

KONFOONG BIOINFORMATION TECH CO.,LTD

# More Than Precise



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**20 years research** and development

# Easy Operation

## High-accuracy Imaging

20 years of technical upgrade experience helps develop the latest series of the best quality KFBIO products. KF-PRO series digital pathology slide scanners have excellent performances in its movement precision, focus precision and image processing precision. High-accuracy WSI meets the needs of traditional slide viewing method, and the high-precision demands of AI-assisted image analysis.

As the first batch of Chinese digital pathology slide scanners, KF-PRO series have been installed in more than **2000 hospitals** and labs, and scanned more than **50 million** slides.

**Application Scenarios: Telepathology, AI analysis, pathology department**

View Samples



HE



TCT



ISH/FISH



IHC

## Five Functions

### 3 Colors Independent Process

K-SCP color processing helps reproduce the original color, color saturation, color temperature, color contrast and color compensation of different monitors. High-accuracy Imaging and high-accuracy color representation make every slide trustworthy.

### 6 Different Capacity

KF-PRO series digital pathology scanners of 1~400 slides meet different needs of different workload. They support different scanning modes of different kinds of slides. Software are self-developed and equipped for digital slides storage and management, telepathology and scientific research.

### 25s High-speed Scanning

It only takes 25s to scan a 15mm\*15mm area at 20x magnification. It's quite suitable for rapid frozen section consultation, high-throughput scanning and real-time AI data acquisition.

### 20nm Precise Control

KF-PRO series digital pathology scanners adopt line scanning technology and grating ruler position method to realize high-precision movement control at nanometer level. It makes every sample process quickly and accurately and realizes more stable imaging.

### 80x Magnification

It uses top optical configuration to improve the light source, objective lens, cameras, optical path, etc. It greatly improves resolution. The structure and details of cells are clearly visible. The edge of cells is sharp and the cell structure is clear.





# High-quality model for clinic and scientific research



KF-PRO-005



**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

## • Application Scenarios •



Rapid remote frozen section diagnosis, complex cases, multi-discipline consultation, applied in top hospitals, medical institutions, laboratories



Precise scanning for data drug collection, new development



Digitize and archive high-quality slides for slide bank construction, education resources, important cases archive



Customized AI-assisted scanning to preprocess the slide images

# AI-assisted Analysis High-matched Model



KF-PRO-020



**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

## • Application Scenarios •



Batch AI-assisted diagnosis



Telepathology consultation, multi-discipline consultation, complex cases archive



Data analysis and academic exchange



Scientific research data archive and management

# High stable model for clinic, education and research



KF-PRO-040



High Speed

15mm\*15mm, 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

• Application Scenarios •



Daily use for pathology labs  
and hospitals



Remote sharing and consulta-  
tion for scientific research



Efficient slide management,  
archiving and storage



Customized AI algorithm to  
assist diagnosis

# High-throughput model for large hospitals and labs



KF-PRO-120



High Speed

15mm\*15mm, 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



High Compatibility

Support bright-field and fluorescence  
Support different image format



Intelligent Scanning

Automatic one-click scanning  
Customized AI algorithm



Professional Services

Customize products quickly  
Provide in-time support

• Application Scenarios •



Large throughput for patholo-  
gy labs and hospitals



Remote sharing and consulta-  
tion for scientific research



Efficient slide management,  
archiving and storage



Customized AI algorithm to  
assist diagnosis





## DIGITAL PATHOLOGY SLIDE SCANNER (FLUORESCENCE)

KF-FL SERIES

Capacity: 5/20/120/400 slides

Mode: Bright-field&fluorescence

Lightning: LED light source

Channel: 8 channels at most

Algorithm: Fluorescence AI analysis algorithm



▲ KF-FL-400



▲ KF-FL-005

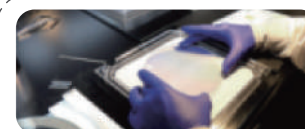


▲ KF-FL-020



▲ KF-FL-120

## Key Advantages



### Top Filter

Minimum spectral band resolution reaches 10nm  
The transmission rate reaches 99% and the cutoff rate reaches OD6



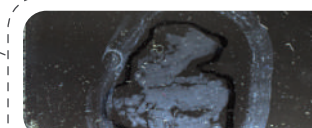
### Original Light Source Lighting Design

Specific spectral band LED light source excitation  
Prevent cross-color efficiently



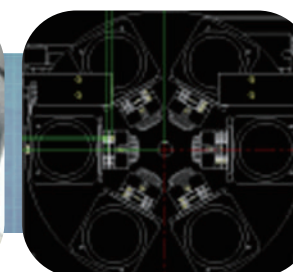
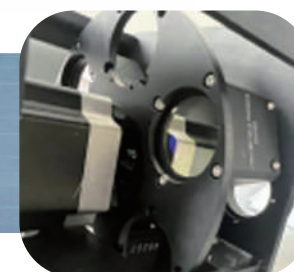
### SCMOS Camera

Active refrigeration SCMOS fluorescence camera  
Low signal-to-noise ratio, high resolution



### Original Preview Shooting Technique

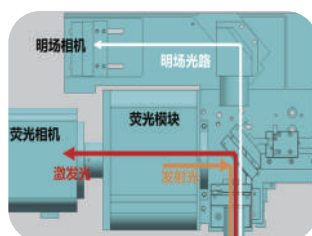
Automated identification of scan areas  
Shorten scanning time



Independent LED light source avoids cross color. It features with its high contrast, high brightness, no drift and no cross color. It's more suitable for specific fluorescence channel.

CHROMA narrowband filter is equipped. The minimum spectral band resolution reaches 10nm.

## Key Technical Advantages



### Flexible Configuration

Support bright-field and fluorescence scanning  
Support different channel purchase



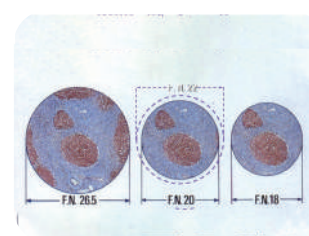
### Convenient Maintenance

Removable color filter  
Easy to maintain



### Durable In Use

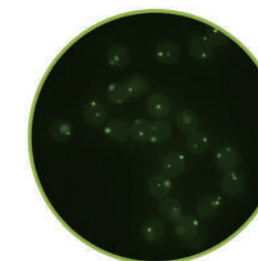
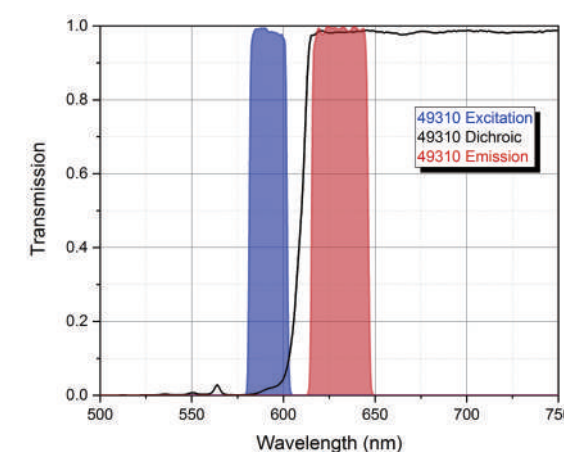
LED light source  
20000+ hours lifetime



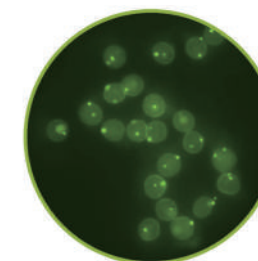
### Large Field of View

26.5mm field of view  
Reduce shoot and exposure time

## 8 channels, 8 filters at most



FISH filters  
High contrast








General filters  
Low contrast



# Choose a product that meets the needs of your lab

## Digital Pathology Slide Scanner Parameter

	KF-PRO-005	KF-PRO-020	KF-PRO-040	KF-PRO-120	KF-PRO-400
Model					
Capacity	5	20	40	120	400
Scanning Mode	Line Scanning				
Scanning Speed	25s (20X, 15mm x 15mm) 40s (40X, 15mm x 15mm)				
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			
Fluorescence Channel	6 channels to choose, CHROMA filter			
	Channel Name	EX	BS	EM
	KF-DAPI	350/50	400	460/50
	KF-GREEN	495/25	515	537/29
	KF-ORANGE	546/10	556	572/23
	KF-RED	580/25	600	625/30
	KF-CY5	630/20	647	667/30
	KF-CY7	710/75	760	810/90
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

# Team and Service

## About KFBIO

KFBIO has been devoted to digital pathology for ten years. KFBIO has developed a innovative end-to-end digital pathology solution including pathology slides scanning equipment, pathology routine equipment, telepathology platform, AI analysis systems, etc.

## Technical Strength

Chinese Thousand Talents Plan: 2 talents; Over 50% R%D staff; 267 patents, 95 invention patents

## Market Distribution

Strong agents network; Cover Asia, Europe, America, etc.

## Top Clients Over 2000 hospital clients



Technology partnership: Intel, Nanjing University of Science and Technology, China Maternal and Child Health Association, Tokyo Institute of Technology

## Value-added Service



Free 50GB cloud space for storage



Digital pathology quality control and training courses



Online pathology slides sharing and discussion webinars



Bright-field and fluorescence scanning for scientific research

# K-VIEWER

## Image Viewing Software

K-Viewer offers to browse and annotate the digital slides for the convenience of pathologists to diagnose the cases. It allows pathologists to quickly access slides or cases locally at the desktop or remotely, on a computer, smartphone or tablet device. K-Viewer gives customized viewing options for different customers to deliver optimal performance and suit the device you choose. Its intuitive interface and customized workflows provide a consistently excellent viewing experience.

## Real-time, Security, Stable

>>Real-time Slide Image Collection and Transmission

>>Safe, Stable and High Fidelity Data Transmission

>>Local PC and Mobile Phone Viewing Are Available



## Software Functions

>>Zoom, rotation and partial magnification

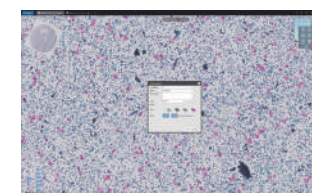
>>Real time view and mark multiple images synchronously

>>Parameter definition of image comparison, color channel, auto-play etc

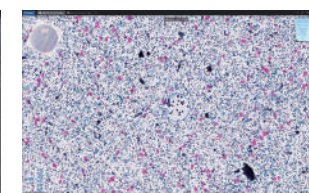
>>Marking tools of images and words, measure the marked areas automatically

## Operating Modules

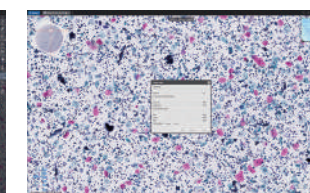
### Local Image Viewing



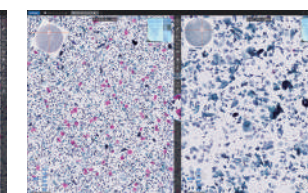
Mark and annotate



Partial zoom

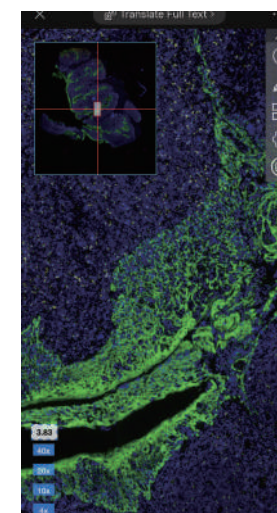


Slide parameter adjustment

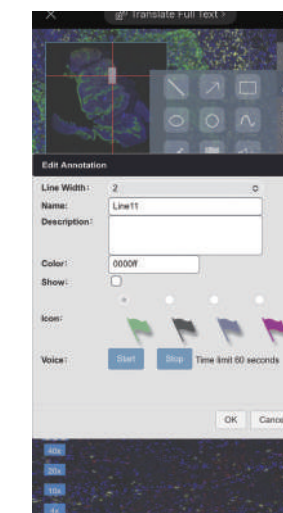


Synchronous viewing

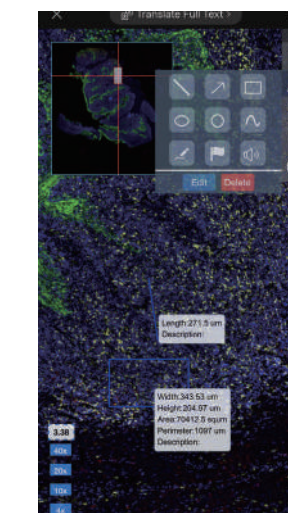
### Mobile Image Viewing



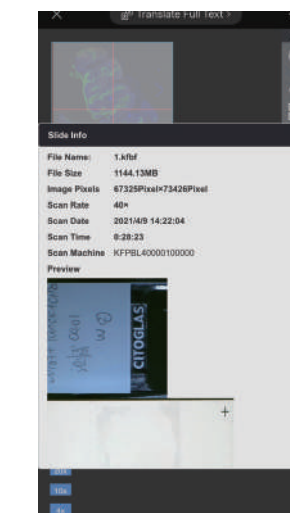
Zoom in and out



Mark and annotate



Automatic measure



Slide information

### • Application Scenarios •



Telepathology for both classroom and online education



Flexible presenter role for students



Instant K-Viewer: an excellent viewer for remote slide viewing



# KFBIO Slide Management System

It makes it possible to manage a large number of digital slides within a short time. It allows pathologists to get access to slides immediately after being scanned so that slides can be shared or annotated remotely. It greatly reduces your workload to manage slides.

Seamlessly connect with **digital pathology slide scanner** to provide the most comfortable experience for you.

## >> Share

Use the link or QR code to share the digital slide to others

## >> Speed

Upload digital slides automatically or manually quickly

## >> Integration

Integrate with HIS and LIS for the convenience of slide sharing and management

## >> Convenient

Rapid retrieve, edit and annotate the digital slides

## >> Security

Privileged access management is properly applied in the system to secure the sensitive data.

# Manage your digital slides in the most convenient way

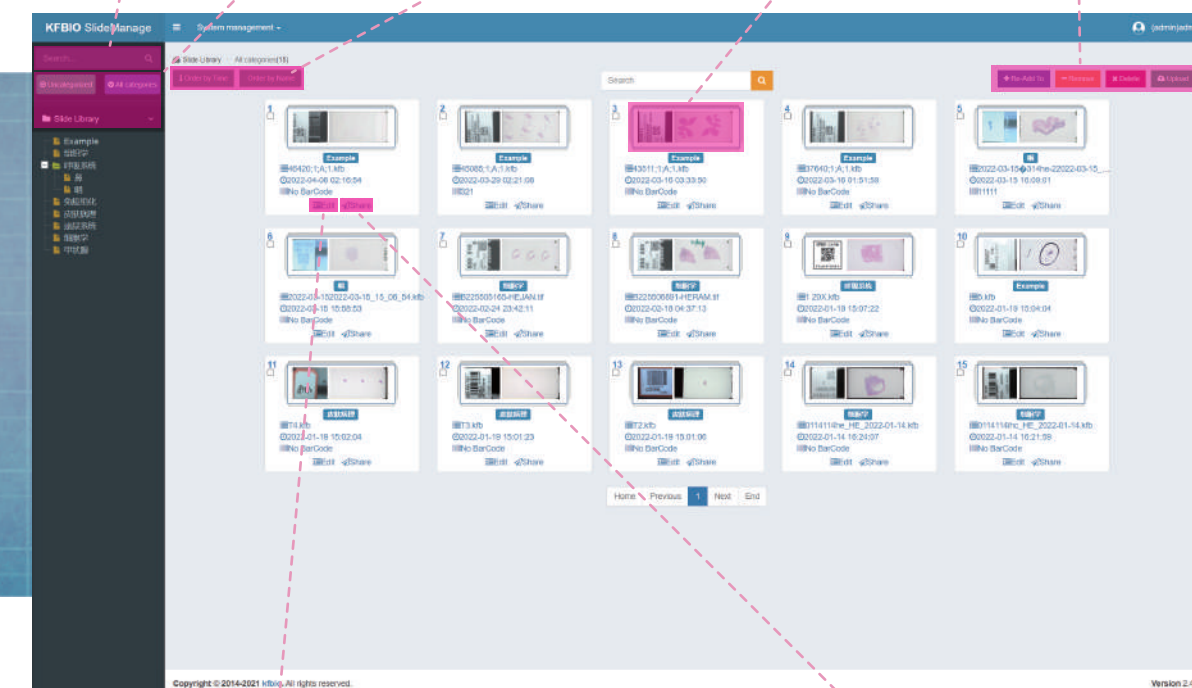
Search the digital slides you want quickly.

Classify different categories of digital slides for quick retrieval.

The digital slides can be sorted in the time order or name order.

All digital slides are presented to preview in a convenient way.

Slide can be automatically or manually uploaded to the system.



The name can be edited for the convenience of being sorted. Bar codes can be connected to facilitate LIS and HIS connectivity.

Edit

Name: 46420.1A.1.kb

Bar code: Please enter

Close Save

Use the link or QR code to share the digital slide to others.

Share

Link: [http://kfbio.com/.../46420.1A.1.kb](#)

QR code: [QR Code]

Close

## • Application Scenarios •



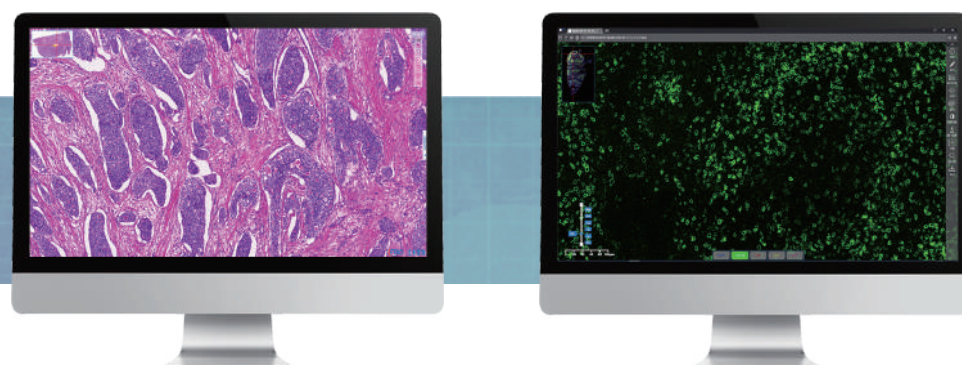
The indispensable software for digital pathology slide scanners



Large-throughput digital slides management in labs or hospitals



Whole digitization of pathology labs or departments



# Telepathology

## Pathology Remote Consultation Platform

Innovated and perfected multiple times by KFBIO, the KFBIO Pathology Remote Consultation Platform has succeeded in greatly simplifying pathologists' workflow and facilitating pathologists in diagnosing remotely and viewing slides without the limitation of time and place. It covers the function of diagnosis management, frozen section management, case collection, data statistics and real-time connection from different sites.

Diagnose and view slides anytime, anywhere. Get right answers efficiently with this telepathology platform to share and discuss the digital slides.



### Real Time

Rapid frozen consultation, real-time audio and video for diagnosis, seamless reports delivery



### High Stability

Stable communication and data transmission, quality control, data management



### Share

Remote education, discussion and consultation, pathology training and assessment support



### High Security

Data transmission encryption, safe user login, sensitive data protection



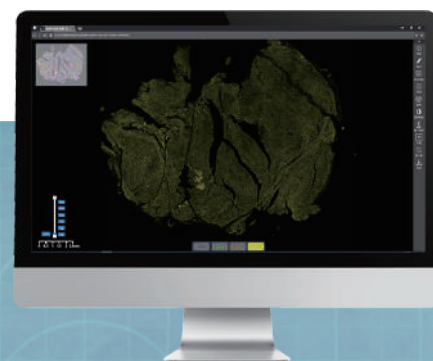
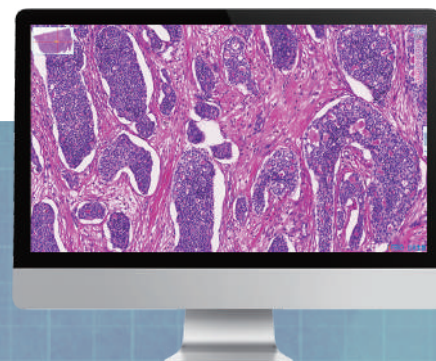
### Convenient

One-click view slides with link or QR code, online zoom and annotate slides, HIS integration

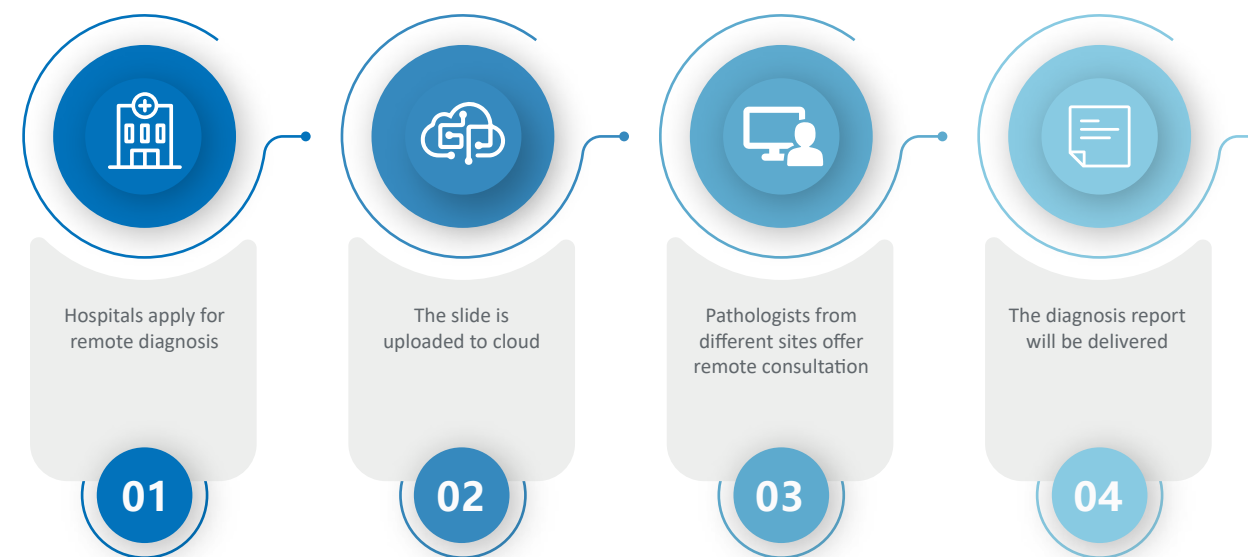


### Service

Fast customization, free upgrade, in-time technical support and after-sales service



## Pathology Remote Diagnosis Workflow



## Security Guarantee



### Application Scenarios

#### Routine and difficult cases consultation

Pathologists discuss and diagnose routine difficult cases remotely via online platform to help analyze the medical history, the current situation and the future treatment plan for patients.

#### Cytology, TCT IHC consultation

Pathologists analyze and diagnose the cytology, TCT and IHC slides together remotely. It improves the sample quality and cell detection sensitivity.

#### Intraoperative rapid frozen section consultation

Pathologists diagnose the frozen sections sampled from the surgery in a short time to provide reference diagnosis opinions to the surgeon for the next step of surgery.

#### MDT multidisciplinary consultation

The group seminar composed of experts from multiple departments is held regularly to discuss the best treatment plan for different diseases and different patients.