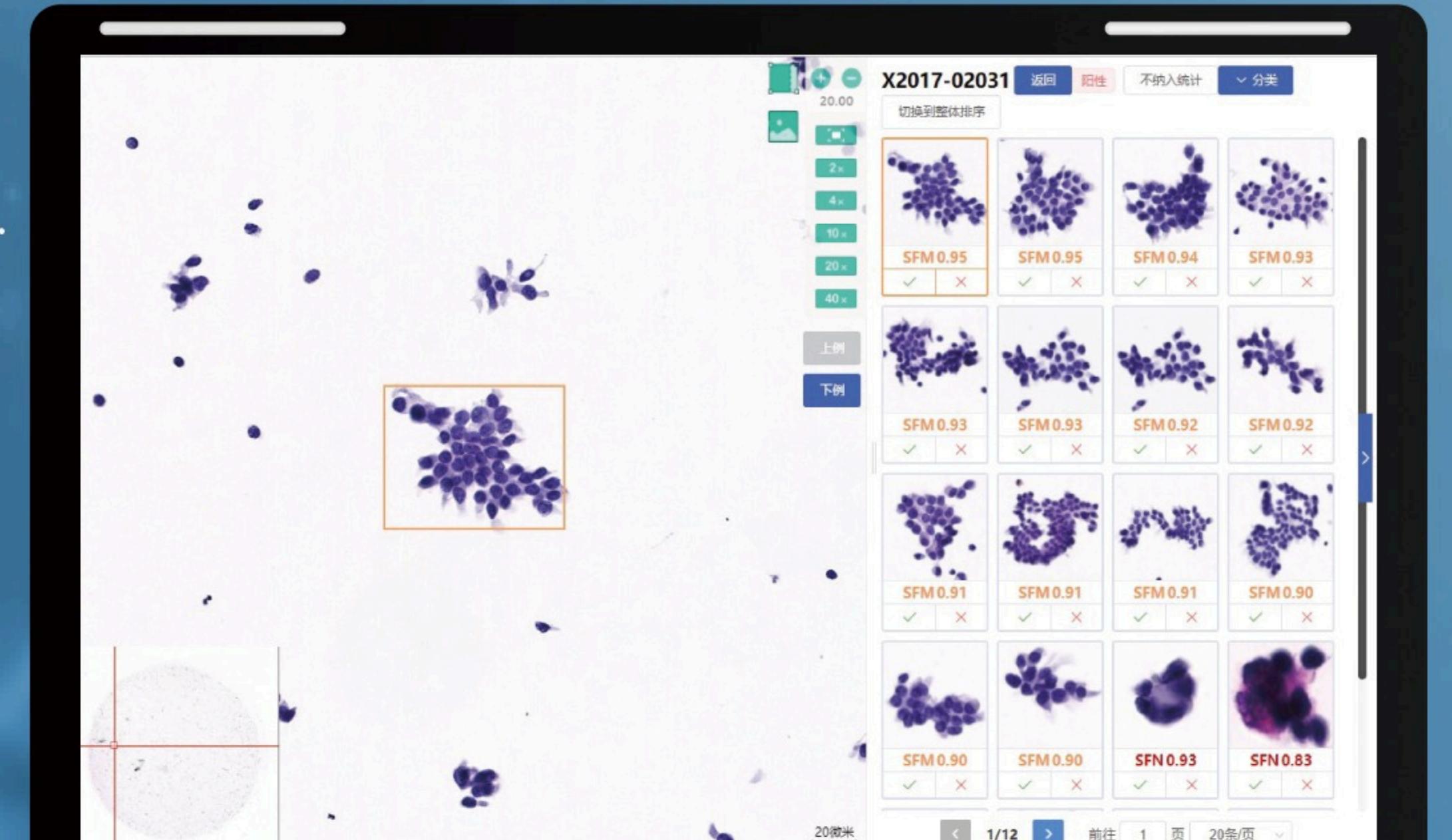
Provide overall solutions related to diagnosis, which can save the time required for system launch.



The WEB-based architecture allows direct access to the diagnostic platform via browsers.

## 02 Liquid Based Cytology AI for Thyroid Cancer

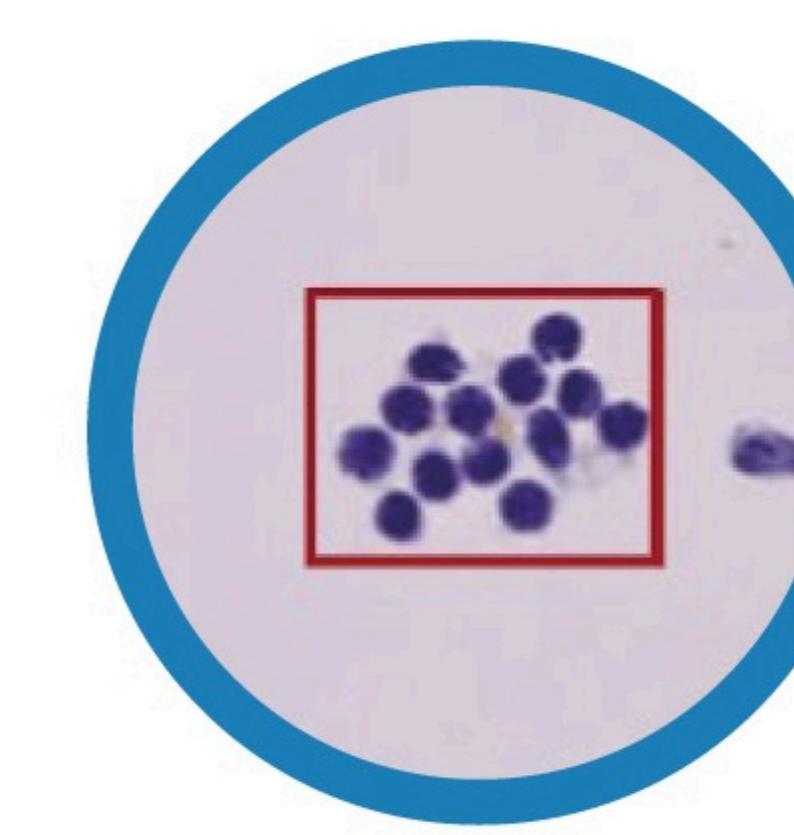
Efficient cell location, intelligent sorting, and support for electronic reports.



**01 Cytology**

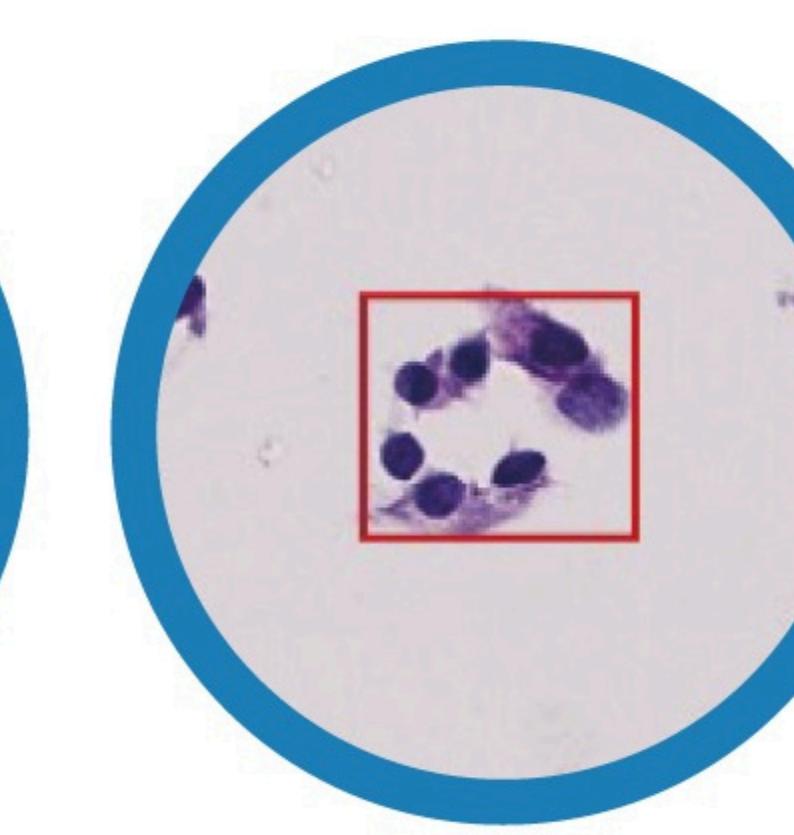
- **Cellular localization**  
Locate abnormal follicular cells and their lengths and widths.
- **Intelligent Sorting**  
Sort intelligently according to cellular abnormalities and generate thumbnails for doctors to quickly review.
- **Electronic Report**  
An electronic report can be generated with one click, including screenshots of digital pathological images.

## 02 Five types of identification and classification



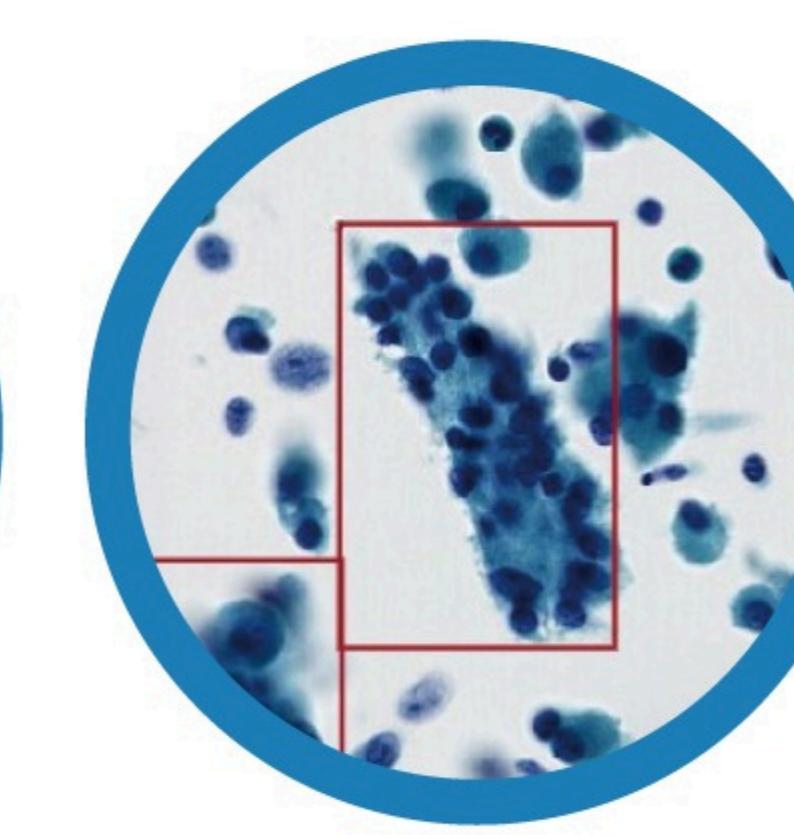
### BFN

Benign Follicular Nodule



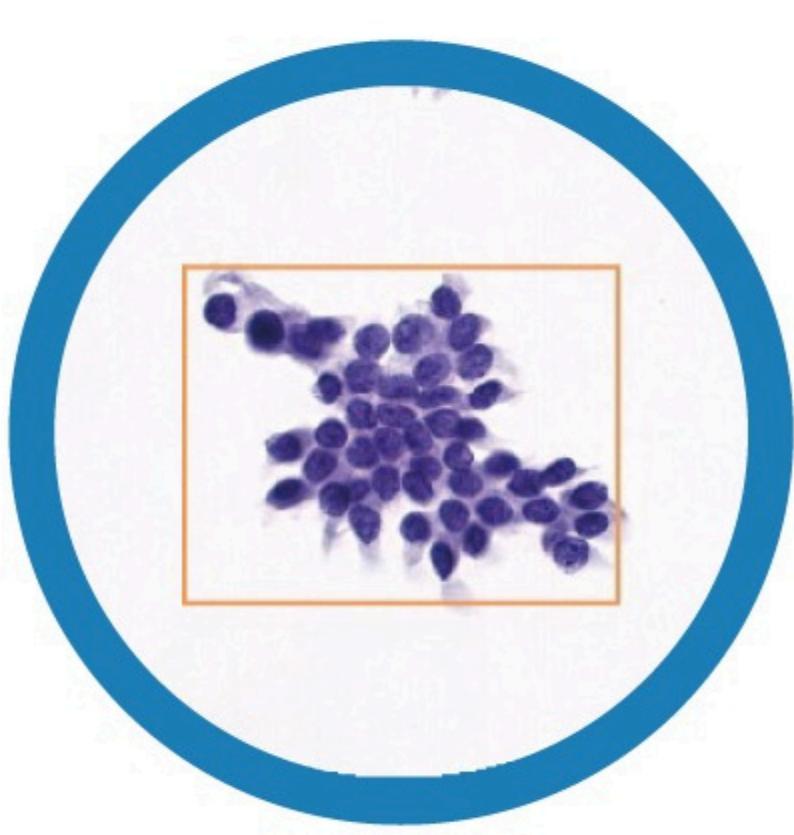
### AUS

atypical or follicular lesion of undetermined significance



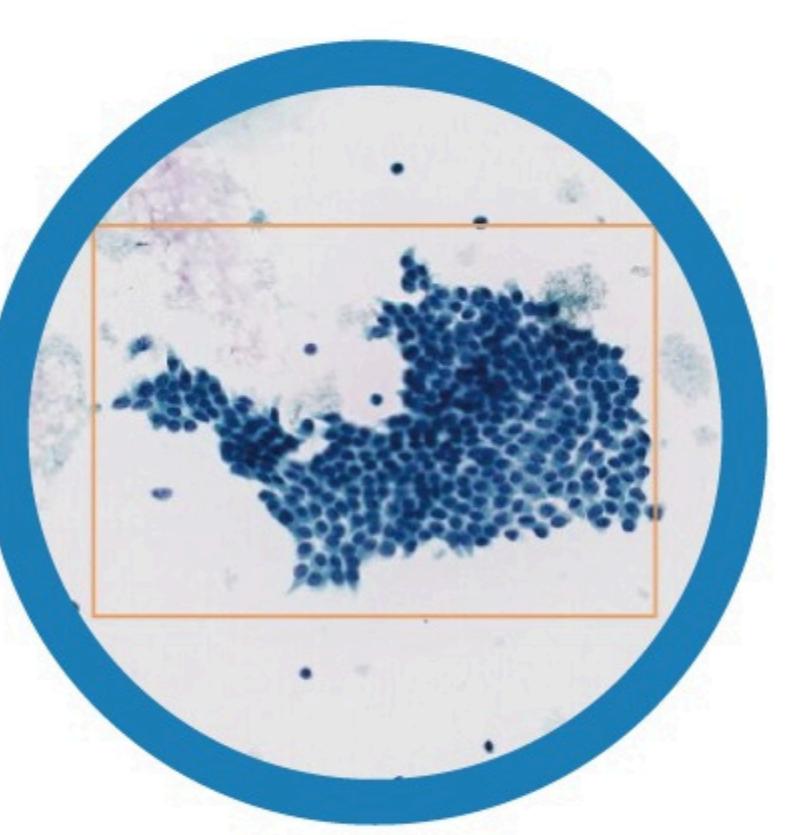
### SFN

Suspicious Follicular Neoplasm



### SFM

Suspicious Malignant Tumor



### PTC

Papillary Thyroid Carcinoma



500+ positive slices  
30,000+ cell annotations.



All slices are from biopsies with matched control slices.



The data comes from multiple sources



A 2:1 ratio of negative to positive slices.

100%

100% whole-slide recognition

95%

Over 95% sensitivity

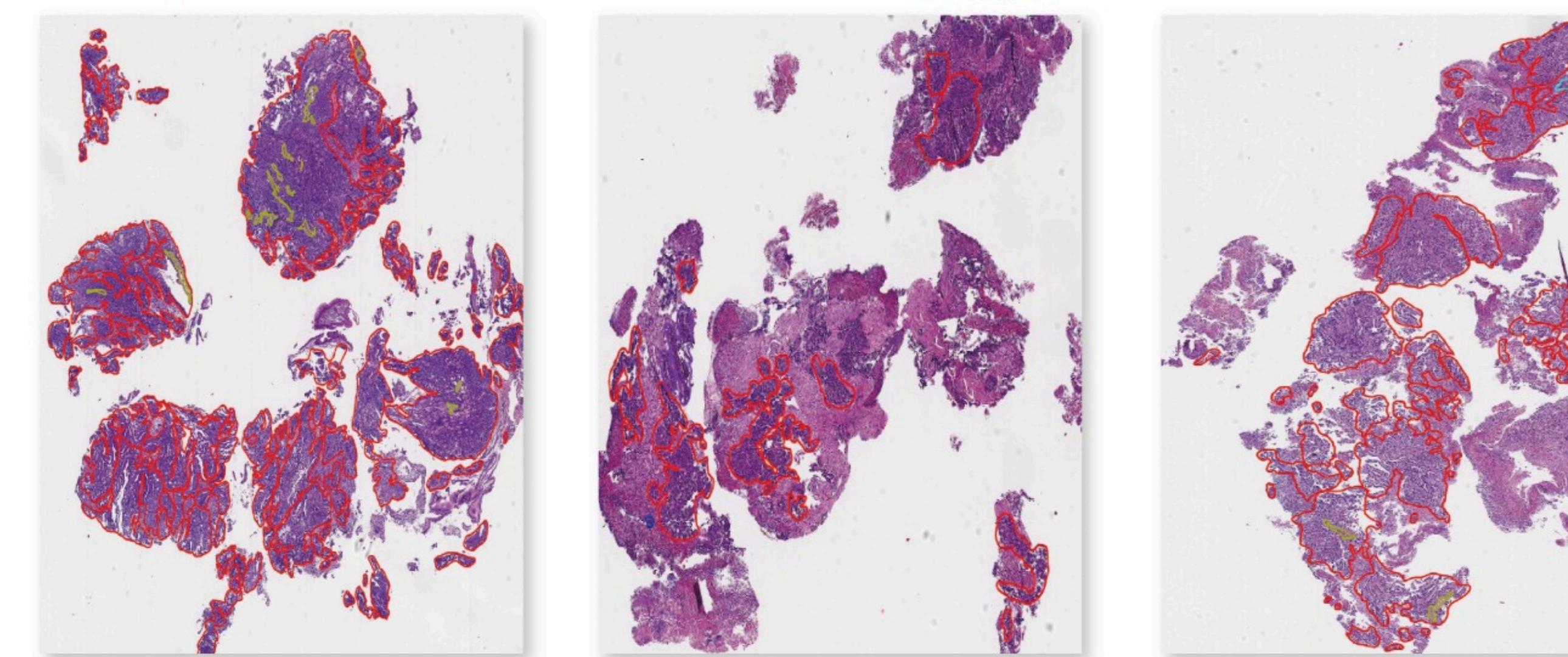
50%

50% average specificity

## 03 Histology AI for Stomach Biopsy

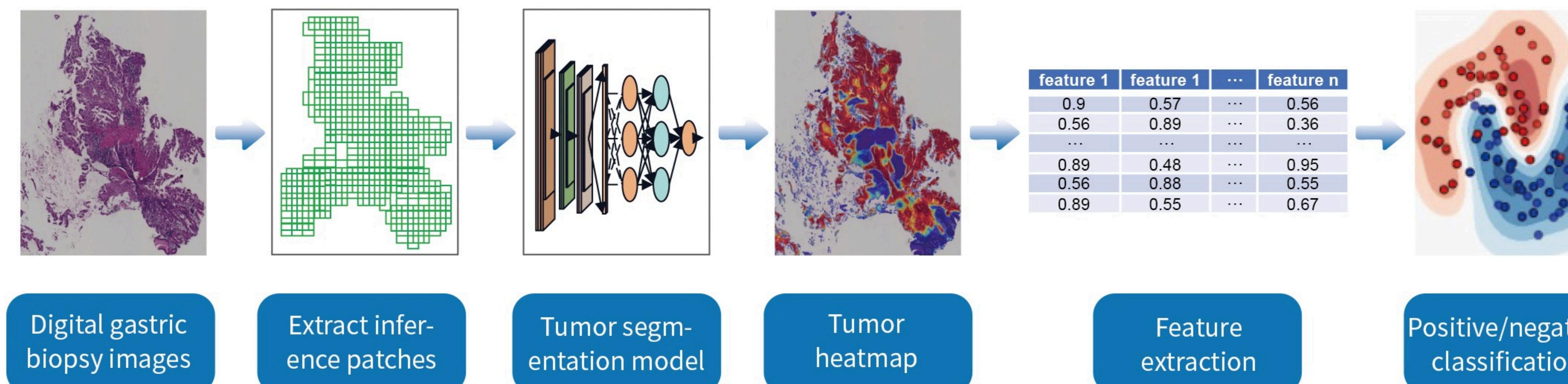
### 01 Five types of identification and classification

- Normal tissue
- Low-grade intraepithelial neoplasia
- High-grade intraepithelial neoplasia
- Adenocarcinoma
- Signet ring cell carcinoma

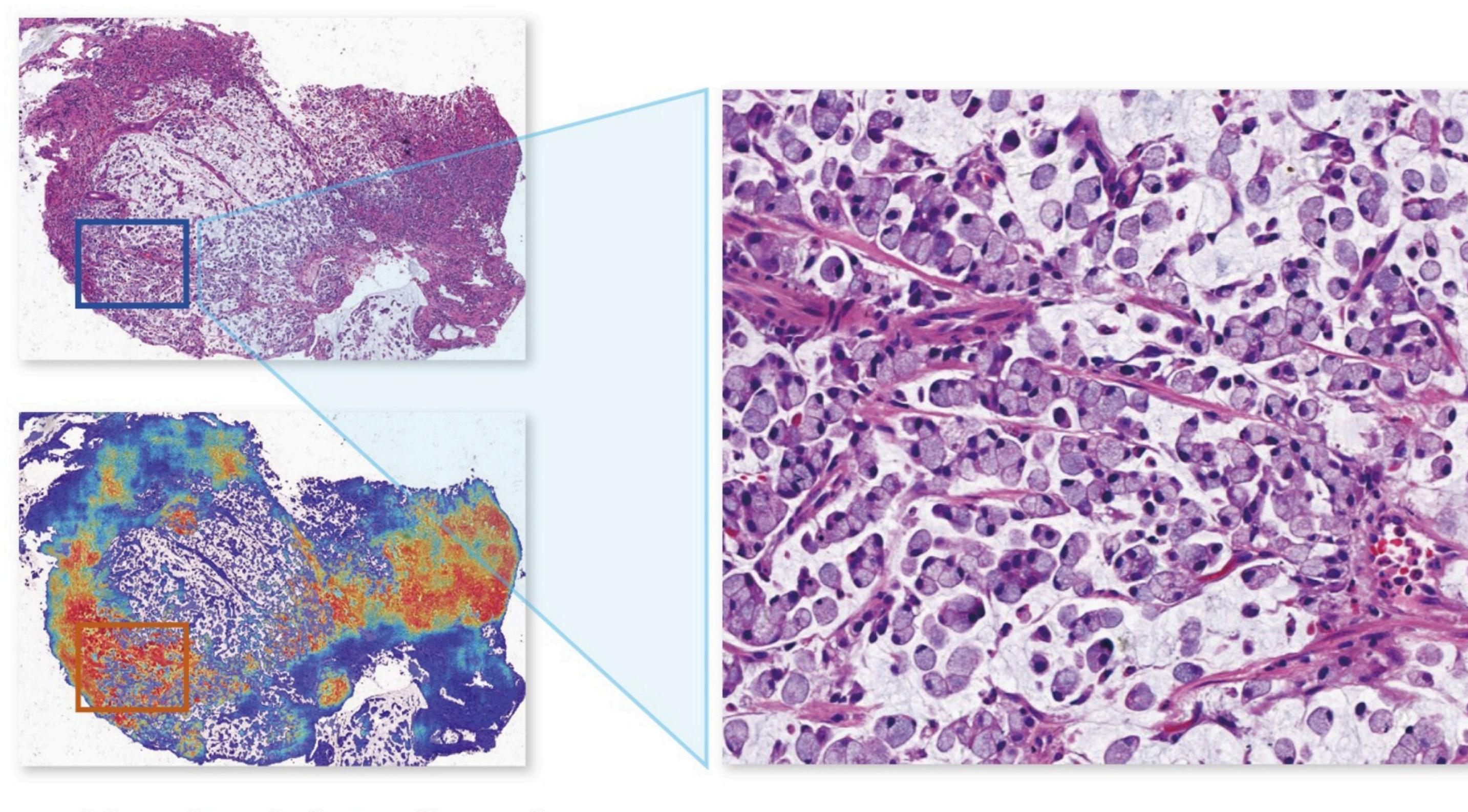


Annotated Example

### 02 WSI inferential prediction of tumor probability



### 03 Diagnostic Management System - Tumor Region Localization

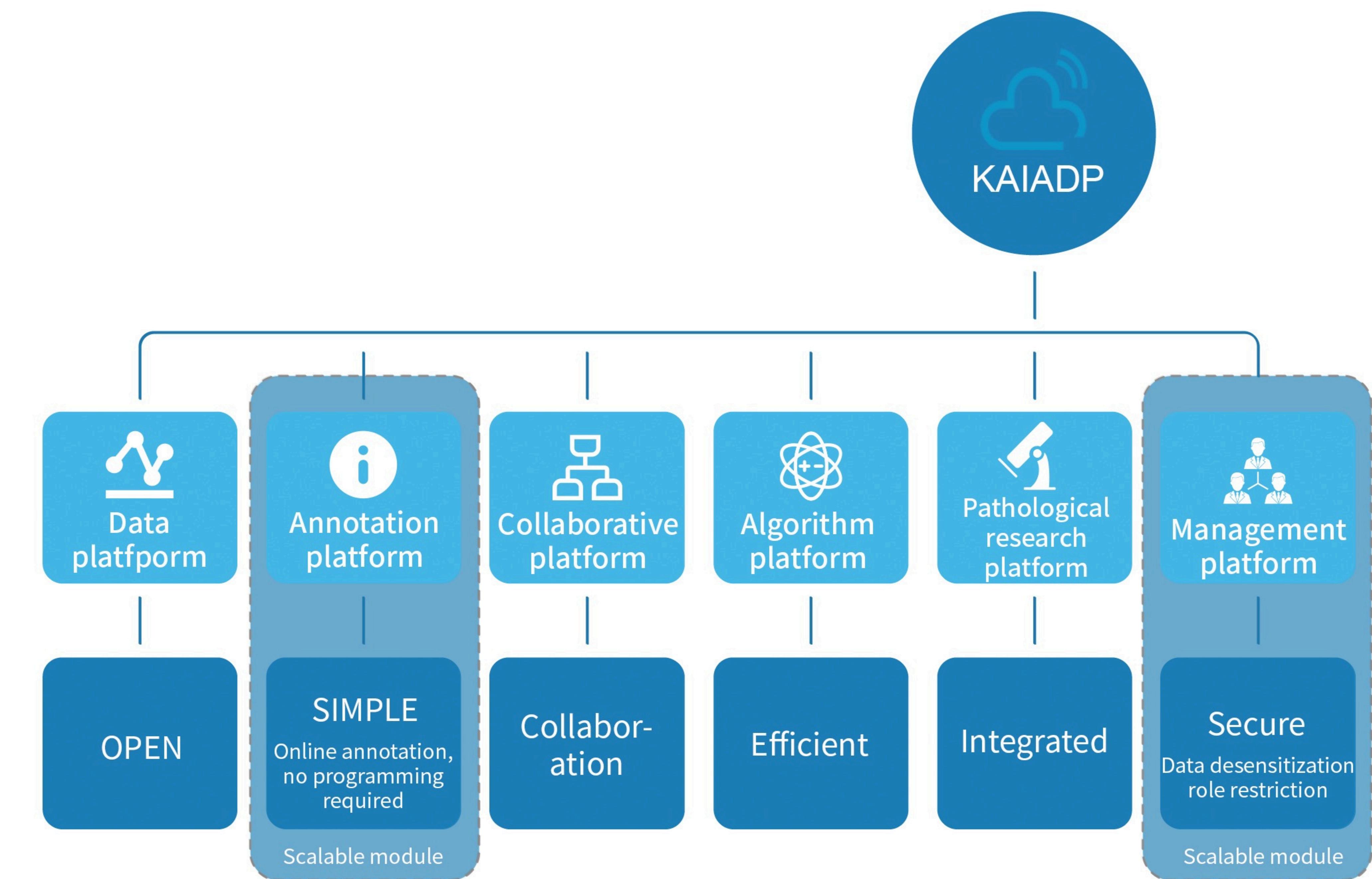


Prompt for signet ring cell carcinoma

## KF-KAIADP Big Data Artificial Intelligence-Assisted Diagnostic Platform

## 04

Achieve intelligent quality - control evaluation of pathological H&E panoramic digital sections, automatically locate quality - control problem areas, identify whether the quality control of sections is qualified, greatly reduce the working intensity of pathologists in manual quality control, and thus improve work efficiency.



### Annotation Management

- Provide a standardized annotation tool library
- Adapt to different annotation scenarios
- Support the export of annotation data
- Support semi-automated annotation
- Annotation task assignment and multi-level annotation management