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签批信息:

作者 : 王璟 (wangjing) 2019-07-25 10:06:56

审核人 : 刘小倩 (liuxiaoqian) 2019-07-25 11:52:38

审核人 : 杜建峰 (dujianfeng) 2019-07-31 09:48:35

批准人 : 杨洁 (yangjie) 2019-08-02 15:48:01

批准人 : 古蒙蒙 (gumengmeng) 2019-08-05 10:04:54

批准人 : 冀伟 (jiwei) 2019-08-03 21:36:12

C3A, C6A, C6A HD

Video Colposcope

User Manual

CE

About this Manual

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Statement

This manual will help you understand the operation and maintenance of the product better. It is reminded that the product shall be used strictly complying with this manual. User's operation failing to comply with this manual may result in malfunction or accident for which the manufacturer cannot be held liable.

The manufacturer owns the copyrights of this manual. Without prior written consent of the manufacturer, any materials contained in this manual shall not be photocopied, reproduced or translated into other languages.

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The user shall understand that nothing in this manual grants him, expressly or implicitly, any right or license to use any of the intellectual properties of the manufacturer.

The manufacturer holds the rights to modify, update, and ultimately explain this manual.

Responsibility of the Manufacturer

The manufacturer only considers itself responsible for any effect on safety, reliability and performance of the equipment if:

Assembly operations, extensions, re-adjustments, modifications or repairs are carried out by persons authorized by the manufacturer, and

The electrical installation of the relevant room complies with national standards, and

The instrument is used in accordance with the instructions for use.

Terms Used in this Manual

This guide is designed to give key concepts on safety precautions.

WARNING

A **WARNING** label advises against certain actions or situations that could result in personal injury or death.

CAUTION

A **CAUTION** label advises against actions or situations that could damage equipment, produce inaccurate data, or invalidate a procedure.

NOTE

A **NOTE** provides useful information regarding a function or a procedure.

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Chapter 1 Safety Guide

CAUTION

Federal (U.S.) Law restricts this device to sale by or on the order of a physician.

NOTE:

- 1 To ensure proper running of the device and safety of the operator and patient, read through this chapter before using the device.
- 2 This user manual is written to cover the maximum configuration. Therefore, your model may not have some of the parameters and functions described, depending on what you have ordered.

1.1 Intended Use/Indications for Use

The C3A, C6A and C6A HD video colposcope is intended for gynecological examination. It provides magnified visualization of the vagina, cervix and external genitalia, which can help diagnose abnormalities and select areas for biopsy. It is intended to be used only by trained and qualified personnel in hospitals, clinics and private offices, and not intended for home use or to touch the patient.

1.2 Safety Precautions

WARNING and CAUTION messages must be observed. To avoid the possibility of injury, observe the following precautions during the operation of the device.

WARNING

- 1 This device is provided for the use of professionally trained and qualified physicians, or under guidance of these personnel. Familiarize yourself with the contents of this user manual before operation.
 - 2 Do not use the device in the presence of flammable anesthetics due to explosion risk.
 - 3 **SHOCK HAZARD** – Do not attempt to connect or disconnect a power cord with wet hands. Make sure that your hands are clean and dry before touching a power cord.
 - 4 **Electromagnetic Interference** – Ensure that the environment in which the device is installed is not subject to any source of strong electromagnetic emissions, such as CT, radio transmitters, mobile phone base stations, etc.
 - 5 **Electromagnetic Interference** – Do not use mobile phones nearby the device, otherwise it may interfere with device operation.
 - 6 Do not touch the signal input or output connector and the patient simultaneously.
-
-

WARNING

- 7 Accessory equipment connected to the device must be certified according to the respective IEC/EN standards (e.g. IEC/EN 60950 for data processing equipment and IEC/EN 60601-1 for medical equipment). Furthermore all configurations shall comply with the valid version of the system standard IEC/EN 60601-1. If any question, please consult our technical service department or your local distributor.
 - 8 Connecting any accessory or equipment to the device makes a medical system. In that case, additional safety measures should be taken during installation of the system, and the system shall provide:
 - a) Within the patient environment, a level of safety comparable to that provided by medical electrical equipment complying with IEC/EN 60601-1, and
 - b) Outside the patient environment, the level of safety appropriate for non-medical electrical equipment complying with other IEC or ISO safety standards.
 - 9 For any non-medical electrical equipment forming part of the system to be used within the patient environment, additional protective earthing should be applied or the non-medical electrical equipment should be supplied via a separating transformer that complies with IEC/EN 60601-1. If no separating transformer or other protective measure is applied, the non-medical electrical equipment must be used outside the patient environment, and the system should be tested according to the requirements of IEC/EN 60601-1.
 - 10 Do not exceed the maximum permitted load when using multiple portable socket-outlets to supply the system. You can refer to the label or silk-screen for the maximum permitted load.
 - 11 **SHOCK HAZARD** – Do not connect non-medical electrical equipment, which has been supplied as a part of the system, directly to the wall outlet when the non-medical equipment is intended to be supplied via a multiple portable socket-outlet with a separating transformer.
 - 12 **SHOCK HAZARD** – Do not connect electrical equipment, which has not been supplied as a part of the system, to the multiple portable socket-outlet supplying the system.
 - 13 Multiple portable socket-outlets shall not be placed on the floor. An additional multiple portable socket-outlet or extension cord shall not be connected to the system.
 - 14 Only accessories supplied by the manufacturer can be used.
 - 15 Do not connect any equipment or accessories that are not approved by the manufacturer or that are not IEC/EN 60601-1 approved to the device. The operation or use of non-approved equipment or accessories with the device is not tested or supported, and device operation and safety are not guaranteed.
 - 16 Using accessories other than those specified by the manufacturer may result in increased electromagnetic emissions or decreased electromagnetic immunity of the device.
-
-

WARNING

- 17 Make sure that all the components and accessories are connected correctly and checked before powering on.
 - 18 No part of the device is intended to be maintained by the user. Unauthorized servicemen shall not open the enclosure. Otherwise, safety hazards may happen.
 - 19 The camera light source is very bright. When the camera is on, do not stare at the light source or aim the light source at the patient's eyes.
 - 20 The system is not for diagnosis or treatment, and it is a non-contact examination device. It should not touch the patient during examination.
 - 21 The mains plug is used as isolation means from supply mains. Position the device in a location where the operator can easily access the disconnection device.
 - 22 The device should not be used adjacent to or stacked with other equipment and that if adjacent or stacked use is necessary, the device should be observed to verify normal operation in the configuration in which it will be used.
 - 23 The medical electrical equipment needs to be installed and put into service according to the EMC Information provided in this user manual.
 - 24 Portable and mobile RF communications equipment can affect medical electrical equipment, refer to section A4.4 Recommended Separation Distances.
 - 25 Do not service or maintain the device or any accessory which is in use with a patient.
 - 26 Assembly of the device and modifications during actual service life shall be evaluated based on the requirements of IEC60601-1.
-
-

CAUTION

- 1 The device is designed for continuous operation. Do not water the device.
 - 2 Keep the environment clean. Make the device far from corrosive medicine, dust area, high-temperature and humid environment. Avoid vibration. Do not move it with the power cord connected.
 - 3 Do not operate the device if it is damp or wet because of condensation or spills. Avoid using the device immediately after moving it from a cold environment to a warm, humid location.
 - 4 Do not sterilize the device or any accessory with autoclave or gas.
 - 5 Do not plug any undefended USB device into the computer in which the video colposcope software has been installed. Make sure that the connected USB device is free of viruses.
 - 6 If the computer in which the video colposcope software has been installed will be connected to the network, install genuine antivirus software to protect the computer against viruses.
-
-

CAUTION

- 7 Do not change the time of the system unless necessary, otherwise the appointment data may be lost.
- 8 The device and accessories are to be disposed of according to local regulations after their useful lives. Alternatively, they can be returned to the dealer or the manufacturer for recycling or proper disposal.

Patient environment means any volume in which intentional or unintentional contact can occur between the patient and parts of the system or between patient and other persons touching parts of the system (reference IEC 60601-1). It is difficult to apply unique dimensions to the volume, and the dimensions given in the figure below have been justified.

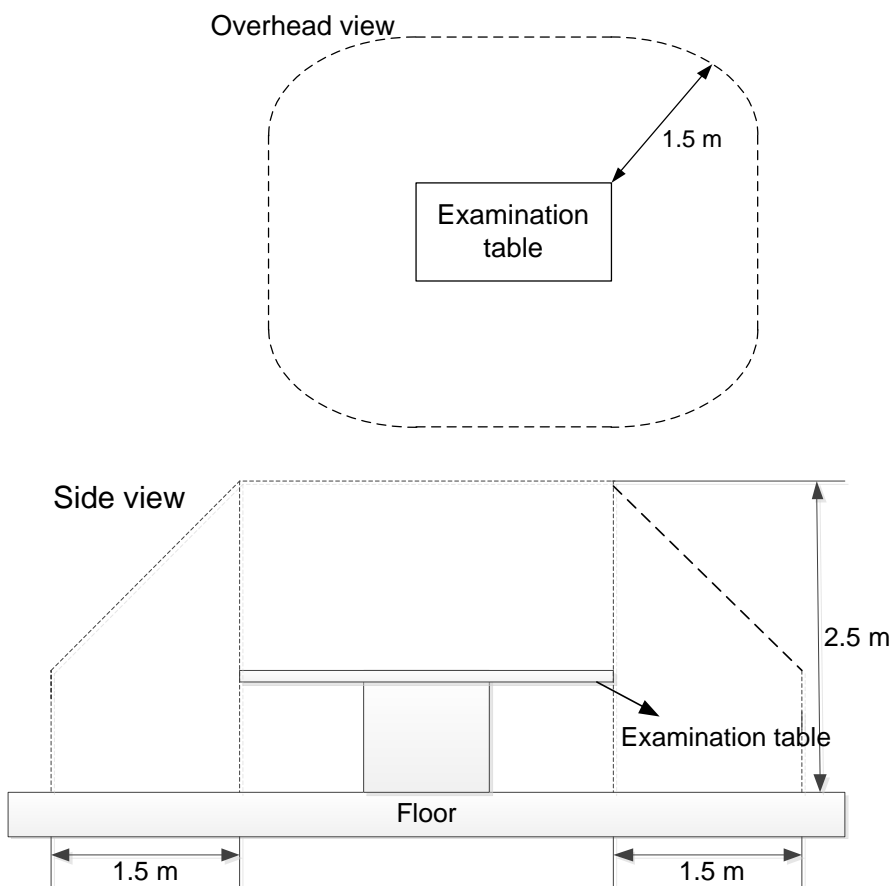
















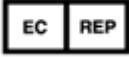
















Figure 1-1 Patient environment

1.3 Definitions and Symbols

No.	Symbol	Description
1		Stand-by

2		Caution
3		USB connection
4		USB 3.0 connection
5		Power supply
6		Monitor
7		Video Output
8		Signal input/output
9		Consulting instructions
10	 eIFU indicator	Consult instruction for use on this website
11		CLASS II equipment
12		Foot switch
13		Part Number
14		SERIAL NUMBER
15		General symbol for recovery/recyclable
16		Date of manufacture

17		AUTHORISED REPRESENTATIVE IN THE EUROPEAN COMMUNITY
18		MANUFACTURER
19		CE marking
20		Disposal method
21	Rx Only	Caution: Federal (U.S.) law restricts this device to sale by or on the order of a physician.
22	IPX8	Water ingress protection degree of the foot switch, protected against the effects of continuous immersion in water
23		Refer to instruction manual/booklet (Background: Blue; Symbol: White)
24		General warning sign (Background: Yellow; Symbol & Outline: Black)
25		No sitting (Background: White; Symbol: Black; Outline: Red)
26		No stepping on surface (Background: White; Symbol: Black; Outline: Red)
27		No Pushing (Background: White; Symbol: Black; Outline: Red)
28		Mind your fingers (Background: Yellow; Symbol: White and black; Outline: Black)
29		This way up

30		Fragile, handle with care
31		Keep away from rain
32		Stacking limit by number
33		Do not roll
34	ON/OFF	Switch on/off

NOTE:

- 1 The user manual is printed in black and white.
- 2 The symbol marked with an asterisk * is only applicable to C3A and C6A.
- 3 The 9th symbol applies to paper user manual.
- 4 The 10th symbol applies to electronic user manual.
- 5 If both paper user manual and electronic user manual are configured, the paper user manual shall prevail.

Chapter 2 Introduction

NOTE:

The pictures and interfaces provided in this manual are for reference only.

2.1 System Connection

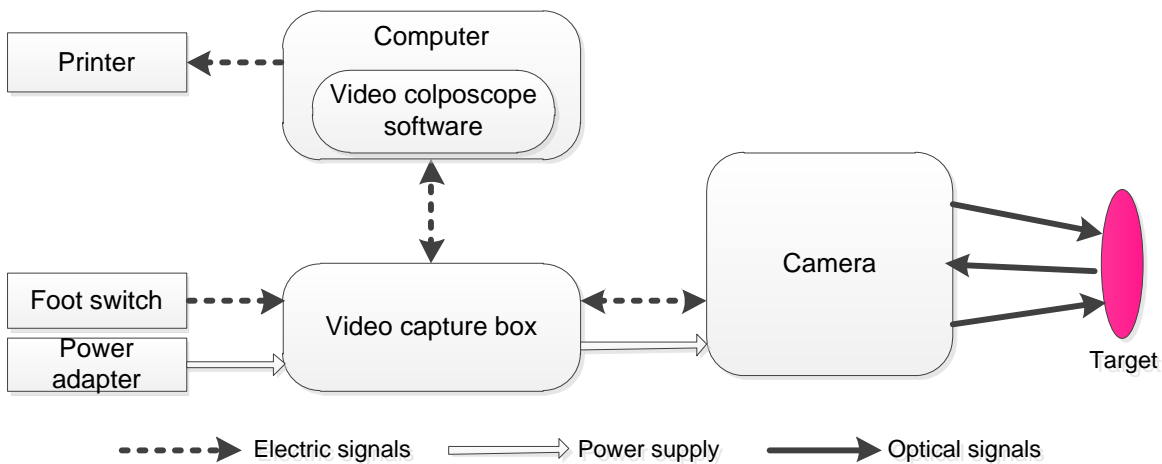


Figure 2-1 System architecture

WARNING

1. Accessory equipment connected to the device must be certified according to the respective IEC/EN standards (e.g. IEC/EN 60950 for data processing equipment and IEC/EN 60601-1 for medical equipment). Furthermore all configurations shall comply with the valid version of the system standard IEC/EN 60601-1. If any question, consult our technical service department or your local distributor.
2. For any non-medical electrical equipment forming part of the system to be used within the patient environment, additional protective earthing should be applied or the non-medical electrical equipment should be supplied via a separating transformer that complies with IEC/EN 60601-1. If no separating transformer or other protective measure is applied, the non-medical electrical equipment must be used outside the patient environment, and the system should be tested according to the requirements of IEC/EN 60601-1.

To ensure proper running of the system, make sure that the computer and printer you use meet the requirements described in the following sections. For any risks due to improper use of the computer or printer, the manufacturer should not be held liable.

2.1.1 Computer Requirements

The video colposcope software should be installed in a computer that meets the following specifications.

C3A, C6A:

CPU	Dual-core, ≥ 2.1 GHz
Memory	≥ 2 GB
Hard disk	≥ 500 GB
Resolution	Over 1366*768

C6A HD:

CPU	Dual-core, ≥ 2.3 GHz
Memory	≥ 4 GB
Hard disk	≥ 500 GB
Resolution	Over 1920*1080

2.1.2 Monitor Requirements

C3A, C6A:

Interface	S-video
Resolution	$\geq 1024*768$

C6A HD:

Interface	HDMI/DVI
Resolution	$\geq 1920*1080$

WARNING

1. The computer shall comply with the requirements of the valid version of IEC/EN 60950 and have relevant certification (such as the CE certification).
2. When connecting the computer to the device, ensure that the formed system meets the requirements of the valid version of IEC/EN 60601-1.

2.1.3 Printer Requirements

A color inkjet printer or laser printer above 600 dpi should be used.

2.2 Camera

NOTE: The magnification of C3 by default is 1~28 X and can be set to 1~40X; the magnification of C6 is 1~36X and can be set to 1~50X; the magnification of C6 HD is 1~50X and can be set to 1~60X.

2.2.1 Appearance




Figure 2-2 C3A, C6A, C6A HD Camera

1	Key panel	2	Camera handle trigger	3	Camera handle
4	Camera lens	5	LED lamps	6	Lens cap

2.2.2 Keys



Figure 2-3 Keys

(1) Stand-by switch 

Function: Switch on or off the camera.

Operation: Press this key, the camera is switched on, and the indicator on its left lights up in green. Press it again, the camera is switched off, and the indicator on its left goes off.

(2) "AF/MF" key

Function: Switch between auto focus (AF) mode and manual focus (MF) mode.

Operation: In AF mode, press this key to enter MF mode (the right indicator is on and "MF" is displayed on the screen). In MF mode, press this key to enter AF mode (the left indicator is on). The system enters AF mode by default.

(3) "F+" key

Function: Adjust the camera focus.

Operation: In MF mode, press this key to pull away the focus. (This key is invalid in AF mode.)

(4) "DISPLAY/F-" key

Function: Enable or disable display of magnification information, or adjust the camera focus.

Operation: In AF mode, press this key to enable display of magnification information, and the screen shows the magnification. Press it again, magnification display would be disabled, and the screen no longer shows the magnification. By default, the magnification is not shown.

In MF mode, press this key to pull close the focus.

(5) "FREEZE" key

Function: Freeze or unfreeze the current image.

Operation: Press this key to freeze the current image, and "--" is shown on the screen. Press it again to unfreeze the image.

(6) "TIME" key

Function: Activate or deactivate timer.

Operation: Press this key to activate timer. The screen shows a time mark as T0:00, which will automatically disappear after it counts to T2:59. Before the time mark reaches T2:59, you can press this key again to deactivate the timer and close the time mark. By default, the timer is not activated.

(7) "WHITE" key

Function: Enable normal white light.

Operation: The system provides three white light modes. It's natural light by default. Press this key, the image is noted W1 on the top, and the light facilitates visualization of acetowhite epithelium. Press the key again, the image is noted W2 on the top, and the light facilitates visualization of acetowhite epithelium or grapy tissue on columnar epithelium. Press the key again, it returns to natural light imaging.

(8) "GREEN" key

Function: Activate green filter.

Operation: Press this key, the system activates green filter to remove red light, in order to highlight the vessel status.

The system has 3 levels of green filters: G1, G2 and G3. Press this key to cycle through the levels. The first level will be activated first. The second and third levels make compensation on the basis of the first level and therefore better facilitate visualization of vessels. Press the WHITE key to exit green filter.

(9) "+" key

Function: Increase the magnification and zoom in the image.

Operation: Press this key to zoom in the image. If display of magnification information is disabled, the magnification is shown on the screen after you press this key and will disappear 3 seconds later. If display of magnification information is enabled, the magnification is always shown on the screen.

(10) "-" key

Function: Decrease the magnification and zoom out the image.

Operation: Press this key to zoom out the image. If display of magnification information is disabled, the magnification is shown on the screen after you press this key and will disappear 3 seconds later. If display of magnification information is enabled, the magnification is always shown on the screen.

(11) Camera handle trigger

Function: Control coordinate display, capture images or display six images.

Operation: If this trigger is set to control coordinate display, pull this trigger, the screen displays a coordinate; pull this trigger again, the coordinate disappears. If this trigger is set to capture images, pull this trigger, the current image is captured. If this trigger is set to **Display Six Images**, pull this trigger on **Examine** interface, and there will be a comparison of 6 images identified by the software. The 6 identified images are for reference only. By default, this trigger is set to **Capture Image**. For setting of this trigger, see section 5.12.2.4 *Setting the Camera Handle Trigger*.

2.3 Vertical Stand

Based on the shape of chassis, the vertical stand has different appearances, as shown in Figure 2-4 and Figure 2-5.

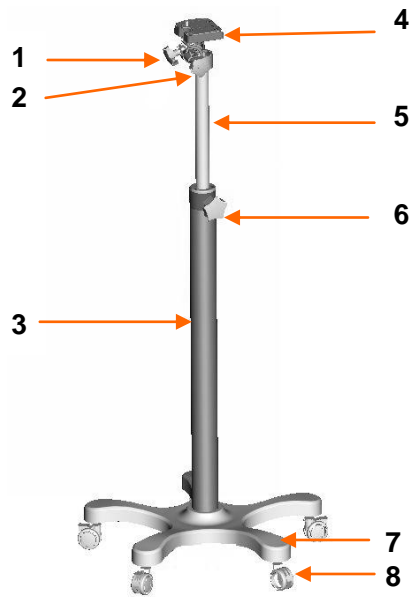


Figure 2-4 Vertical stand (with star-shaped chasis)

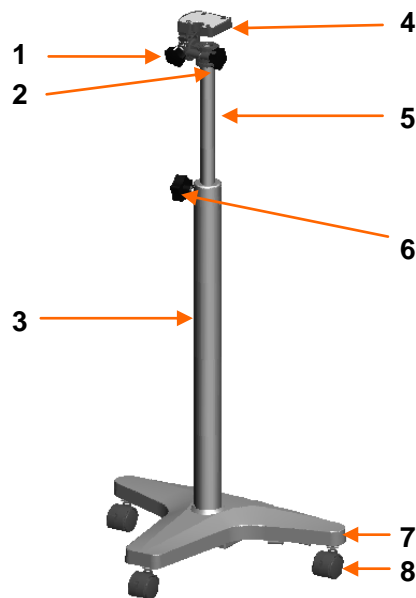


Figure 2-5 Vertical stand (with T-shaped chasis)

1	Vertical angle adjustment knob	2	Horizontal angle adjustment knob	3	Stand post
4	Camera holder	5	Lifting post	6	Height adjustment knob
7	Chassis	8	Casters		

2.4 Swing Arm Stand

By default, the swing arm stand includes the camera stand part. The monitor supporter part, keyboard tray part and laptop tray part are optional. The swing arm stand in maximum configuration is as follows:

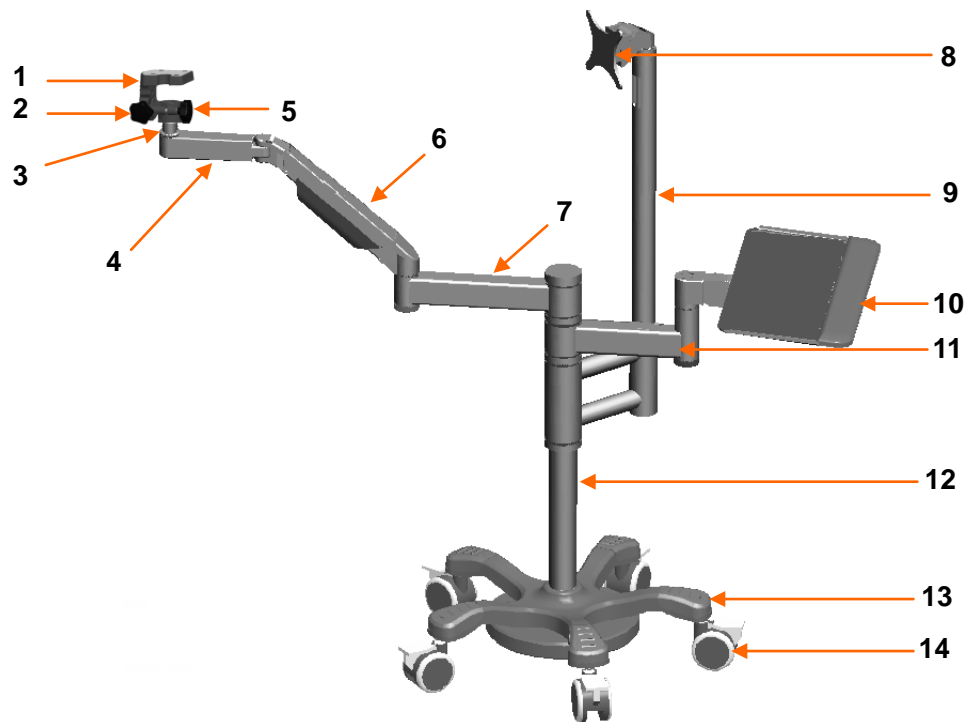


Figure 2-6 Swing arm stand (with the monitor supporter part and keyboard tray part)

If the laptop tray part is configured, the swing arm stand appears as follows:

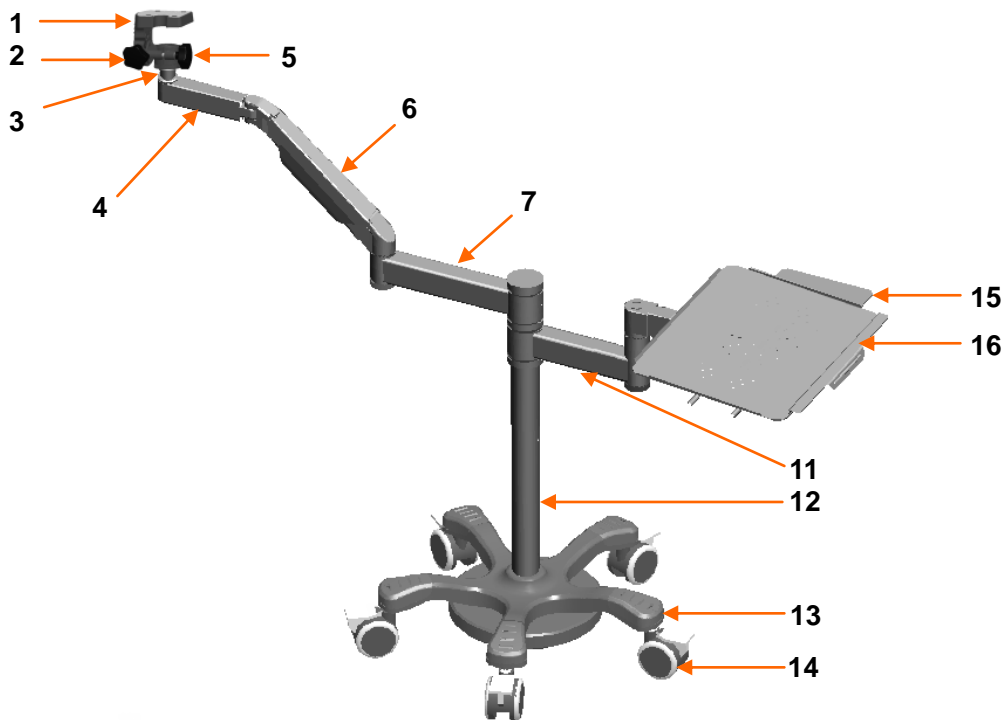


Figure 2-7 Swing arm stand (with the laptop tray part)

1	Camera holder	2	Vertical angle adjustment knob	3	Holder post
4	Horizontal arm-1	5	Horizontal angle adjustment knob	6	Swing arm
7	Horizontal arm-2	8	Monitor supporter	9	Monitor supporter post
10	Keyboard tray	11	Tray arm	12	Stand post
13	Chassis	14	Casters	15	Mouse tray
16	Laptop tray				

The monitor or all-in-one PC can be installed on the monitor supporter.

The keyboard can be placed on the keyboard tray.

The laptop can be placed on the laptop tray. The mouse can be placed on the mouse tray, which can be pushed inward when not needed.

CAUTION

The maximum load of the monitor supporter is 7.5 kg, that of the keyboard tray and laptop tray is 3.5 kg, and that of the mouse tray is 0.5 kg. Do not put objects exceeding the load limit on them.

2.5 MT-806 Trolley

The MT-806 trolley is optional.

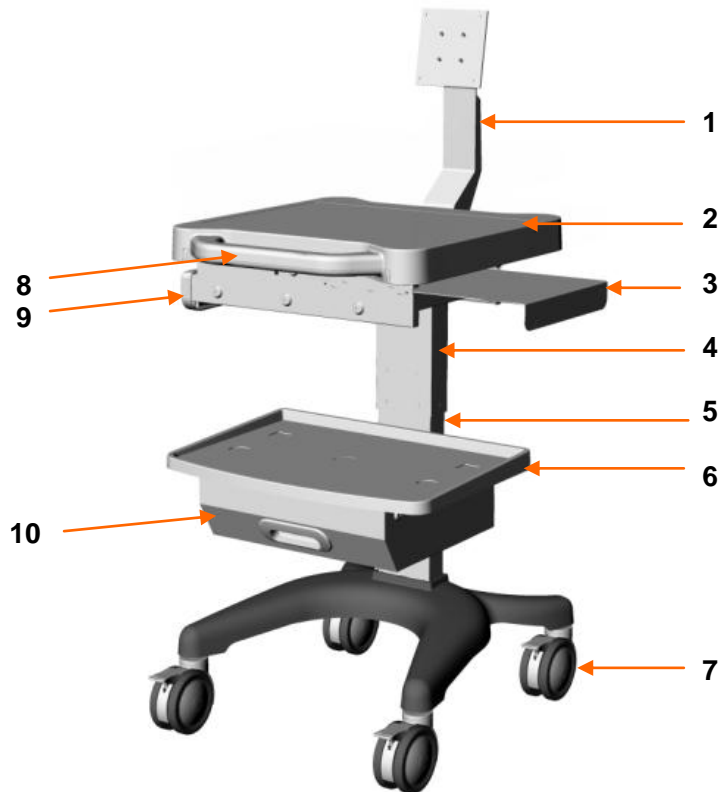


Figure 2-8 MT-806 trolley

1	Monitor supporter	2	Upper tray	3	Mouse tray
4	Upper stand post	5	Lower stand post	6	Lower tray
7	Casters	8	Trolley handle	9	Upper drawer
10	Lower drawer				

The monitor or all-in-one PC can be installed on the monitor supporter.

The laptop or keyboard can be placed on the upper tray. The mouse can be placed on the mouse tray, which can be pushed inward when not needed. The printer can be placed on the lower tray.

You can put small miscellaneous objects in the upper drawer and printing paper in the lower drawer.

CAUTION

The maximum load of the monitor supporter is 7.5 kg, that of the upper tray is 10 kg, that of the mouse tray is 0.5 kg, that of the lower tray is 7.5 kg, that of the upper drawer is 1 kg, and that of the lower drawer is 3 kg. Do not put objects exceeding the load limit on or in them.

2.6 Fixed Video Capture Box

The fixed video capture box is only configured to C3A and C6A.

The fixed video capture box applies only to the vertical stand and is installed under the chassis of the vertical stand. The following figure shows its appearance and external interfaces.

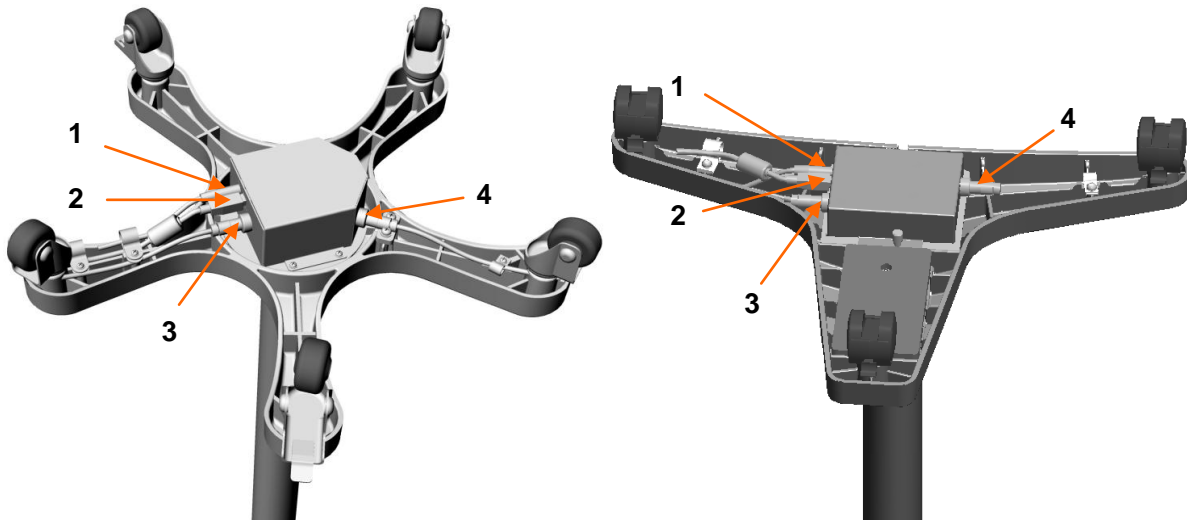


Figure 2-9 Fixed video capture box

1	DC port, used for connection with the power adapter
2	USB B interface, used for connection with the computer
3	3-pin aviation interface, used for connection with the foot switch
4	4-pin aviation interface, used for connection with the monitor

2.7 Movable Video Capture Box

The movable video capture box applies to both the vertical stand and swing arm stand. It can be installed on horizontal arm-2 of the swing arm stand or placed on the trolley or desk, etc.

C3A, C6A movable video capture box:



Figure 2-10 Movable video capture box

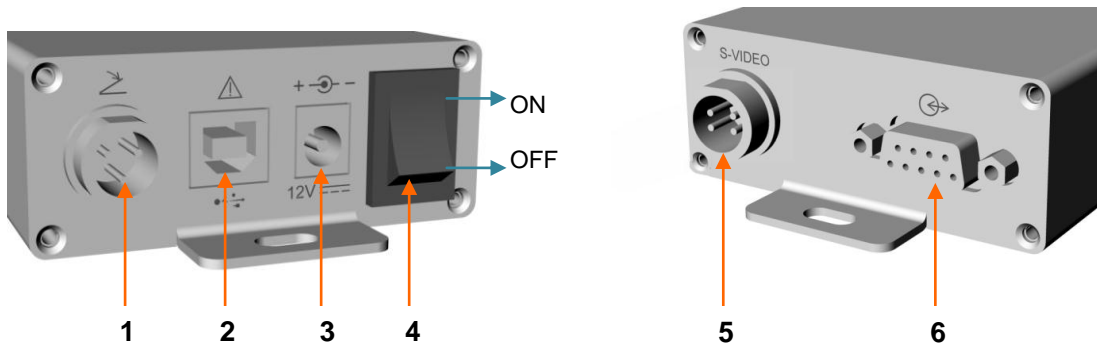


Figure 2-11 External interfaces and button

1	3-pin aviation interface, used for connection with the foot switch
2	USB B interface, used for connection with the computer
3	DC port, used for connection with the power adapter
4	Power switch
5	4-pin aviation interface, used for connection with the monitor
6	DB9 interface, used for connection with the camera

C6A HD movable video capture box:

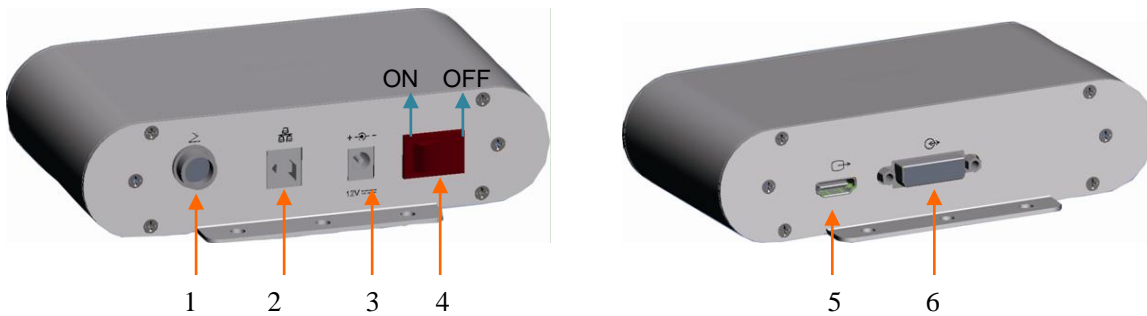


Figure 2-12 C6A HD movable video capture box

1	3-pin aviation interface, used for connection with the foot switch
2	USB B interface, used for connection with the computer
3	DC port, used for connection with the power adapter
4	Power switch
5	HD signal output interface, used for connection with the monitor
6	HD signal input interface, used for connection with the camera

2.8 Foot Switch

A foot switch is provided. You can capture images by simply stepping on the foot switch.

2.9 Power Adapter

A power adapter is provided. There are two models: FW7556M/12 and ME20A1202F01. Do not use other models of power adapter. For any malfunction or accident due to improper use of the power adapter, the manufacturer should not be held liable.

Chapter 3 Basic Operations

3.1 Opening and Checking the Package

Visually examine the package prior to unpacking. If any signs of mishandling or damage are detected, contact the carrier to claim for damage.

Open the package and check the components according to the packing list. Inspect the components for any damage. Let the service engineer of the manufacturer assemble the system for you.

Keep the package for possible future transportation or storage.

3.2 Adjusting the Vertical Stand

3.2.1 Placing/Moving the Stand

Each stand caster has a pedal. Step down the pedal can lock the caster.

When the stand is placed somewhere, step down the pedals to lock the casters and stop the stand from moving around.

When you need to move the stand, hold the lifting post with your hand and then push up the pedals to release the casters. After you move the stand to the destination, step down the pedals again.

CAUTION

Do not move the stand by holding the camera handle, otherwise the camera may be damaged.

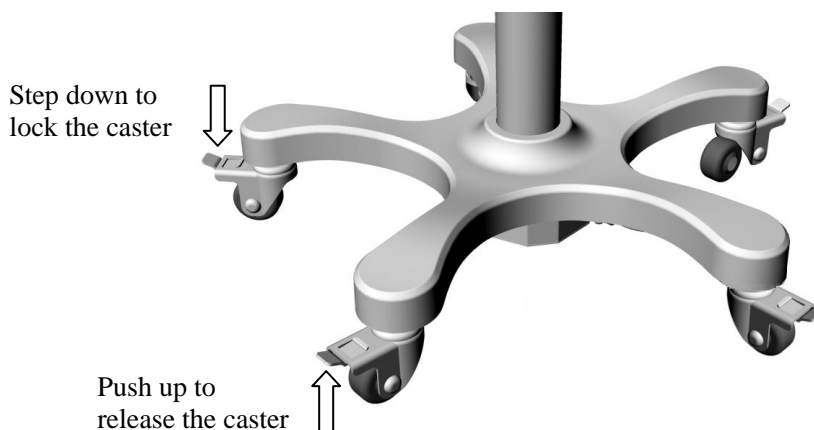


Figure 3-1

3.2.2 Adjusting the Stand Height

To get a clear image, you may need to adjust the stand height. Perform the following steps:

1. Step down the caster pedals to stop the stand from moving around.
2. Hold the lifting post with one hand, anticlockwise rotate the height adjustment knob to loosen it. Lift the post up or push it down to the desired height.
3. Rotate the knob clockwise to tighten it.

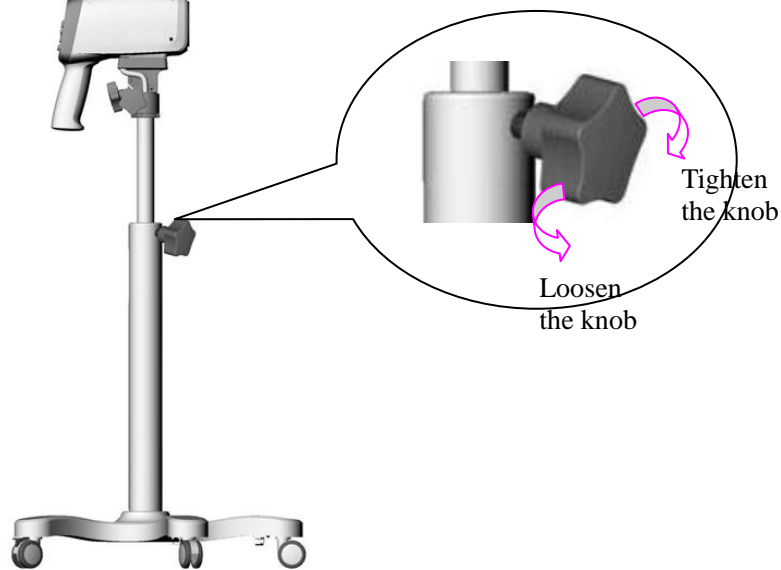


Figure 3-2

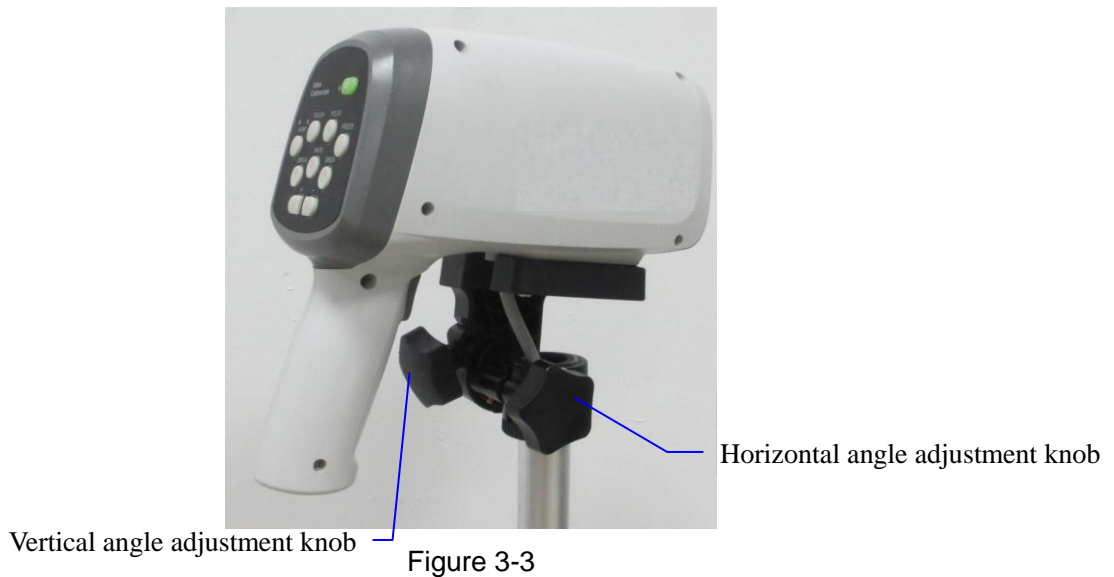
CAUTION

When you loosen the height adjustment knob, hold the lifting post with one hand to avoid sudden fall of the camera.

3.2.3 Adjusting the Camera Angle

To get a clear image, you may need to adjust the camera angle. Follow the instructions:

- To adjust horizontal angle: Hold the camera handle with your left hand and rotate the horizontal angle adjustment knob anticlockwise with the other hand. Now you can tilt the camera left or right to the proper angle. Rotate the adjustment knob clockwise to tighten it.
- To adjust vertical angle: Hold the camera handle with your right hand and rotate the vertical angle adjustment knob anticlockwise with the other hand. Now you can tilt the camera up or down to the proper angle. Rotate the adjustment knob clockwise to tighten it.



CAUTION

Do not exert pressure downward more than 15 kg on the camera or it may hurt you or damage the device.

3.3 Adjusting the Swing Arm Stand

3.3.1 Placing/Moving the Stand

Each stand caster has a pedal. Step down the pedal can lock the caster.

When the stand is placed somewhere, step down the pedals to lock the casters and stop the stand from moving around.

When you need to move the stand, hold the stand post with your hand and then push up the pedals to release the casters. After you move the stand to the destination, step down the pedals again.

CAUTION

1. Do not move the stand by holding the camera handle, otherwise the camera may be damaged.
 2. When moving the stand, avoid the camera from hitting the door frame or other objects.
 3. If the laptop tray or keyboard tray is configured, remove the laptop or keyboard placed on the tray before you move the stand. Otherwise, the laptop or keyboard may fall down.
 4. If the monitor supporter is configured, avoid the monitor or all-in-one PC installed on it from hitting the doorframe or other objects when you move the stand.
-

3.3.2 Adjusting the Camera Stand Height

You can adjust the camera stand height by adjusting the swing arm. Follow the instructions:

- To decrease the height: Hold the swing arm with your hand and press it down to the desired height, then release your hand.
- To increase the height: Hold the swing arm with your hand and lift it up to the desired height, then release your hand.

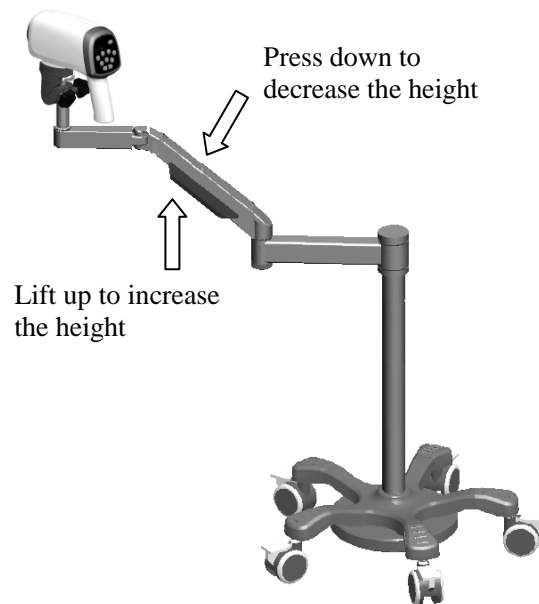


Figure 3-4

Due to the locking force of the gas spring inside the swing arm, the swing arm can fix at the position after you release your hand. The adjustment hole of the gas spring is in the swing arm axle connecting horizontal arm-2, as shown in the following figure:



Figure 3-5

If the swing arm continues to fall after you release your hand, it indicates that the locking force of the gas spring is too small. You can use a 4 mm socket head wrench to rotate the adjustment hole of the gas spring to the "+" direction.

If the swing arm continues to rise after you release your hand, it indicates that the locking force of the gas spring is too large. You can use a 4 mm socket head wrench to rotate the adjustment hole of the gas spring to the "-" direction.

3.3.3 Adjusting the Camera Angle

The swing arm stand allows flexible adjustment of the camera angle.

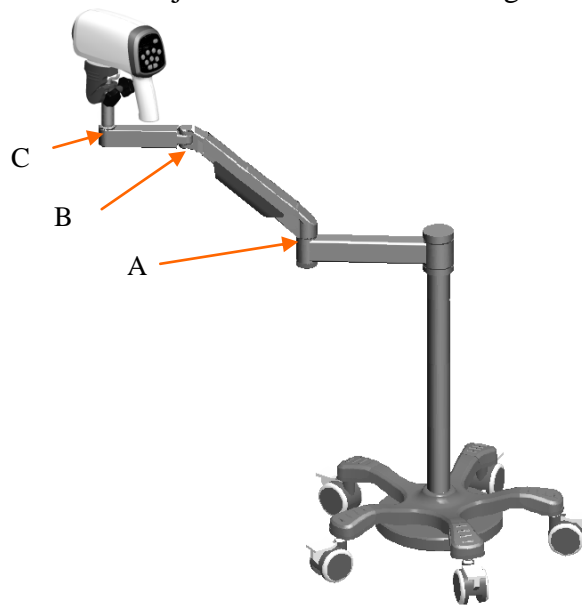


Figure 3-6

You can adjust the angle at points A, B and C. Follow the instructions:

- Point A: Hold horizontal arm-2 with one hand, and rotate the swing arm to the desired position on the horizontal direction with the other hand.
- Point B: Hold the swing arm with one hand, and rotate horizontal arm-1 to the desired position with the other hand.
- Point C: Hold horizontal arm-1 with one hand, and rotate the holder post to the desired position by rotating the camera handle with the other hand.

You can also adjust the camera angle by using the horizontal angle adjustment knob and vertical angle adjustment knob. The operation is the same as that for adjusting the angle of the camera on the vertical stand, for details, see section 3.2.3 *Adjusting the Camera Angle*.

CAUTION

Do not rotate the camera handle towards the same direction for multiple circles, otherwise the camera output cable may be twisted or broken.

3.3.4 Adjusting the Position of Keyboard Tray or Laptop Tray

If the keyboard tray or laptop tray is configured, you can adjust its position on the horizontal direction. Either of the following methods can be used:

- Hold the stand post with one hand, and rotate the tray arm around the stand post to the desired position with the other hand.
- Hold two sides of the tray with both hands, and rotate it to the desired position.

CAUTION

Adjust the position of the tray in a slow and gentle manner, otherwise your hands or arms may be hit by another part of the swing arm stand and get hurt.

3.3.5 Adjusting the Monitor Angle

If the monitor supporter is configured and a monitor is installed on it, you can adjust the monitor angle. Follow the instructions:

- To adjust horizontal angle: Hold the left and right sides of the monitor with both hands, then tilt it left or right to the desired angle.
- To adjust vertical angle: Hold the top and bottom sides of the monitor with both hands, then tilt it up or down to the desired angle.

CAUTION

When tilting the monitor, be careful not to jam your hands between the monitor supporter and the monitor.

3.4 Adjusting the MT-806 Trolley

3.4.1 Placing/Moving the Trolley

Each trolley caster has a pedal. Step down the pedal can lock the caster.

When the trolley is placed somewhere, step down the pedals to lock the casters and stop the trolley from moving around.

When you need to move the trolley, hold the trolley handle with your hands and then push up the pedals to release the casters. After you move the trolley to the destination, step down the pedals again.

3.4.2 Adjusting the Monitor Angle

If a monitor is installed on the monitor supporter of the trolley, you can adjust its angle on the vertical direction. The operation is as follows: Hold the top and bottom sides of the monitor with both hands, then tilt it up or down to the desired angle.

CAUTION

When tilting the monitor, be careful not to jam your hands between the monitor supporter and the monitor.

3.5 Connecting the Power Adapter

Make sure that the AC power supply complies with the following specifications:

Operating Voltage: 100 V-240 V~

Operating Frequency: 50 Hz/60 Hz

3.6 Switching on the System

Prior to switching on the system, check if all the components are correctly connected and if all the cables are in good condition. Then turn on the camera.

If the movable video capture box is used, first turn on its power switch, then the camera.

3.7 Switching off the System

When the examination is completed, exit the video colposcope software. Turn off the camera, and cover it with the dustproof cover.

If the movable video capture box is used, remember to turn off its power switch when you switch off the system.

Chapter 4 Software Installation

NOTE:

- ◆ The video colposcope software applies to operating system Windows 7, Windows 8, Windows 8.1 and Windows 10.
- ◆ Before software installation, ensure that all the equipment forming the system has been connected and the camera has been switched on.
- ◆ Before software installation, close any antivirus software.
- ◆ Replace or update of the software must be performed by professional personnel of the manufacturer or under their guidance.

1. Open the CD. The available directories, files, and programs are as follows:

chart	2015-3-17 8:56
softdog	2015-3-17 8:56
usbdriver	2015-3-17 8:56
v2500driver	2015-3-17 8:56
xvid-1.2.2	2015-3-17 8:56
1031.mst	2015-3-16 20:35
1033.mst	2015-3-16 20:35
1034.mst	2015-3-16 20:35
1036.mst	2015-3-16 20:35
1040.mst	2015-3-16 20:35
1043.mst	2015-3-16 20:35
1049.mst	2015-3-16 20:35
1053.mst	2015-3-16 20:35
2052.mst	2015-3-16 20:35
Colposcope.msi	2015-3-16 20:36
Datal.cab	2015-3-16 20:35
ISSetup.dll	2015-3-16 20:30
setup.exe	2015-3-16 20:36

Figure 4-1

2. Double-click  `setup.exe`. The following interface is displayed.

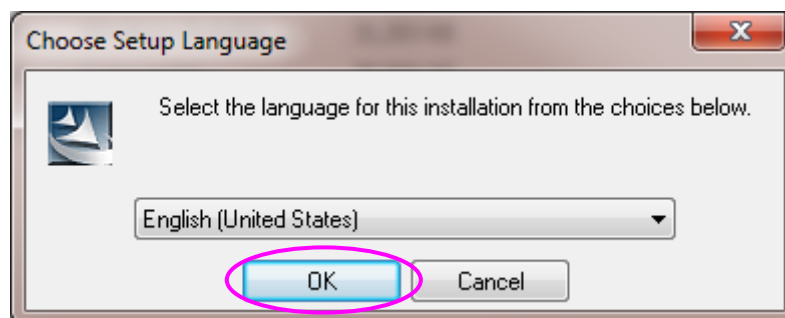


Figure 4-2

3. Select a language, and click **OK**.

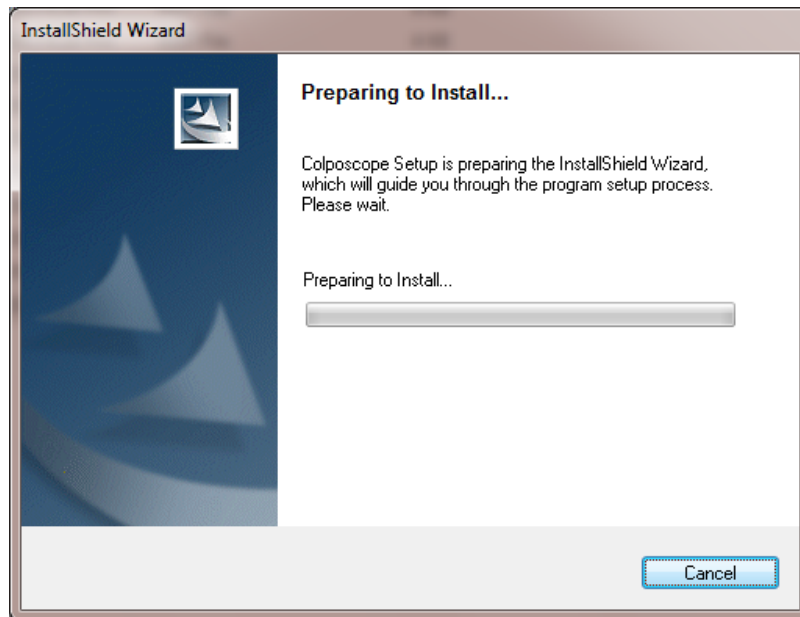


Figure 4-3

It takes some time for the software installation preparation. Please wait. When the installation is ready, the following interface is displayed. Click **Next**.

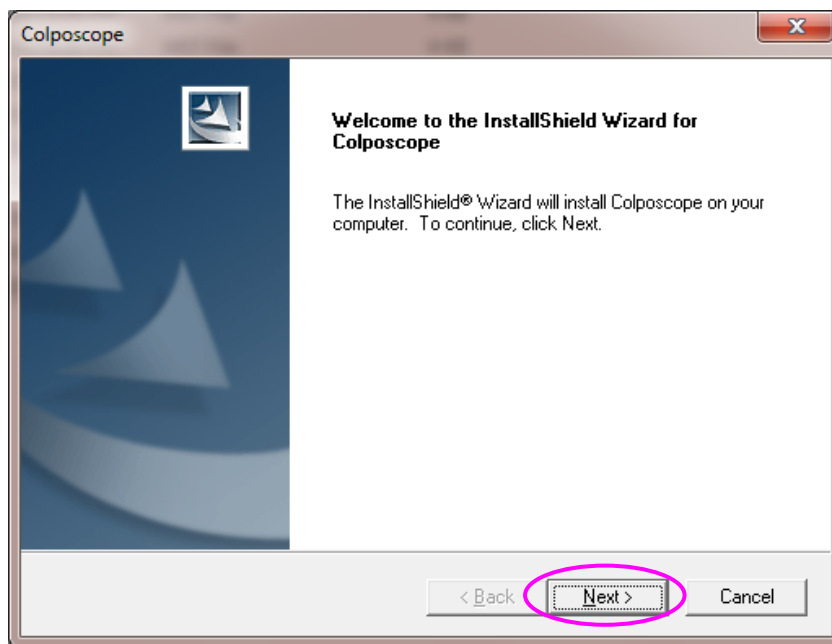


Figure 4-4

4. The following prompt is displayed. Click **Next** after you check the items.

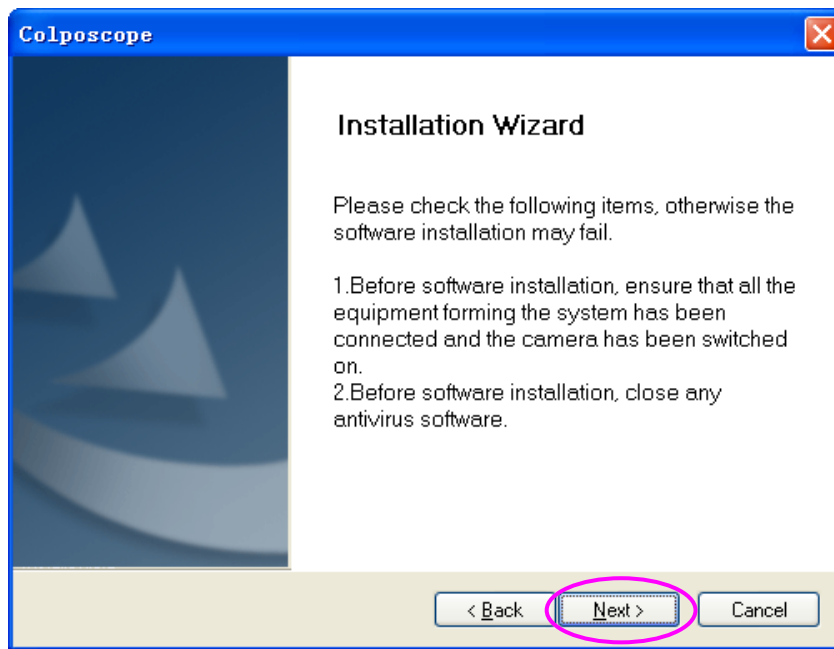


Figure 4-5

5. Click **Browse** to select the installation path. The default path **D:\Cx\Cx_Workstation** is recommended. Then, click **Next**.

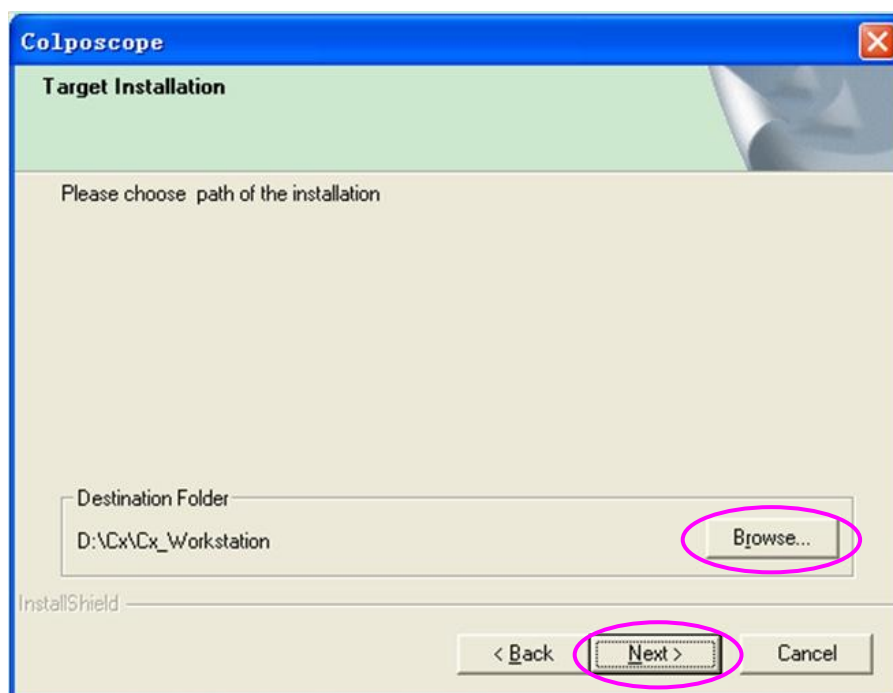


Figure 4-6

NOTE:

If disk D does not exist in the system, the default path is invalid. Please select another path.

- Click **Browse** to select the database installation path. Do not select **C:\Program Files**. The default path **D:\Cx\Cx_Database** is recommended. Then, click **Next**.

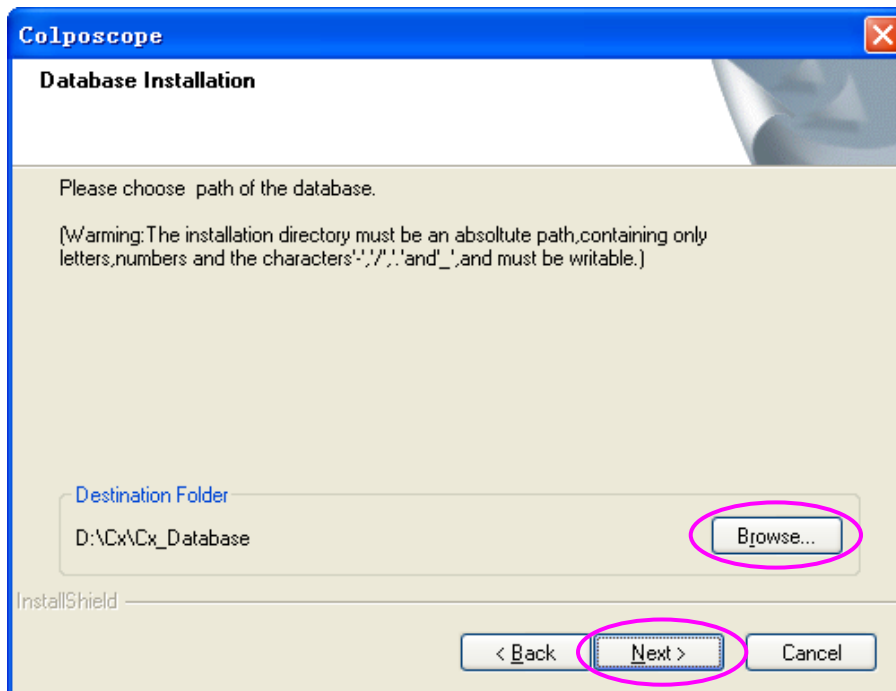


Figure 4-7

- Click **Next** to continue installation. Do not close the black command prompt windows.

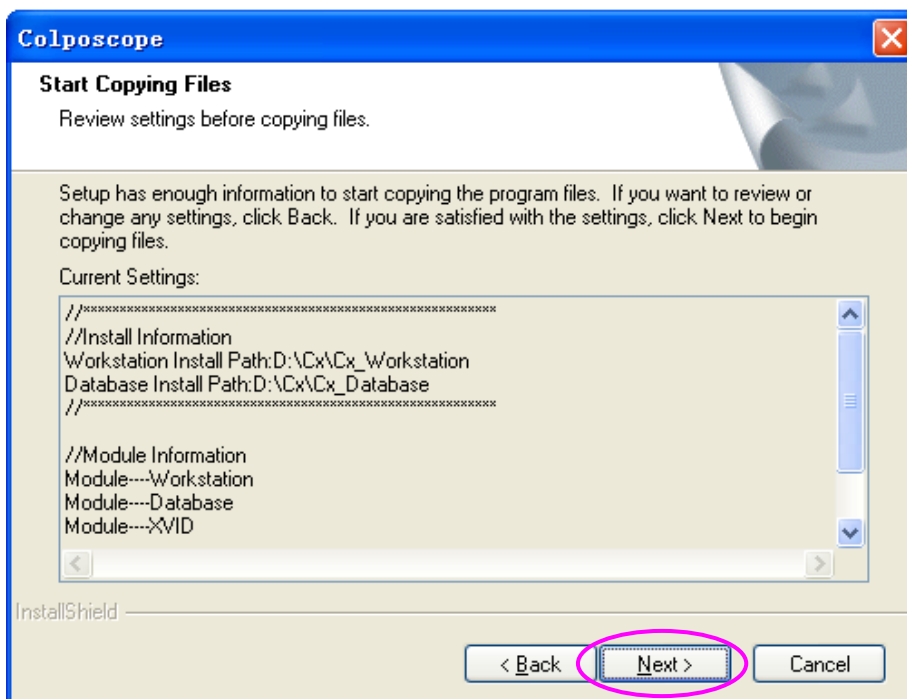


Figure 4-8

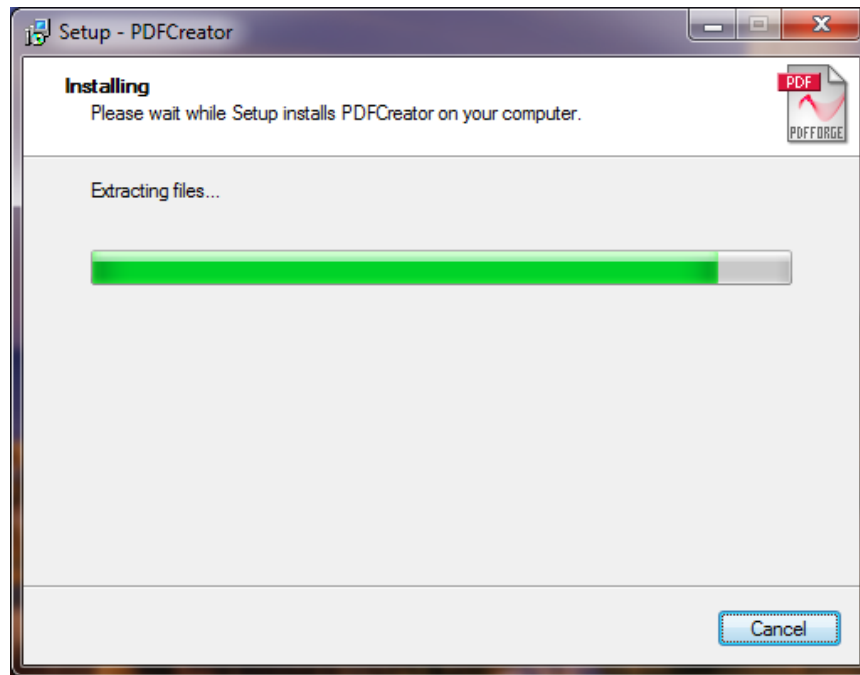


Figure 4-9

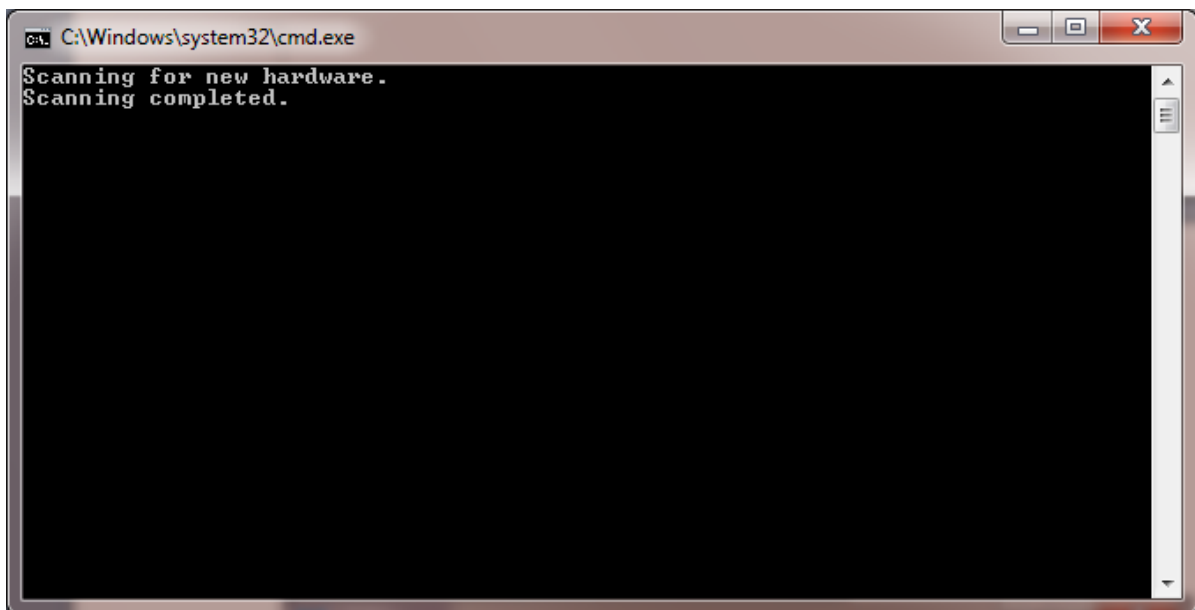


Figure 4-10

For operating system Windows 7, Windows 8, Windows 8.1 or Windows 10, a prompt will be displayed, asking you whether to install the software driver. Choose to install the driver, as shown in the following figure (Windows 8 is used as an example).

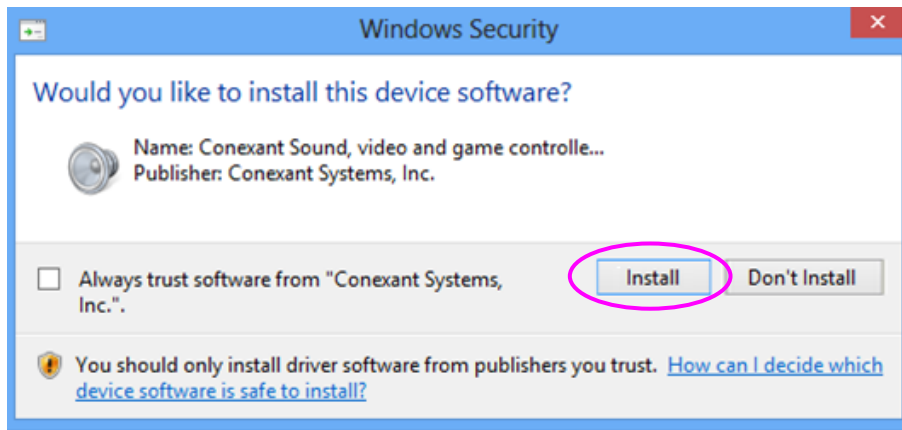


Figure 4-11

NOTE:

If the driver is not installed, when you try to access the **Examine** interface or to set the capture card on the **Setup** interface, a system prompt will be displayed, indicating that initializing video module failed. For details about the troubleshooting, see relevant descriptions in *A2.2 Access to Video Colposcope Software with Error Reporting*.

- 8. Click **Finish** to complete the installation.

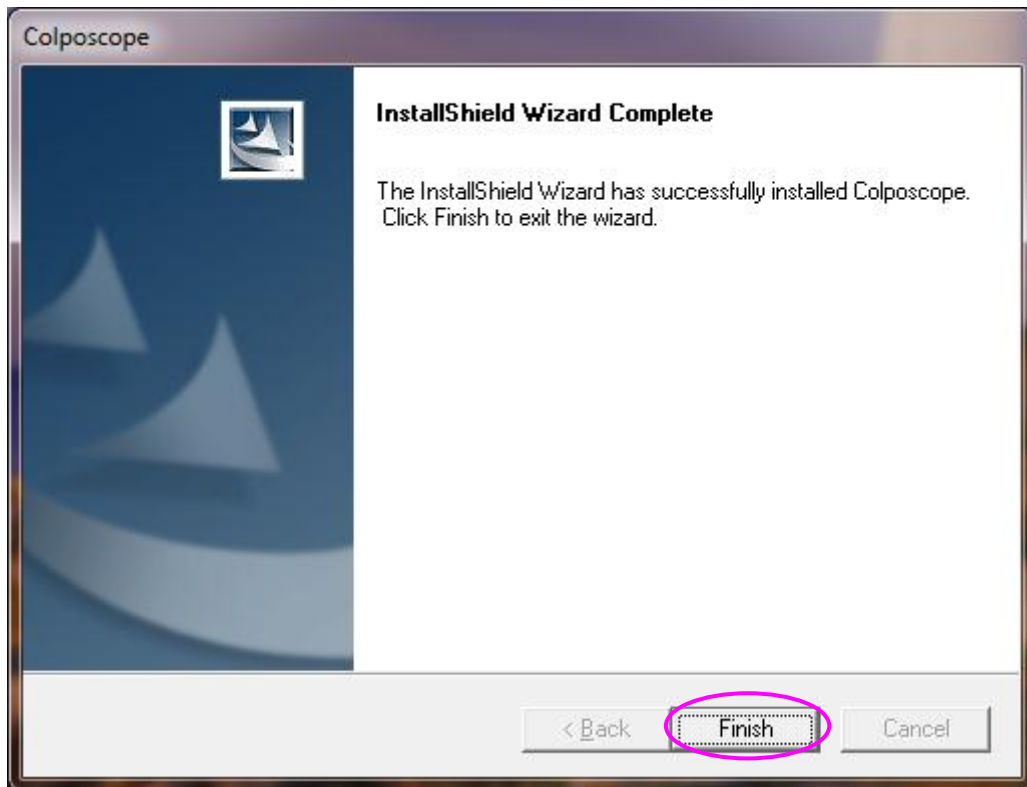


Figure 4-12

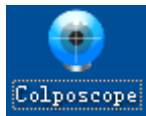
After installation, the software icon  is available on the PC desktop.

Chapter 5 Application of the Video Colposcope Software

NOTE:

During normal running of the system, do not remove the USB connection between the computer and the video capture box.

5.1 Starting up the Software



Double-click the software icon on the desktop. The system login interface is displayed.



Figure 5-1

The drop-down menu of **Name** lists all existing usernames. Select your username, input the correct password and then click **Login**. Your username is shown on the top of the displayed main interface, for example, **Doctor Login: [sys]**.

For the first login, use the name **sys** and the default password is **sys**. After you log in to the system, you can add more users by using the procedures described in 5.12.1.2 *Adding a User*.

NOTE:

You are advised to change the password of user **sys** after the first login.

5.2 Main Interface

After login, the main interface is displayed.

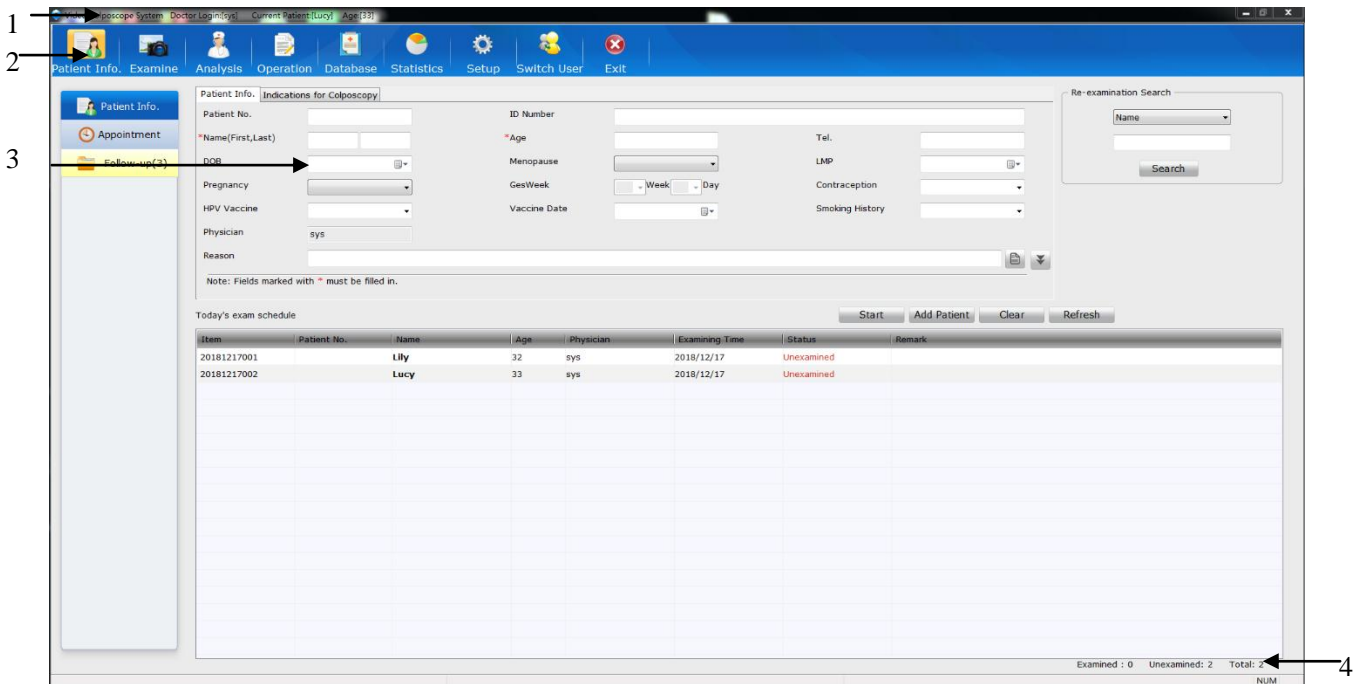


Figure 5-2

Item	Name	Description
1	Title bar	It shows the software system name, doctor login and current patient information.
2	Tool bar	It shows the available function modules. You can open their operation interfaces by clicking on these buttons.
3	Operation interface	It corresponds with the buttons in the tool bar.
4	Status bar	It calculates the number of patients examined and to be examined.

5.3 Patient Information

The system displays the **Patient Info.** operation interface after login. On another interface, you



can click the **Patient Info.** button **Patient Info.** in the tool bar to switch to this interface. On this interface, you can input patient information, view today's exam schedule, search for a re-examined patient, make appointment, or manage follow-up patient data.

5.3.1 Adding a Patient



Click the **Patient Info.** tag to open the **Patient Info.** interface.

On the **Patient Info.** tab, input the patient information, e.g. name, age, and reason.

Figure 5-3

If **Yes** is selected for **Menopause**, **Menopause Age** instead of **LMP** is displayed and must be specified.

You can click for more patient information, for example, marital status and gravidity. The button changes to the button. You can click to hide the patient information again.

Figure 5-4

On the **Indications for Colposcopy** tab, select the clinical indication and input information about TCT, HPV, or histopathology based on the patient's actual conditions.

Figure 5-5

NOTE:

Examining Time can only be the current day or an earlier day.

For **Reason**, **TCT**, **HPV**, and **Histopathology**, you can manually input the information or click



to open the **Select Term** page and select relevant terms.

On the **Select Term** page, you can also perform term maintenance. Click **Term Maintenance** to enter the **Term Maintenance** page. On this page, you can add, modify, delete, or move up or down a term.

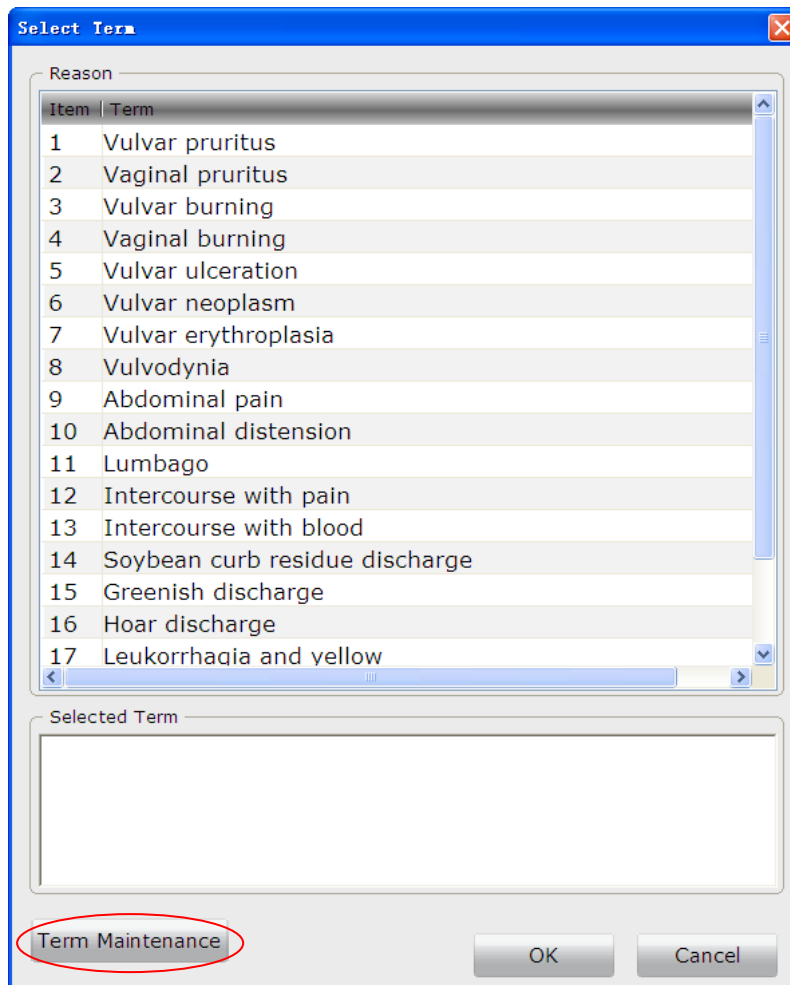


Figure 5-6

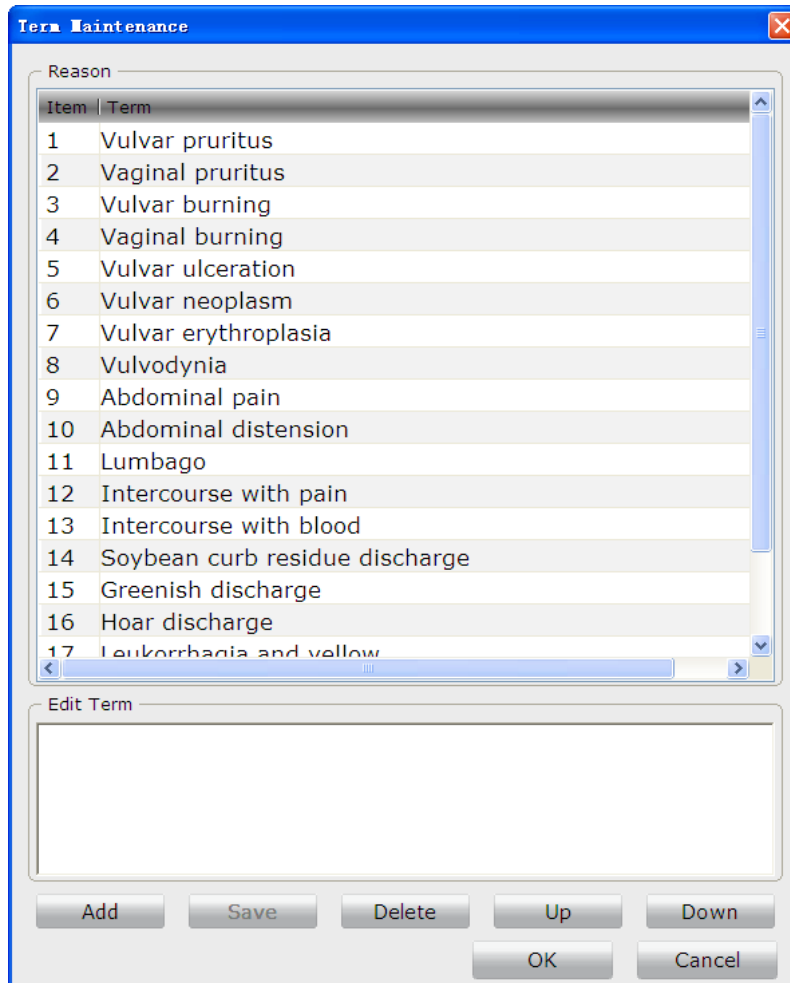


Figure 5-7

NOTE:

Certain terms provided by the system cannot be modified or deleted. When you double-click such a term to select it, the **Save** and **Delete** buttons are unavailable.

After you input patient information and indications for colposcopy, click **Add Patient**, this patient is added to today's exam schedule. Or you can click **Start**, this patient is added and the system enters the **Examine** interface automatically. You can click **Clear** to delete all the inputted information.

5.3.2 Viewing Today's Exam Schedule

Today's exam schedule lists all patients of the current day, who have been examined or are to be examined.

By default, the list is sorted based on **Item** and **Status** as follows: Unexamined patients are listed preceding examined patients, and within each group, patients are sorted by **Item** in ascending order. You can click another item name such as **Age**, and the list is then sorted in this order. Click this item again, the list is sorted in reverse order.

Today's exam schedule							
Item	Patient No.	Name	Age	Physician	Examining Time	Status	Remark
20150327002		Sally	42	sys	2015-03-27	Unexamined	
20150327004		Carol	39	sys	2015-03-27	Unexamined	
20150327001		Mary Smith	50	sys	2015-03-27	Examined	
20150327003		Ann	47	sys	2015-03-27	Examined	

Figure 5-8

Select a patient in the list and right-click it, you can choose to browse her examination record, modify her information or delete her information.

5.3.3 Browsing Examination Record

Select a patient in the list, right-click it and choose **Browse Examination Record**. This patient's examination record is displayed.

You can only view the examination record but cannot edit it.

5.3.4 Modifying Patient Information

Select a patient in the list, right-click it and choose **Modify Patient Information**. On the displayed page, you can modify the patient information. Then, click **OK** to confirm the modification, or click **Exit** to cancel it.

Figure 5-9

NOTE:

1. If a patient in today's exam schedule is not examined, her information will be deleted the next day. Therefore, you need to modify **App. Time** for her and the system makes

the appointment.

2. **App. Time** and **Physician** are available for modification only when the patient is unexamined and not the current patient.

5.3.5 Deleting Patient Information

Select a patient in the list, right-click it and choose **Delete Patient Information**. A prompt is issued. Click **OK** to confirm the deletion, or click **Cancel** to cancel it.

NOTE:

1. The current patient's information cannot be deleted.
2. Once a patient's information is deleted, this examination record of hers in the database is deleted as well.

5.3.6 Searching for a Re-examined Patient

To quickly search for an examined patient, perform the following procedures:

In the **Re-examination Search** area, select a condition, then input the keyword. If the condition is **Name** or **Patient No.** or **DOB**, the system supports fuzzy search, and you can search by inputting only part of the keyword. The more information you input, the more accurate result you will get.

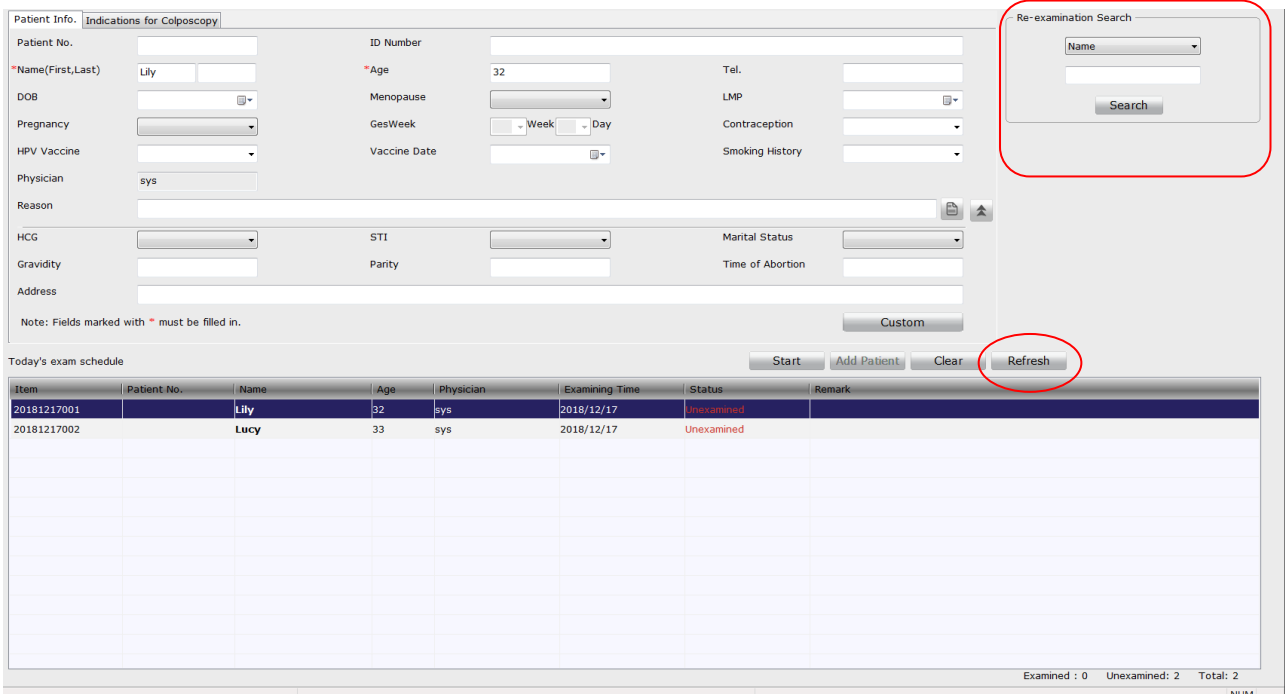


Figure 5-10

Click **Search**, all the patients that meet the condition will be displayed in the **Re-examining Patient** list. Click **Refresh**, the today's exam schedule is shown again.

Select a patient in the **Re-examining Patient** list, her information is shown above. You can edit

the information. Click **Add Exam**, this patient is added to today's exam schedule and the system shows today's exam schedule again. Or you can click **Start**, this patient is added to today's exam schedule and the system enters the **Examine** interface. You can click **Clear** to delete the inputted information.

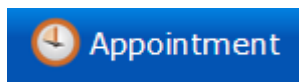
Re-examining Patient							
Item	Patient No.	Name	Age	Physician	Examining Time	Status	Remark
20150128026		test0	23	sys	2015-01-28	Examined	
20150128027		test1	35	sys	2015-01-28	Examined	
20150128028		test2	43	sys	2015-01-28	Examined	
20150128029		test3	23	sys	2015-01-28	Examined	
20150324001		test	37	sys	2015-03-24	Examined	

Figure 5-11

5.3.7 Making an Appointment

You can make an appointment for a patient after this function is enabled (see section 5.12.2.10 *Enabling Patient Appointment*).

Figure 5-12



Click the **Appointment** tag to open the **Appointment** interface. Input information such as patient name, age and appointment time on the **Patient Info.** tab and indications on the **Indications for Colposcopy** tab, then click **Save**. The appointment is made, and the patient's information is shown in the appointment list below.

The appointment time can be the current day or a future day. If the user type of the doctor login is nurse, the system will move the patients whose appointment time is the current day to **Today's exam schedule**; if the user type of the doctor login is not nurse, the system will move the patients whose appointment time is the current day to **Today's exam schedule** only when the appointed

physician is the doctor login or not specified.

NOTE:

Every login user can view all the appointment information.

5.3.8 Searching for an Appointment

To quickly search for an appointment, perform the following procedures:

In the **Appointment Search** area, select a condition, then input the keyword. If the condition is **Name** or **Patient No.**, the system supports fuzzy search, and you can search by inputting only part of the keyword. The more information you input, the more accurate result you will get. If the condition is **App. Time**, the result will include all the appointment records of the inputted date and dates after it.

Click **Search**, all the patients that meet the condition will be listed.

Click **Refresh**, the original appointment list is shown again.

5.3.9 Modifying an Appointment

Select a patient in the appointment list, her appointment information is shown above. You can edit the information and then click **Modify**. A prompt is issued. Click **OK** to confirm the modification, or click **Cancel** to cancel it.

5.3.10 Deleting an Appointment

Select a patient in the appointment list, right-click it and choose **Delete Appointment**. A prompt is issued. Click **OK** to confirm the deletion, or click **Cancel** to cancel it.

You can select multiple pieces of the appointment information and delete them at the same time.

5.3.11 Follow-up Management

If the patient appointment function is enabled (see section 5.12.2.10 *Enabling Patient Appointment*), the **Follow-up** tag is available.

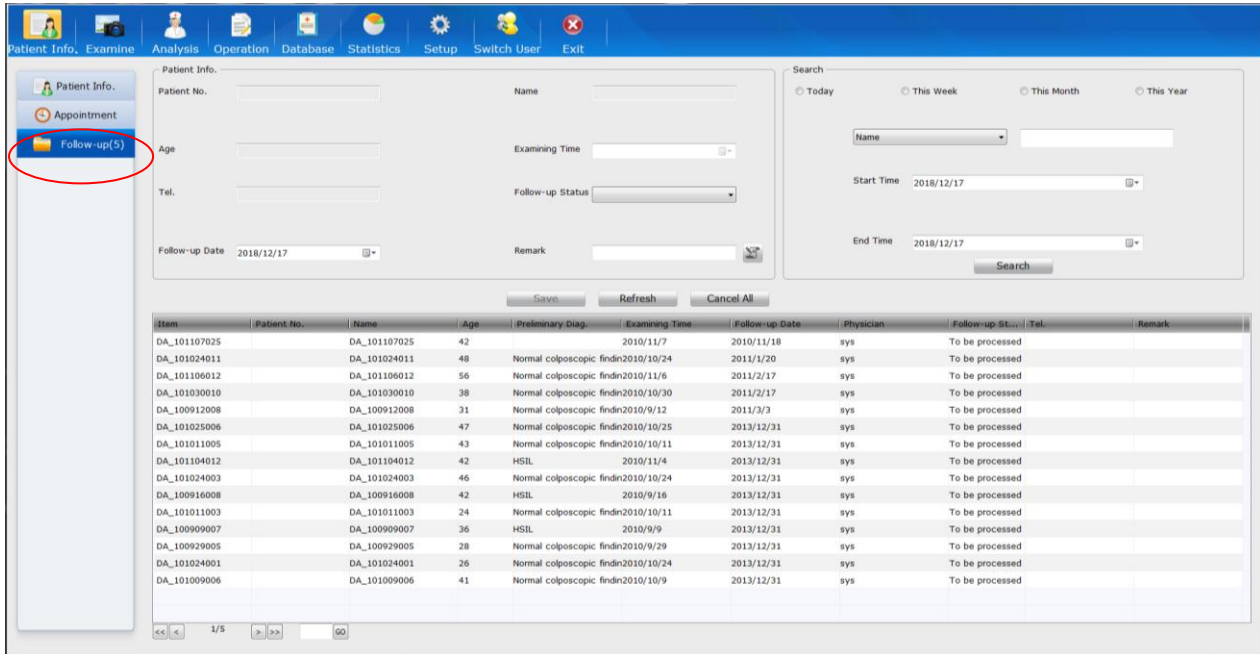


Figure 5-13

Click the **Follow-up** tag, the follow-up patients to be processed in or before the specified follow-up period will be displayed. The list shows the patients by follow-up date in ascending order, and the **Follow-up** tag shows the total number of records. For setting of the follow-up period, see section 5.12.2.2 *Setting Follow-up Period*.

Select a patient in the list, her information will be displayed in the area above. You can modify the follow-up status, follow-up date, or remark, and click **Save**. The inputted follow-up date cannot be earlier than the current day. If the follow-up status is changed to **Cancelled**, the follow-up visit will be cancelled for the patient; if changed to **To Appointment**, the system will make the appointment for the patient, and the **Appointment** interface shows this appointment record, in which the appointment time is the follow-up date.

Input search conditions in the **Search** area, and click **Search**, all the patients that meet the conditions will be displayed in the follow-up list. Click **Refresh**, the original follow-up list is shown again.

Click **Cancel All**, the follow-up status of all the patients whose follow-up date has expired will be set to **Cancelled**.

NOTE:

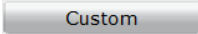
You cannot modify information of the patients whose follow-up status is "To Appointment".

5.3.12 Bar Code Scanner Function

When the bar code scanner is connected to the system, you can activate the scanner function and enter patient information by scanning patient bar code.

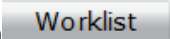
After the bar code scanner function is enabled (**System Setup>General Setup> Scanner Setup>On**), you can scan the patient bar code on the **Patient** interface or **Appointment** interface with the scanner, and the patient's information, including patient number, patient name, birthday and age, will be entered automatically. The rest information can be entered manually. Click "**Add Patient**" (**Patient** interface) or "**Save**" (**Appointment** interface) after entering information.

5.3.13 Patient Info. Input Items Customization

Users can customize patient info. input items through this function. Click the **Custom** button  on the patient information interface and the **Custom** page is displayed. Select the items that you want to input. Among the items, **Patient No.**, **Name** and **Age** are selected by default and can't be modified. The rest items are selected by default and can be modified. After the modification, click **Save** and "**Modification succeeded**" will be displayed.

5.3.14 Worklist

Users can search records and download them to local file on PACS server through this function.

Enable DICOM function, for details, please refer to *Section 5.12.4.1 Enabling DICOM*. Click the **Worklist** button  and the **Records Search** interface is displayed. Input search conditions such as **Patient No.**, **Name**, **Age**, **Physician**, **Examining time**, and then click **Search**, the searched results will be displayed in the list. Select the records that you need to download and then click **Download the Selected Patients**, the selected records will be downloaded to local file.

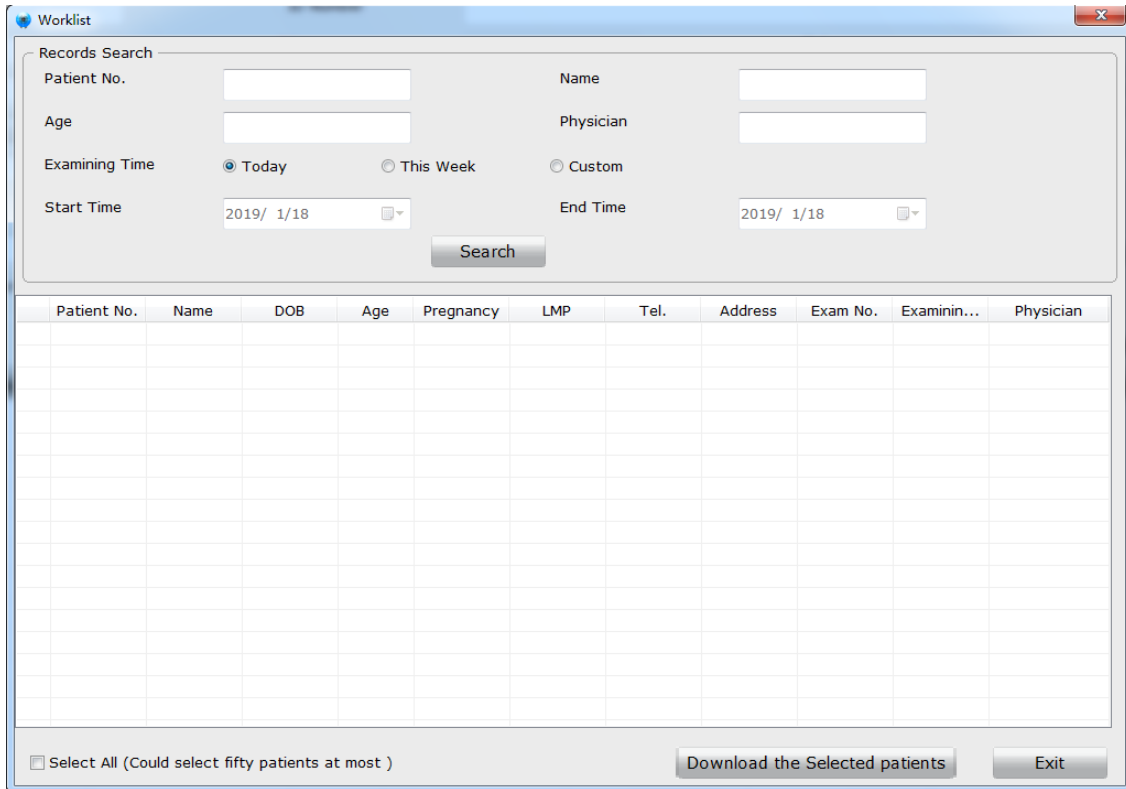
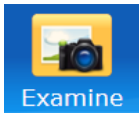


Figure 5-14

5.4 Examining

Once a patient is selected on the **Patient Info.** interface, click **Start** on the interface or the



Examine button in the tool bar. The system enters the **Examine** interface, with the patient's key information displayed on the lower left. On this interface, you can capture images, take video, make comparison, edit or measure the images.

NOTE:

1. You can open the **Examine** interface only after the camera is connected to the computer and switched on.
2. If no image is displayed, check whether the USB connection between the computer and the video capture box is normal.

5.4.1 Examination Prompts

If the function of providing examination prompts is enabled (see section 5.12.2.15 *Enabling Examination Prompts*), prompts are available when you open the **Examine** interface. You can also click the **Help** tag and view examination guide on the displayed **Help** page.

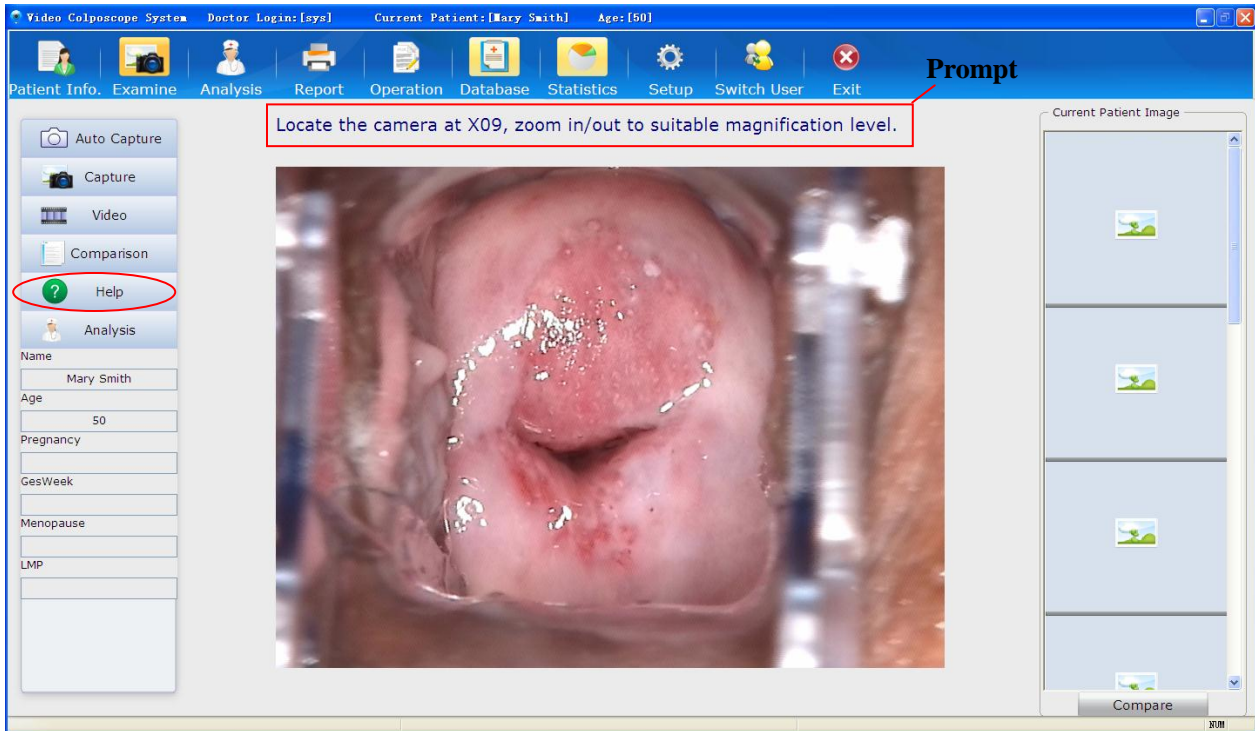
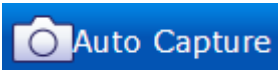
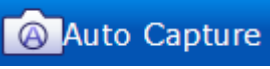


Figure 5-15

5.4.2 Capturing Images

Click the **Auto Capture** tag , the auto capture function is enabled (which is only effective to the current operation. After the restart of the software, the setup will resume to the setup in **Setup**, see section 5.12.2.16 *Enabling Auto Capture*), and the tag turns to . After you press the "TIME" key of the camera, the system will automatically capture one image at specific time points. To disable the auto capture function, click **Auto Capture** again.

If the function of providing examination prompts is enabled (see section 5.12.2.15 *Enabling Examination Prompts*), the system will show prompts after you press the "TIME" key of the camera. Perform operations according to the prompts.

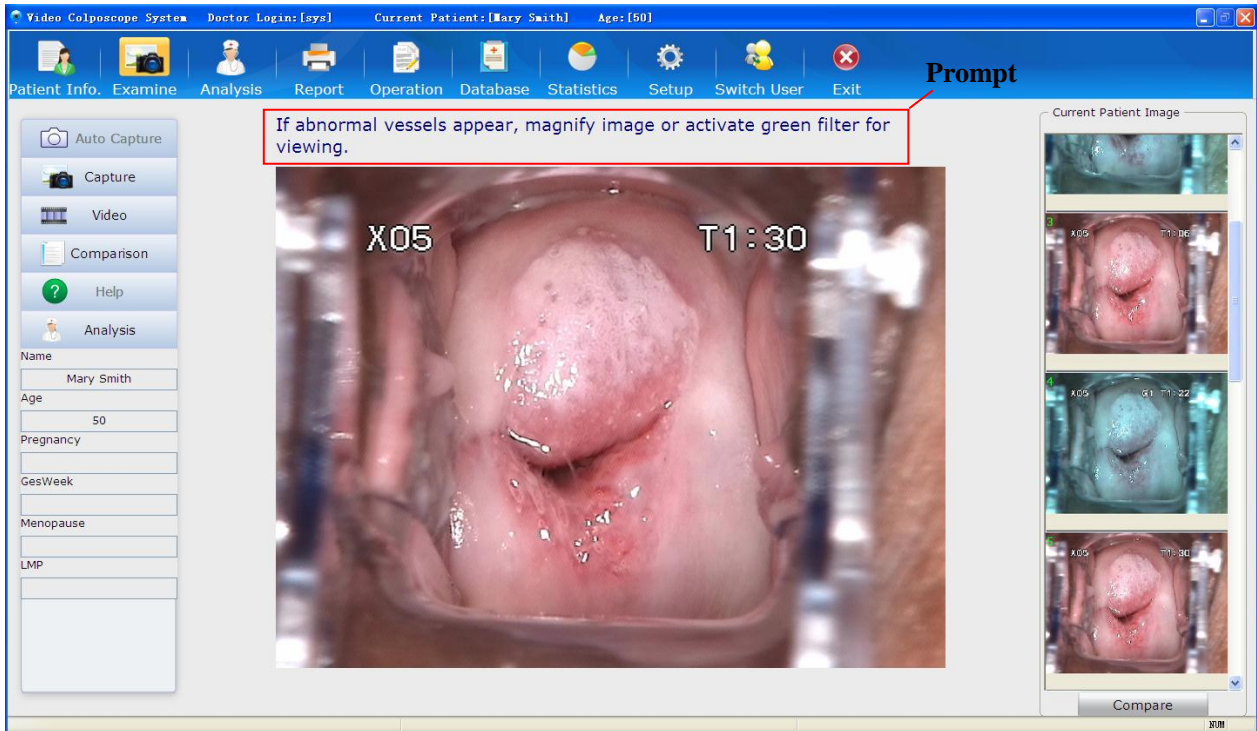
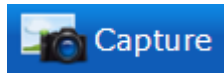


Figure 5-16

NOTE:

After you press the "TIME" key, the **Auto Capture** and **Help** tags become unavailable. They are available again after you press the "TIME" key again or the current timer ends.



Click the **Capture** tag, the system captures the current image. The captured image is shown on the right of the screen. A maximum of 50 images can be captured for a patient. You can double-click an image to magnify it. You can click an image to select it, then right-click it and choose **Delete** to delete it. You can select multiple images and delete them at the same time.

If the foot switch is connected, you can step on it to capture or freeze and capture the current image, depending on the setting.

By default, the camera handle trigger is used to control coordinate display. Pull this trigger, the screen displays a coordinate, as shown in the figure below.

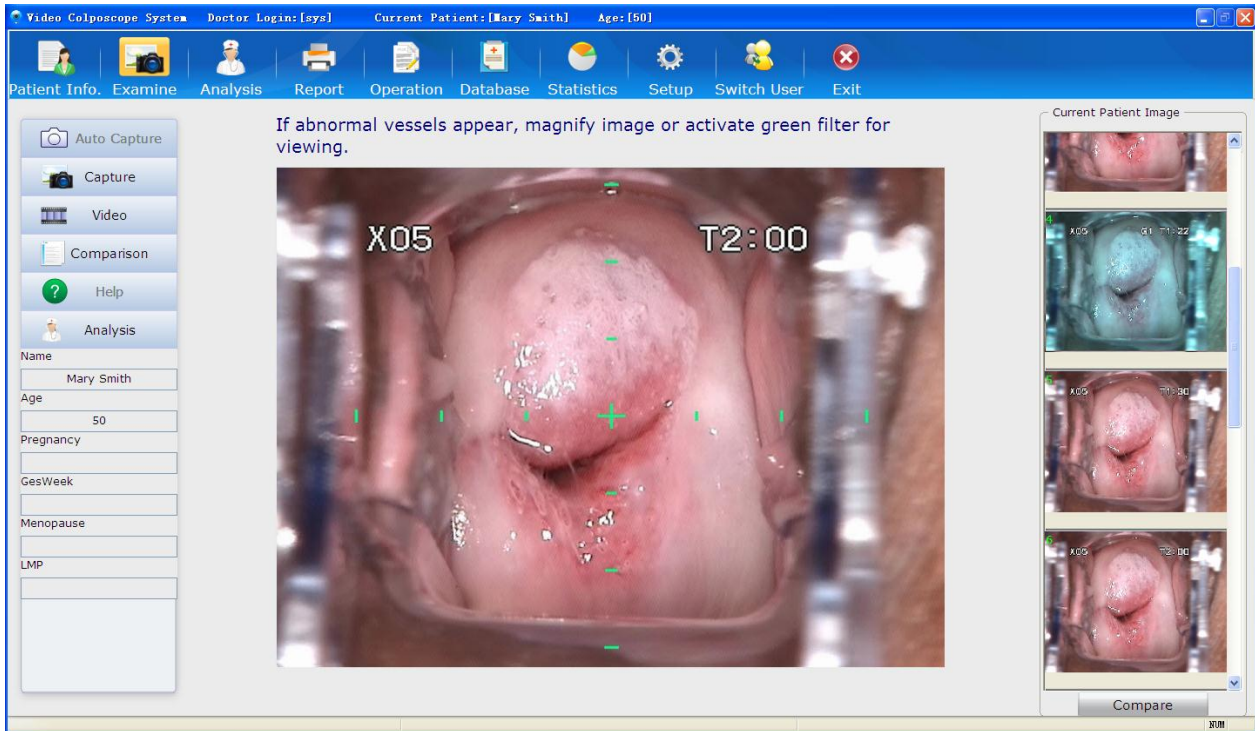




Figure 5-17

The coordinate helps to locate the center of an image, facilitating image capturing. Pull the trigger again, the coordinate disappears.

If the camera handle trigger is set to capture image, you can pull this trigger to capture the current image.

5.4.3 Taking Video

Click the **Video** tag  , the system starts taking video. Click the **Stop** tag  to stop taking video. The video taking can last for at most one hour. Once one hour is reached, the system automatically stops taking video.

The video is saved as an .avi file and the file is shown with a video symbol on the right of the screen. You can double-click to play the video and capture images during video playing.

5.4.4 Viewing in Full Screen Mode

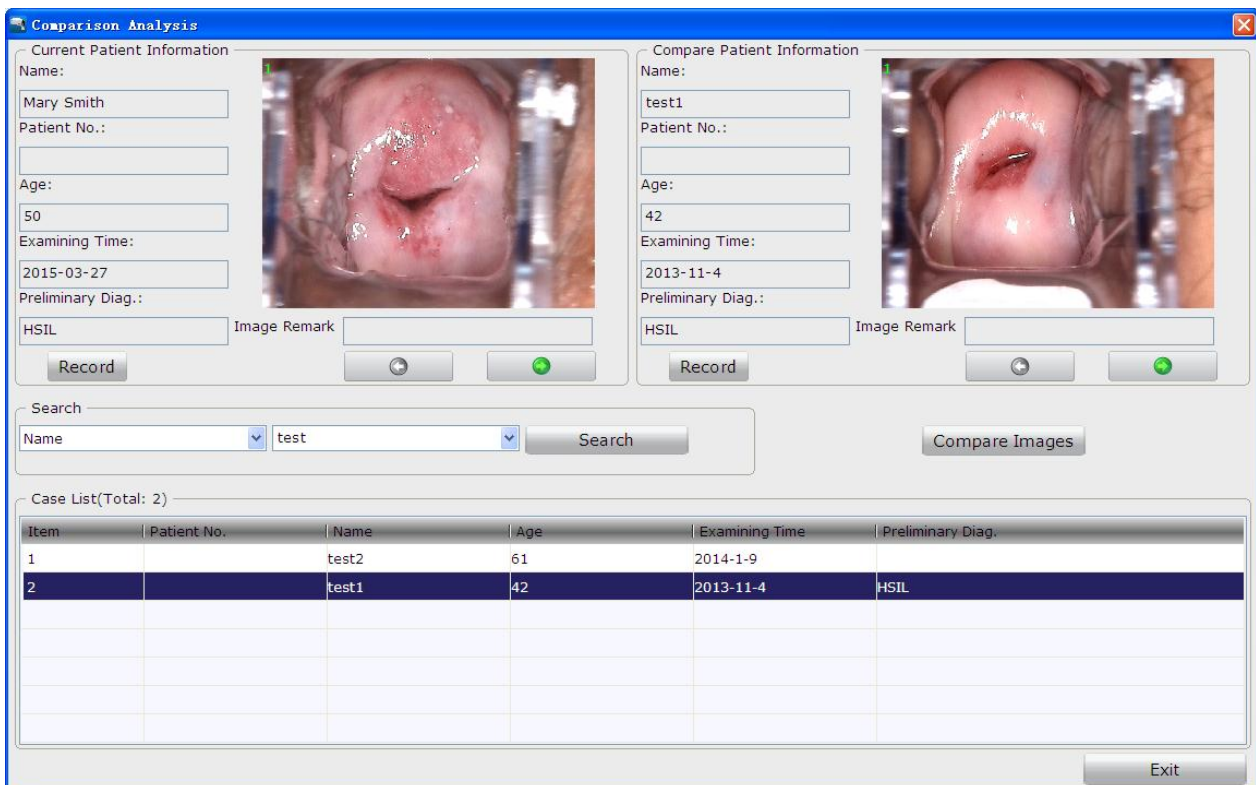
Double-click on the image observation area, it zooms in to occupy the whole screen. Double-click on the screen or press the **Esc** button to exit full screen mode.

5.4.5 Making Comparison

During examination, you can bring out an existing case for comparison or reference.

Click the **Comparison** tag . The **Comparison Analysis** page is displayed, with the current patient's information and image displayed on the upper left.

In the **Search** area, select a condition: **Name**, **Patient No.**, **Preliminary Diag.**, or **DOB**, input a keyword, then click **Search**. All the cases that meet the specified condition are shown in the **Case List**. By default, the **Compare Patient Information** area on the upper right displays the patient information and image of the first case in the list. You can click a desired case in the **Case List** so that its patient information and image are displayed in the **Compare Patient Information** area.




Item	Patient No.	Name	Age	Examining Time	Preliminary Diag.
1		test2	61	2014-1-9	
2		test1	42	2013-11-4	HSIL

Figure 5-18

NOTE:

For a re-examined patient, the **Compare Patient Information** area displays her last examination record, and the **Case List** shows all of her examination records, with the latest examination records listed first.

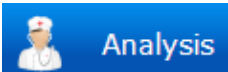
You can click **Record** to view the corresponding examination record. You can double-click an image to magnify it, and double-click the magnified image or click  on it to exit magnification.

Click **Compare Images** to compare image of the current patient with that of the compare patient. If you have selected images, comparison starts from the first selected, otherwise it starts from the first patient image.



Figure 5-19

5.4.6 Analyzing

Click the **Analysis** tag  to switch to the **Analysis** interface. For specific operations on the **Analysis** interface, see section 5.5 *Analyzing*.

5.4.7 Comparing Images

Click the **Compare** button under the **Current Patient Image** area, the **Current Patient Image Comparison** page is displayed. The system compares all images of the current patient. If there are more than 6 images, the first 6 images are compared. For operations on this page, see section 5.5.1 *Comparing Images of the Current Patient*.

5.4.8 Editing an Image

Right-click an image in the **Current Patient Image** area and choose **Image Processing**. The **Image Processing** page is displayed. You can edit the image on the **Image Editing** tab.

1) Adding Image Remark

In the **Image Remark** area, input remark for the image, then click **Save** to save the remark. A maximum of 50 characters (excluding "&") can be inputted. This remark will be shown together with the image.

2) Adding Image Notes

You can add notes on the image as follows: In the **Image Note** area, click **Note**. Then move the cursor to the image area and click on it. A broken line frame is shown, and you can type note in it. You can move the cursor to other positions to add more notes. After all notes are added, click

Save to save them.

A maximum of 20 notes can be added to an image, with each note containing no more than 30 characters.

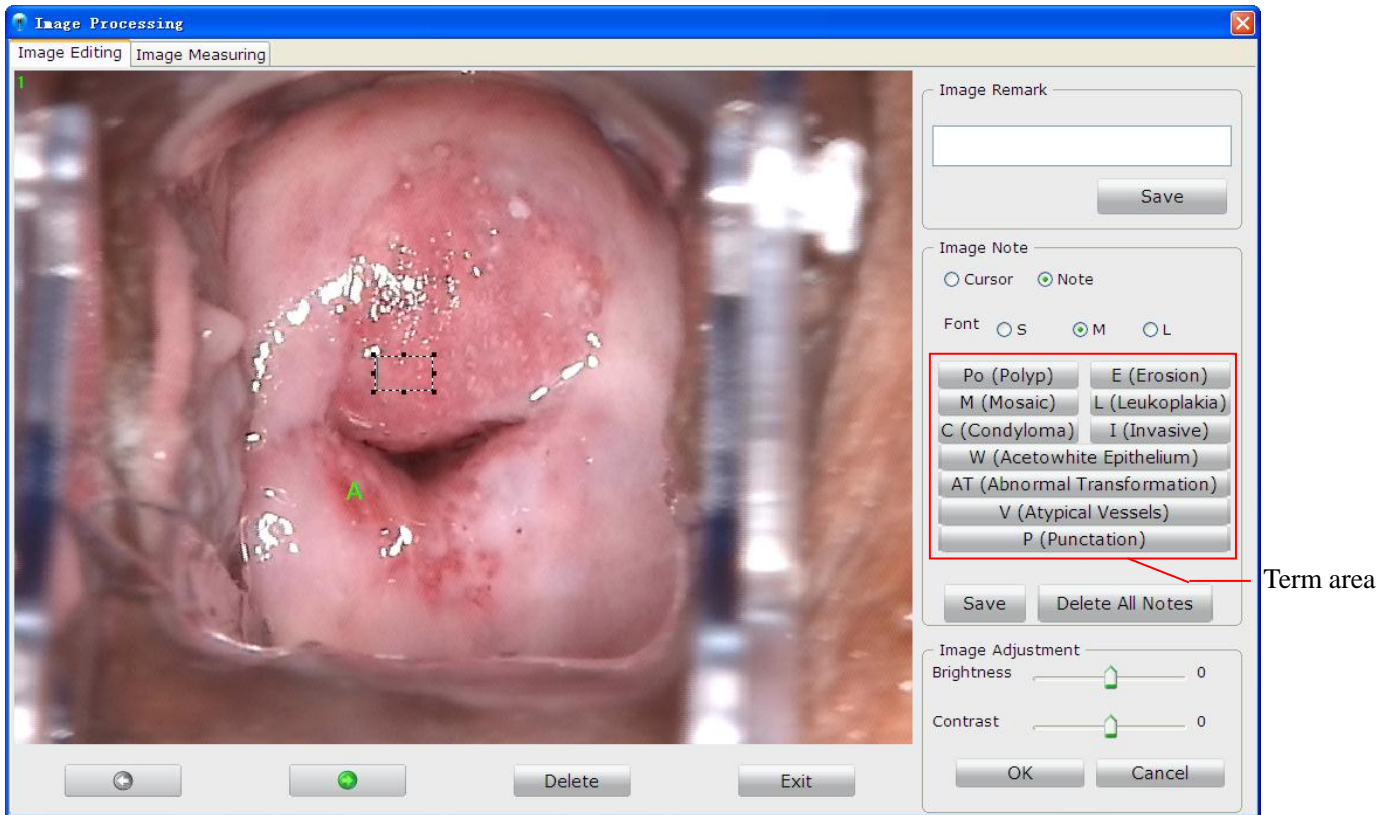


Figure 5-20

The system allows quickly adding notes. Click a term in the term area, then click on the image at the desired position, the term note is added to the image.

A note can be modified, moved or deleted.

To modify note font: the font of notes can be set to small (S), medium (M), or large (L). Once a font is selected, it applies to all notes.

To modify note content: click the note, the cursor flashes and the note becomes editable. Modify the content and then click **Save** in the **Image Note** area.

To move a note: click and drag the note to the target position. Then click **Save** in the **Image Note** area.

To delete a note: right-click the note and choose **Delete**. The note is deleted. Then click **Save** in the **Image Note** area.




To delete all notes: click **Delete All Notes** in the **Image Note** area, all notes are deleted.

3) Adjusting Brightness and Contrast

Move the slider of **Brightness/Contrast** to the left to decrease or to the right to increase the brightness/contrast. Click **OK** to save the setting.

4) Deleting an Image

Click the **Delete** button underneath the image to delete it. A prompt is issued. Click **Yes** to confirm the deletion, or click **No** to cancel it.

If multiple images are available, you can click  or  to switch to the previous or next image and then edit it in the same way. Click **Exit** or  to close this page.

5.4.9 Measuring an Image

Right-click an image in the **Current Patient Image** area and choose **Image Processing**. The **Image Processing** page is displayed. You can measure the image on the **Image Measuring** tab. Perform calibration before measuring the image. You can choose manual calibration or default calibration.

NOTE:

1. If you choose default calibration, keep the camera at a distance of 25 cm from the target in vertical direction while capturing images, and make the calibration magnification consistent with the actual magnification.
2. In default calibration, magnifications for C3 camera, C6 camera and C6 HD camera are 1-28 times, 1-36 times and 1-50 times respectively.

1) Default Calibration

Select **Default** and the magnification and you can measure the image by **Line**, **Perimeter** or **Area**. When you select a desired area, the measurement result will be displayed nearby.

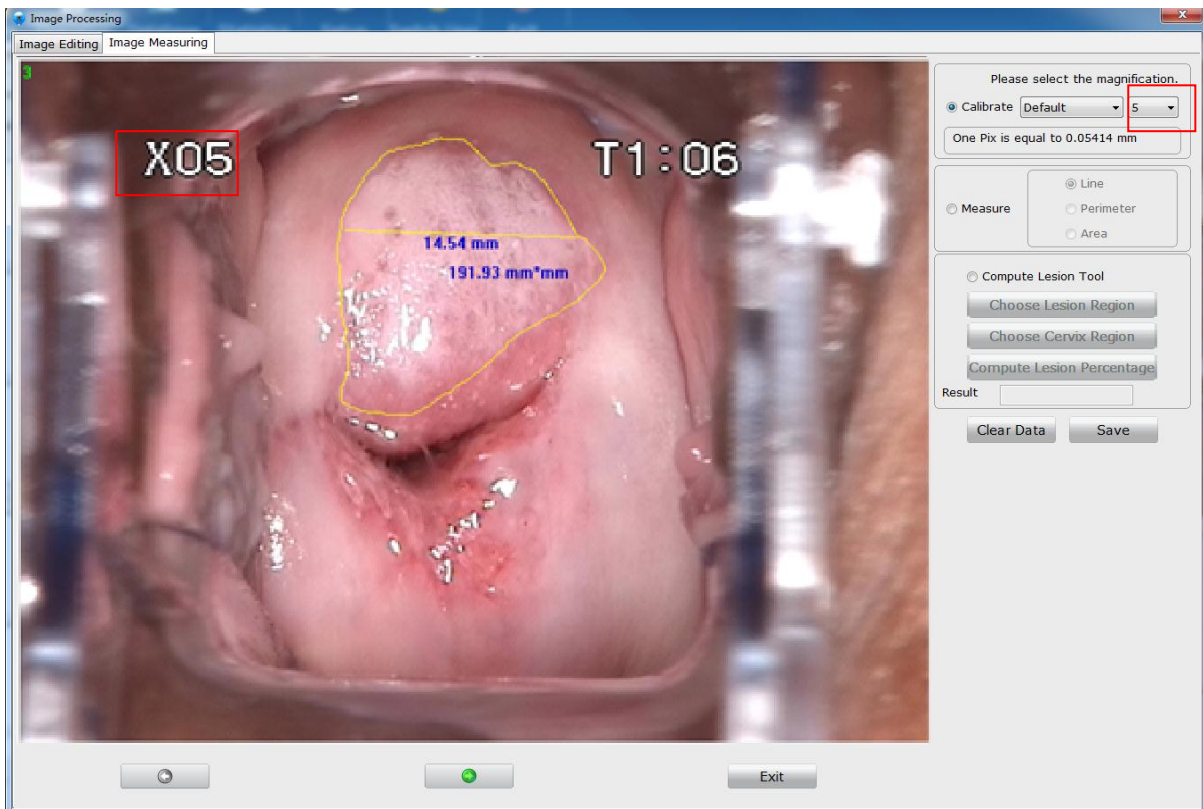


Figure 5-21

2) Manual Calibration

Select **Manual** and draw a line on the image with your mouse. Input the length (mm) of the line and click **OK**. If you input 0 or any other invalid value, the following prompt will be issued: **The input value is invalid, please input again.**

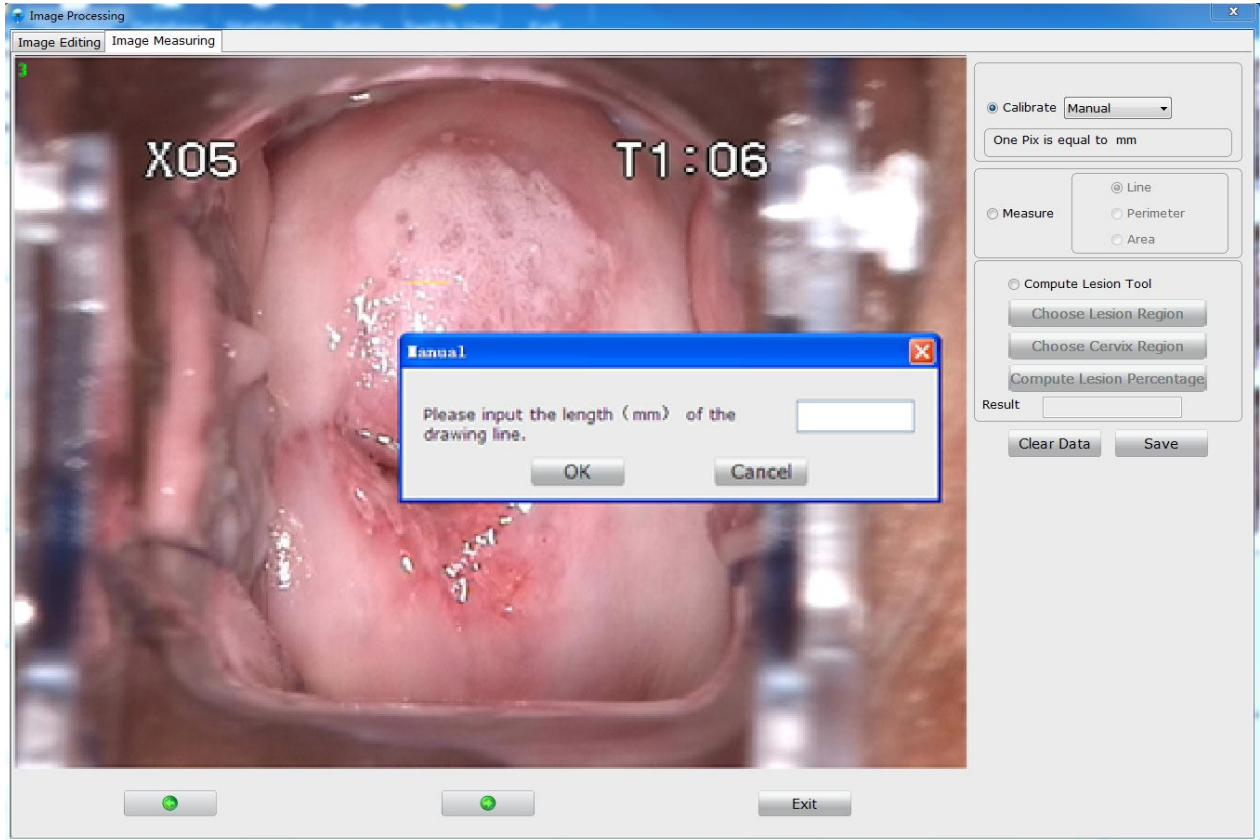


Figure 5-22

Then you can measure the image by **Line**, **Perimeter** or **Area**, and the measurement result will be displayed nearby.

You can drag the measurement result to an appropriate position.

To delete a piece of measurement data, right-click it, and choose **Delete**. You can click **Clear Data** to clear all the measurement data on the image.

Click **Save**, the current image with all the measurement data on it will be saved as a new image and displayed in the patient image list. If you switch to the **Image Editing** tab, the measurement data will be cleared.



3) Compute Lesion Percentage

- a) Select lesion compute function
- b) Select the lesion region, draw the lesion region on the image with a mouse.
- c) Select the cervical region, draw the cervical region on the image with a mouse.
- d) Compute the percentage of the lesion region that accounts for the cervical region.

5.4.10 Import Image

Right click the **Current Patient Image** region and select **Import Image** and the image selection page will be displayed. Select an image and import it. After importing is succeeded, the image will be displayed in current patient image list.

5.5 Analyzing

Click the **Analysis** button  in the tool bar to open the **Analysis** interface, or you can click the **Analysis** tag  on the **Examine** interface to switch to the **Analysis** interface. On this interface, you can perform R-way evaluation, RCI evaluation, and Swede evaluation, and input examination result and biopsy result.

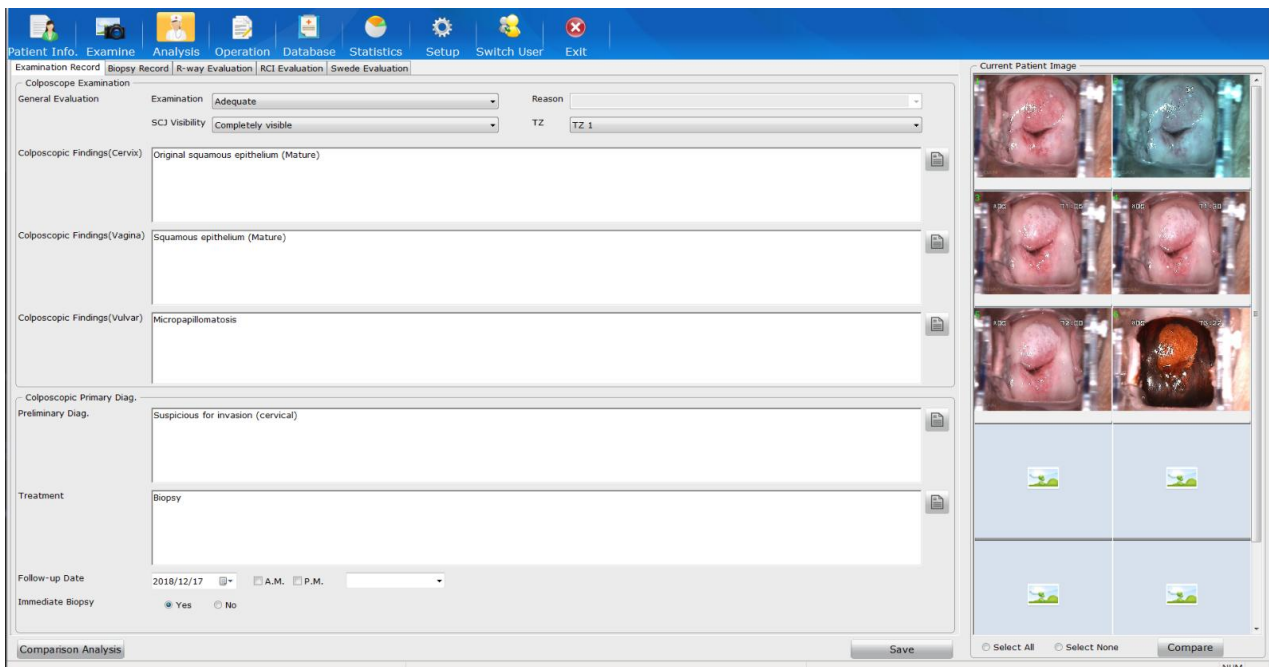


Figure 5-23

5.5.1 Comparing Images of the Current Patient

In the **Current Patient Image** area, select two or more images, right-click and choose **Compare**, or click the **Compare** button at the bottom. The **Current Patient Image Comparison** page is displayed.



Figure 5-24

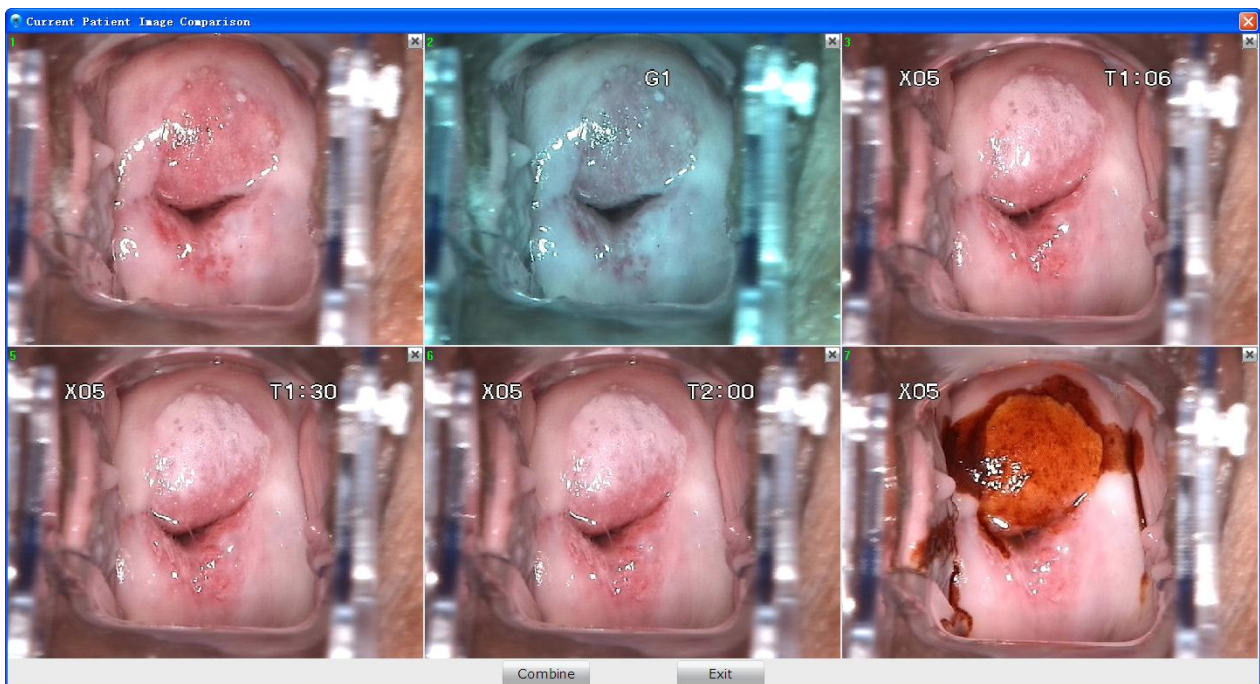




Figure 5-25

You can compare 2-6 images at the same time. If more than 6 images are selected, the first 6 images are compared by default, and the  button is available at the upper right corner of each image. You can click  to delete an image from the comparison page, and another selected image will be displayed instead. After the deletion, you can right-click and choose **Undo deletion** to undo it.

Click **Combine**, images on the comparison page are combined into one image, which is also displayed in the **Current Patient Image** area.

In the **Current Patient Image** area, select an image, right-click it and choose **Delete**, the image will be deleted. You can select multiple images and delete them at the same time.



Figure 5-26

Click **Select All**, all the images will be selected. Click **Select None**, all the images will be deselected.

You can double-click an image to magnify it.

Right-click an image and choose **Image Processing**, the **Image Processing** page is displayed, and you can edit or measure the image. For details, see sections *5.4.8 Editing an Image* and *5.4.9 Measuring an Image*.

5.5.2 Making Comparison with an Existing Case

Click the **Comparison Analysis** button at the lower left corner of the **Analysis** interface. The **Comparison Analysis** page is displayed. For specific operations on this page, see section 5.4.5 *Making Comparison*.

5.5.3 Performing R-way Evaluation

NOTE:

1. The **R-way Evaluation** tab is available only when the USB Sentinel for R-way evaluation is connected to the computer and R-way evaluation is enabled (see section 5.12.2.11 *Enabling R-way Evaluation*).
2. The R-way evaluation is not available in the United States.

On the **R-way Evaluation** tab, you can observe normal saline test images, acetic acid solution test images and Lugol's iodine test images, observe whether there are continuous hemorrhagic spots and make labels as required. The system will offer colposcopic preliminary diagnose and treatment suggestion based on your observation and labels.

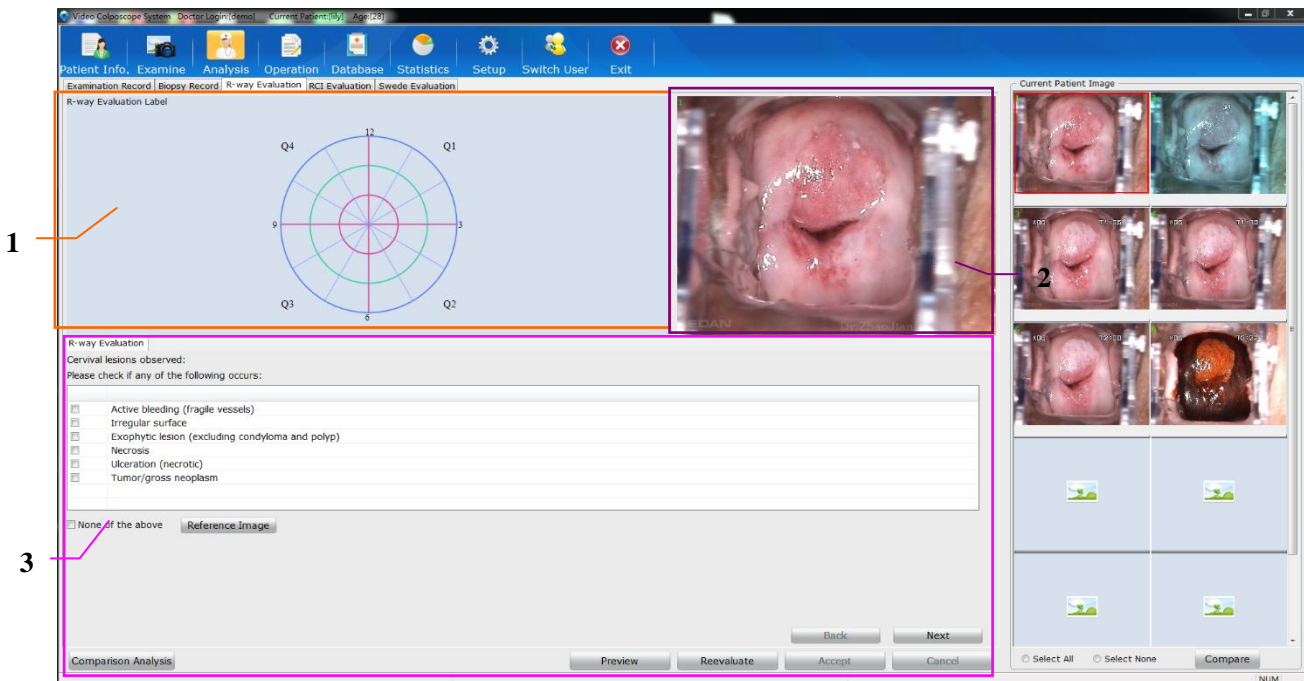


Figure 5-27

1 Labeling area

2 Image preview area

3 Evaluation step area

When the cursor is placed on an image in the **Current Patient Image** area, this image will be displayed in the image preview area. You can double-click the image in the image preview area to magnify it, and you can move the magnified image during evaluation.

In the evaluation step area, perform operations as instructed. During the process, you may be asked to mark labels on the image in the labeling area. Click on the image to add labels. If you need to delete a label, click it or right-click it and choose **Delete**. You can delete a label only in

the corresponding labeling step.

When the evaluation is completed, the **Evaluation Result** sub-tab is displayed. It shows preliminary diagnosis and treatment suggestion. If the treatment suggestion is biopsy, information (including the grade, quadrant, clock direction and offset) about the recommended biopsy regions will be given in the list under **Biopsy Region**. If you select **Immediate Biopsy**, a point will be displayed on the biopsy image on the left to indicate this biopsy region.

Item	Grade	Quadrant	Clock Direction	Offset	Immediate Biopsy
1	H=HSIL	Q1	3	Near Point	<input checked="" type="checkbox"/>
2	H=HSIL	Q2	6	Near Point	<input checked="" type="checkbox"/>
3	H=HSIL	Q2	6	Midpoint	<input type="checkbox"/>

Figure 5-28

Click **Preview**, you can view the current R-way evaluation process.

If you want to reevaluate, click **Reevaluate**. The system clears the evaluation result and shows the first evaluation step again.

If endocervical curettage (ECC) or diagnostic conization is recommended, select **ECC** or **Diagnostic Conization**.

Click **Accept**, the system switches to the **Examination Record** tab, and the preliminary diagnosis and treatment suggestion are loaded to the **Examination Record** tab, and information about the recommended biopsy regions is loaded to the **Biopsy Record** tab. If there is any immediate biopsy region, on the **Examination Record** tab, **Yes** is selected for **Immediate Biopsy**, and the **Remark** field under **Colposcopic Primary Diag.** will automatically add the first term in the remark term list.

Click **Cancel**, the system switches to the **Examination Record** tab, without loading any information.

5.5.4 Inputting Examination Result

On the **Examination Record** tab, you can input the colposcopic examination result and preliminary diagnose.

You can manually input **Colposcopic Findings (Cervix)** and **Colposcopic Findings (Vagina)** and **Colposcopic Findings (Vulvar)**, or click  to select relevant terms.

Colposcope Examination

General Evaluation Examination: **Adequate** Reason:

SCJ Visibility: **Completely visible** TZ: **TZ 1**

Colposcopic Findings(Cervix): Original squamous epithelium (Mature)

Colposcopic Findings(Vagina): Squamous epithelium (Mature)

Colposcopic Findings(Vulvar): Micropapillomatosis

Figure 5-29 Colposcopy examination

Click , the **Select Term** page is displayed.

Select Term

Colposcopic Findings(Cervix)

Normal | **Abnormal** | Suspicious For Invasion | Miscellaneous Finding

Item	Term
1	Original squamous epithelium (Mature)
2	Original squamous epithelium (Atrophic)
3	Columnar epithelium
4	Columnar epithelium (Ectopy)
5	Metaplastic squamous epithelium
6	Nabothian cysts
7	Crypt (gland) openings
8	Deciduosis in pregnancy
9	Lugol's staining: partially stained
10	Lugol's staining: stained
11	Endocervical bleeding
12	Cervical bleeding

Selected Term

Dense acetowhite epithelium; Lugol's staining: non-stained

Current Patient Image




Image Remark

Reference Image

Terminology

Term Maintenance OK Cancel Add Ref. Image Del. Ref. Image

Figure 5-30 Selection of terms for colposcopic findings (cervix)

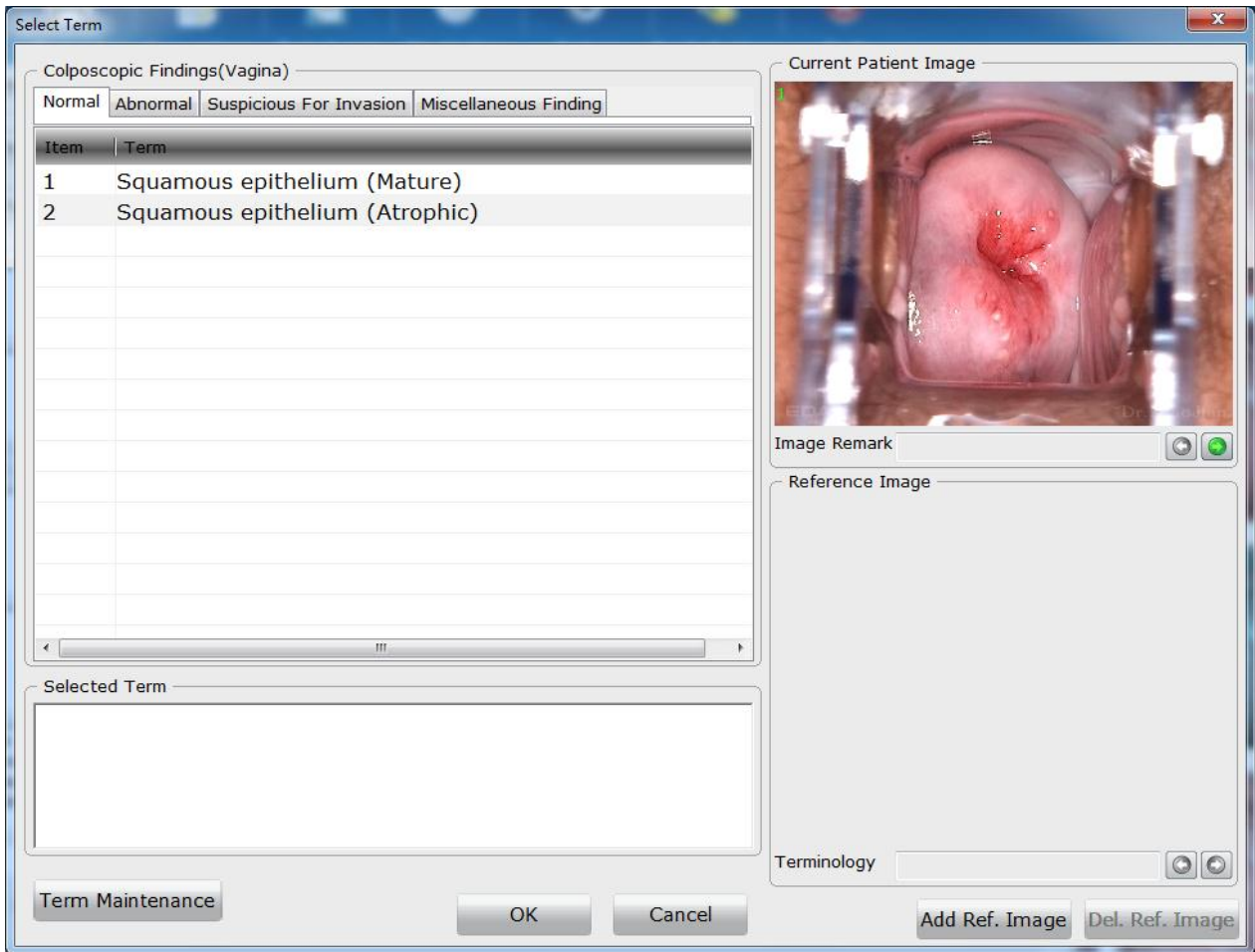


Figure 5-31 Selection of terms for colposcopic findings (vagina)

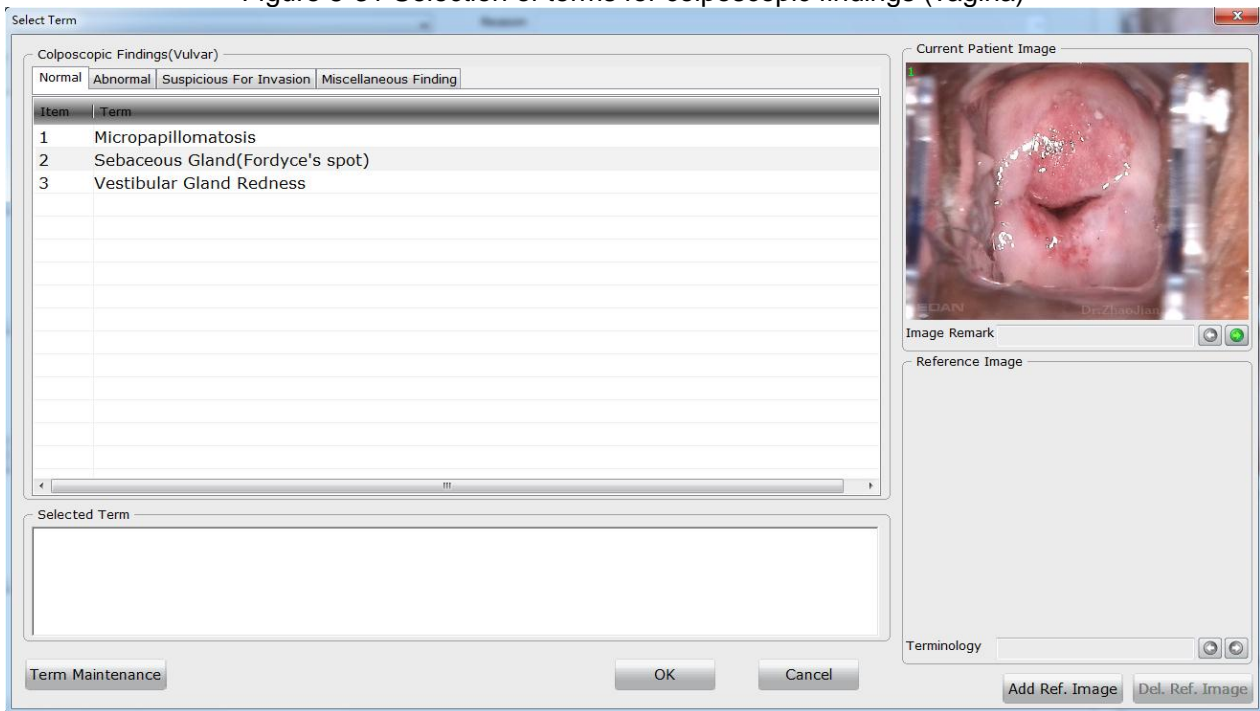







Figure 5-32 Selection of terms for colposcopic findings (vulvar)

Terms of colposcopic findings are listed on the left and classified into four categories: **Normal**, **Abnormal**, **Suspicious For Invasion** and **Miscellaneous Finding**. Double-click a term, this term is added to the **Selected Term** area. You can select multiple terms and edit them. Click **OK**, the

selected terms are added to the **Colposcopic Findings** field.

The current patient image is shown on the upper right of the page. If multiple images are available, you can click  or  next to the **Image Remark** field to view the previous or next image. You can double-click an image to magnify it, and double-click the magnified image or click  on it to exit magnification.

Some terms are provided with reference images. Click such a term, its reference image is shown in the **Reference Image** area. If multiple reference images are available for this term, you can click  or  next to the **Terminology** field to view the previous or next reference image.

If the current patient image is a typical one, you can add it to be a reference image. Select the relevant term in the term list, then click **Add Ref. Image**. The current patient image is added as a reference image of this term.

If you want to delete the current reference image, click **Del. Ref. Image**. A prompt is issued, asking you to confirm the deletion. Click **OK**, the current reference image is deleted.

You can also click **Term Maintenance** and maintain terms on the displayed **Term Maintenance** page.

Under **Colposcopic Primary Diag.**, you can manually input preliminary diagnose and treatment or select relevant terms by using the button next to the field.

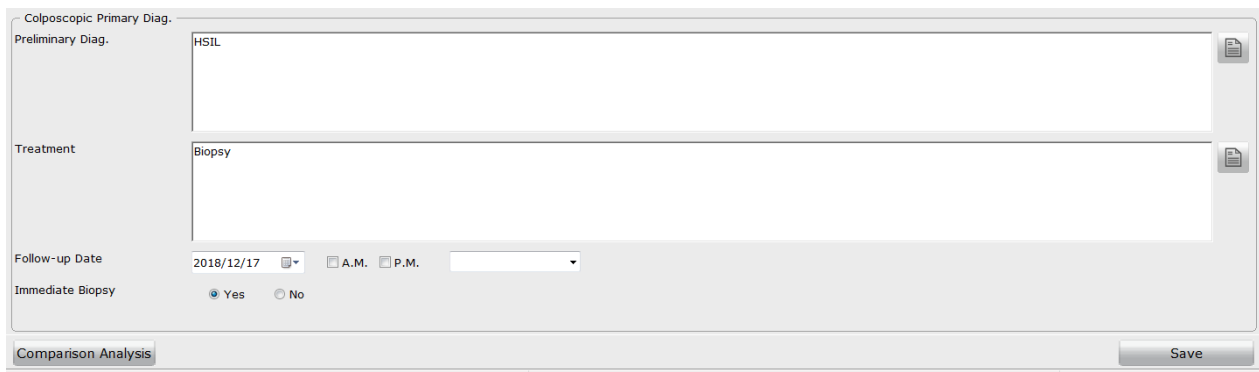


Figure 5-143

For the follow-up date, you can select a specific date or a period later (for example, 1 month later or 3 months later), or manually input the date.

If you select **Yes** for **Immediate Biopsy**, the system switches to the **Biopsy Record** tab.

NOTE:

Only when you select a specific date as the follow-up date, **A.M.** and **P.M.** are available for selection.

5.5.5 Inputting Biopsy Result

On the **Biopsy Record** tab, you can record the biopsy region and pathology.

The biopsy has three categories: cervix, vagina and external genitalia. You can select category and mark it as required. The categories are represented by different letters: X for cervix, W for external genitalia and V for vagina. The biopsy categories are also shown in the biopsy list. Under

Biopsy Region, you can click on the biopsy image to add a point to indicate an immediate biopsy region, which is marked as XN (N is the Item number). Information (including the quadrant, clock direction, and offset) about the biopsy region is automatically shown in the list on the right. **Immediate Biopsy** is selected by default, and you can select the lesion grade from the **Grade** drop-down list. If **Immediate Biopsy** is deselected, the biopsy image will show only the lesion grade (if selected) without a point.

The font of notes on the biopsy image can be set to small (S), medium (M), or large (L). Once a font is selected, it applies to all notes.

After you add an immediate biopsy region, the **Post-examination Notice** field will automatically add the first term in the remark term list; and when all immediate biopsy regions are deleted, the content in the **Post-examination Notice** field will be cleared.

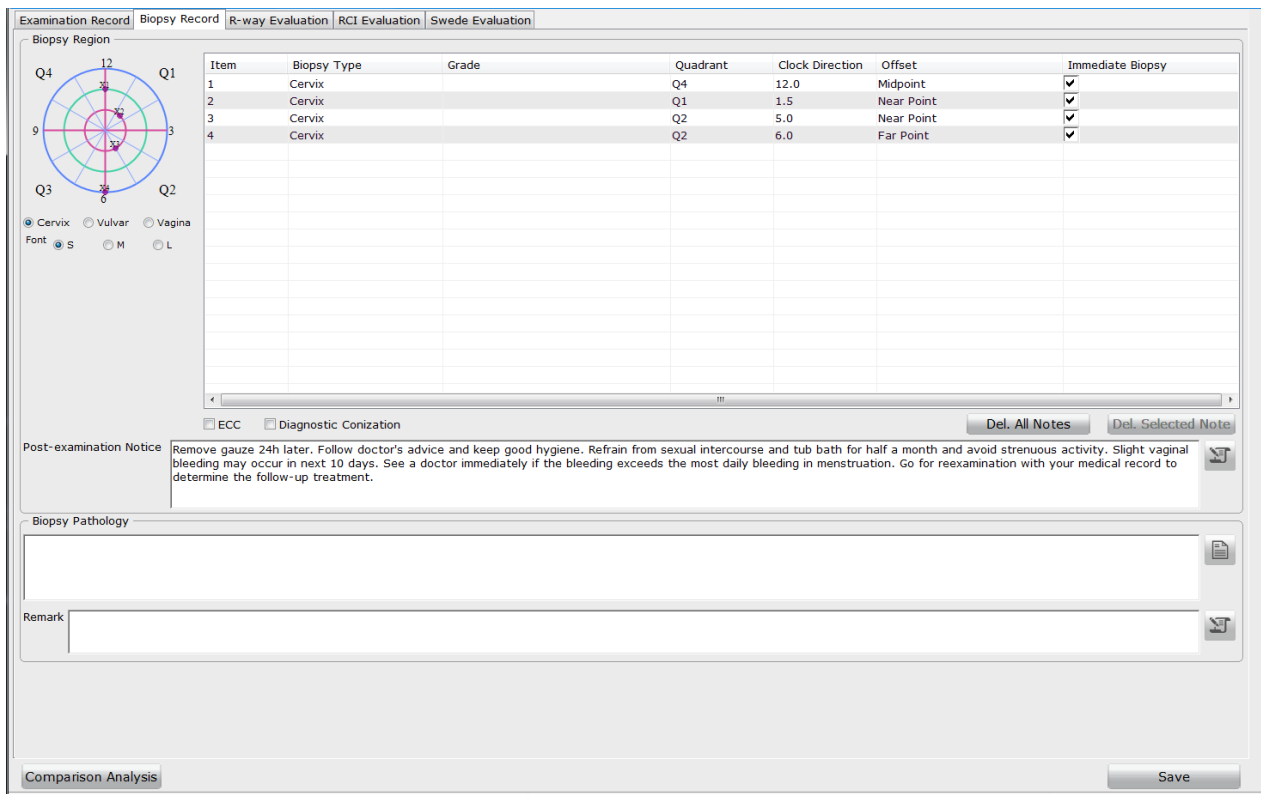


Figure 5-154

If you want to delete a note, select this note in the list and click **Del. Selected Note**. If you click **Del. All Notes**, all notes in the list and on the biopsy image will be deleted.

If ECC or diagnostic conization is performed, select **ECC** or **Diagnostic Conization**.

You can manually input post-examination notice, biopsy pathology and remark or select relevant terms by using the button next to the field.

5.5.6 Performing RCI Evaluation


NOTE:

1. The **RCI Evaluation** tab is available only when RCI evaluation is enabled (see section 5.12.2.13 *Enabling RCI Evaluation*).
2. The RCI evaluation is not available in the United States.

On the **RCI Evaluation** tab, you can perform RCI (Reid Colposcopic Index) evaluation.

Criteria	Score
Colour Dull, opaque, oyster white	2
Margin Regular-shaped, symmetrical lesions with smooth, straight outlines	1
Vessel Absent vessels	1
Iodine Staining Negative iodine uptake of significant lesion, i.e., yellow staining by a lesion already scoring four points or more on the first three criteria	2
RCI Evaluation Result CIN2-3	Total Score 6

Figure 5-35

RCI evaluation is performed based on four aspects: colour, margin, vessel, and Iodine staining. Click the  button, the corresponding **Select Term** page is displayed. In the term list, each term has its score.

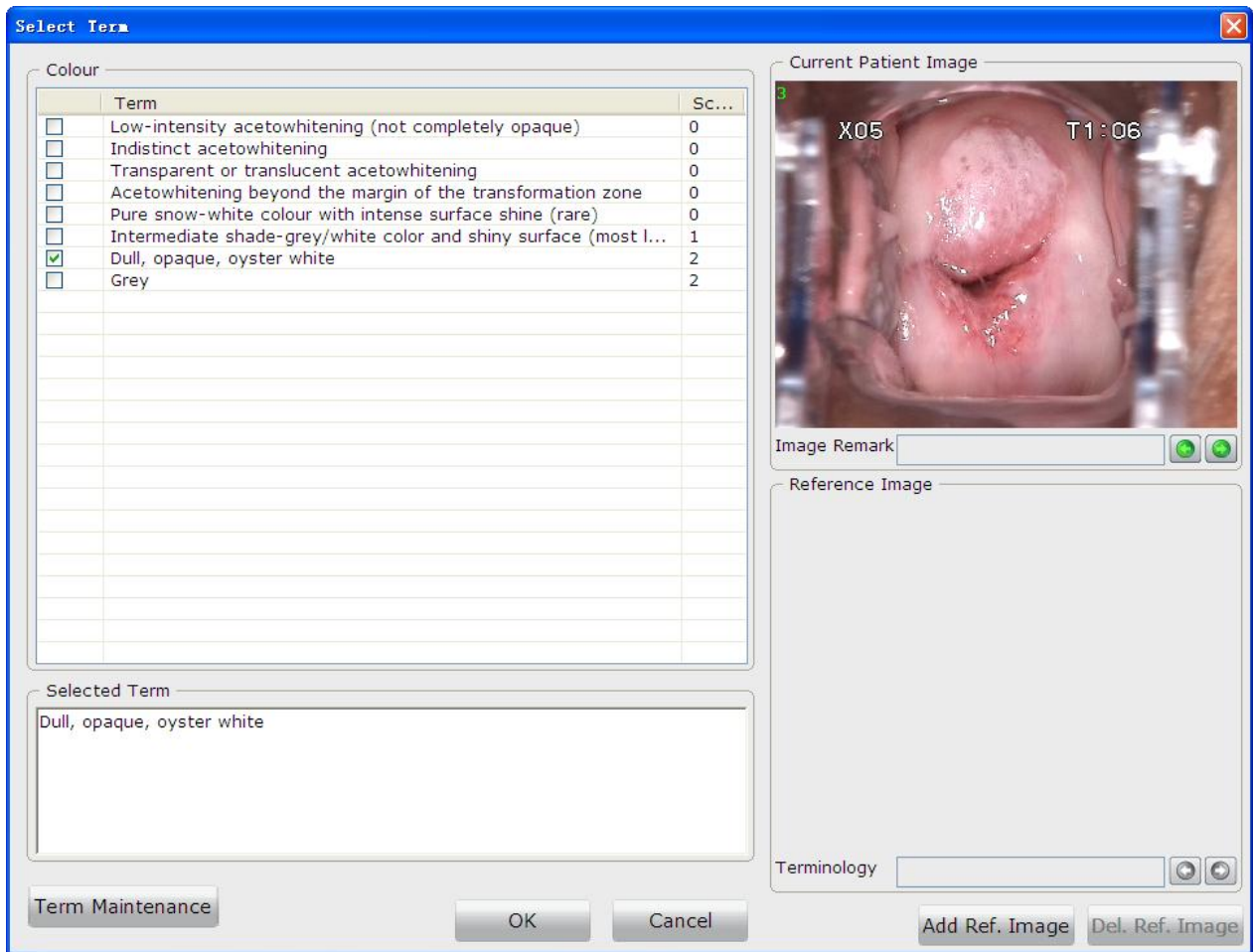


Figure 5-36

When you select a term and click **OK**, this term and its score are added to the corresponding fields on the **RCI Evaluation** tab. If multiple terms are selected for one aspect, the score of this aspect is the largest value among the scores of the selected terms. The system will calculate the total score and provide the RCI evaluation result based on this score.

NOTE:

You can modify terms of RCI evaluation, but you cannot modify term scores or add, delete, or move up or down any term. When you first enter the **Term Maintenance** page, the **Add**, **Save**, **Delete**, **Up** and **Down** button are invalid. The **Save** button becomes valid after you double-click a term to select it.

5.5.7 Performing Swede Evaluation

NOTE:

1. The **Swede Evaluation** tab is available only when Swede evaluation is enabled (see section 2.2.1 *RCI Evaluation* is selected by default. You can deselect it to disable the function.
1. The RCI evaluation is not available in the United States.
2. **Enabling Swede Evaluation**).
3. The Swede evaluation is not available in the United States.

On the **Swede Evaluation** tab, you can perform Swede evaluation.

Category	Value	Score
Aceto Uptake	Distinct, opaque white	2
Margin/Surface	Sharp but irregular, jagged, "geographical" satellites	1
Vessel	Absent	1
Lesion Size	2 quadrants	1
Iodine Staining	Distinct yellow	2
Swede Evaluation Result	CIN-2 or CIN-3	Total Score 7

Figure 5-167

Swede evaluation is performed based on five aspects: aceto uptake, margin/surface, vessel, lesion size, and Iodine staining. Operations on the **Swede Evaluation** tab are similar to those on the **RCI Evaluation** tab, see section 5.5.6 *Performing RCI Evaluation* for reference.

5.5.8 Saving Analysis Result

After inputting all the analysis result, click **Save** to save the result. Alternatively, you can click **Save&Print** to save the result and switch to the **Report** interface.

5.6 Examination Report

5.6.1 Printing the Examination Report



Select a patient and then click the **Report** button in the tool bar to open the **Report** interface.

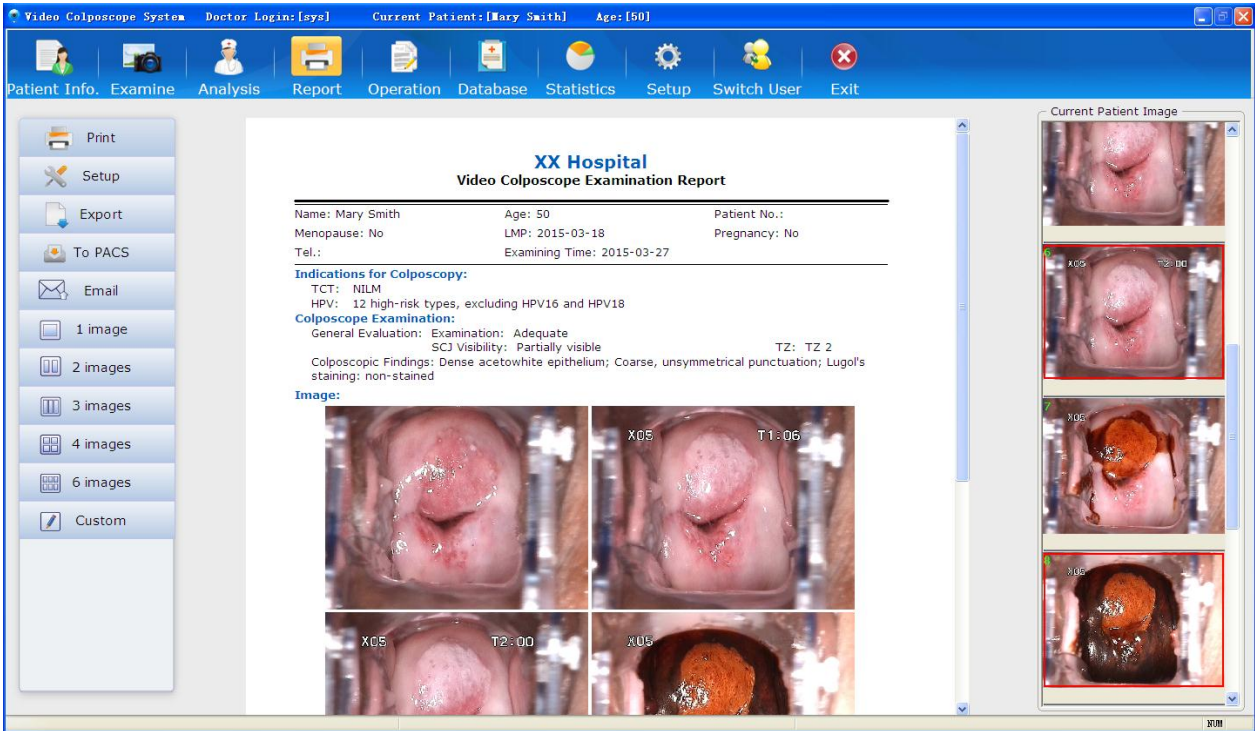


Figure 5-38

The examination report is shown in detail in the middle of the interface. The captured images are shown on the right.

If six images of the patient have been combined into one image using the combination function (see section 5.5.1 *Comparing Images of the Current Patient*), the examination report will show these images by default according to the following principle:

Print Template	Images Shown on the Report
1 image	5th image
2 images	5th and 6th images
3 images	1st, 5th and 6th images
4 images	1st, 3rd, 5th and 6th images
6 images	All the images

The sequence of these images is as follows:

1st	2nd	3rd
4th	5th	6th

Once you switch the print template, the principle no longer works.

If you want to have an image shown on the report, drag it from the **Current Patient Image** list to the **Image** area of the report. The original shown image (if any) will be replaced.



Click the **Print** tag on the left of the interface to start printing the report.

To obtain an optimal report, you are advised to set the print items first.

NOTE:

1. You can double-click an image in the **Current Patient Image** list to magnify it, and double-click the magnified image or click on it to exit magnification.
2. If multiple images are available, click on the left or right of the magnified image to view the previous or next image.

5.6.2 Changing Print Settings



On the **Report** interface, click the **Setup** tag on the left to open the **Setup** page.

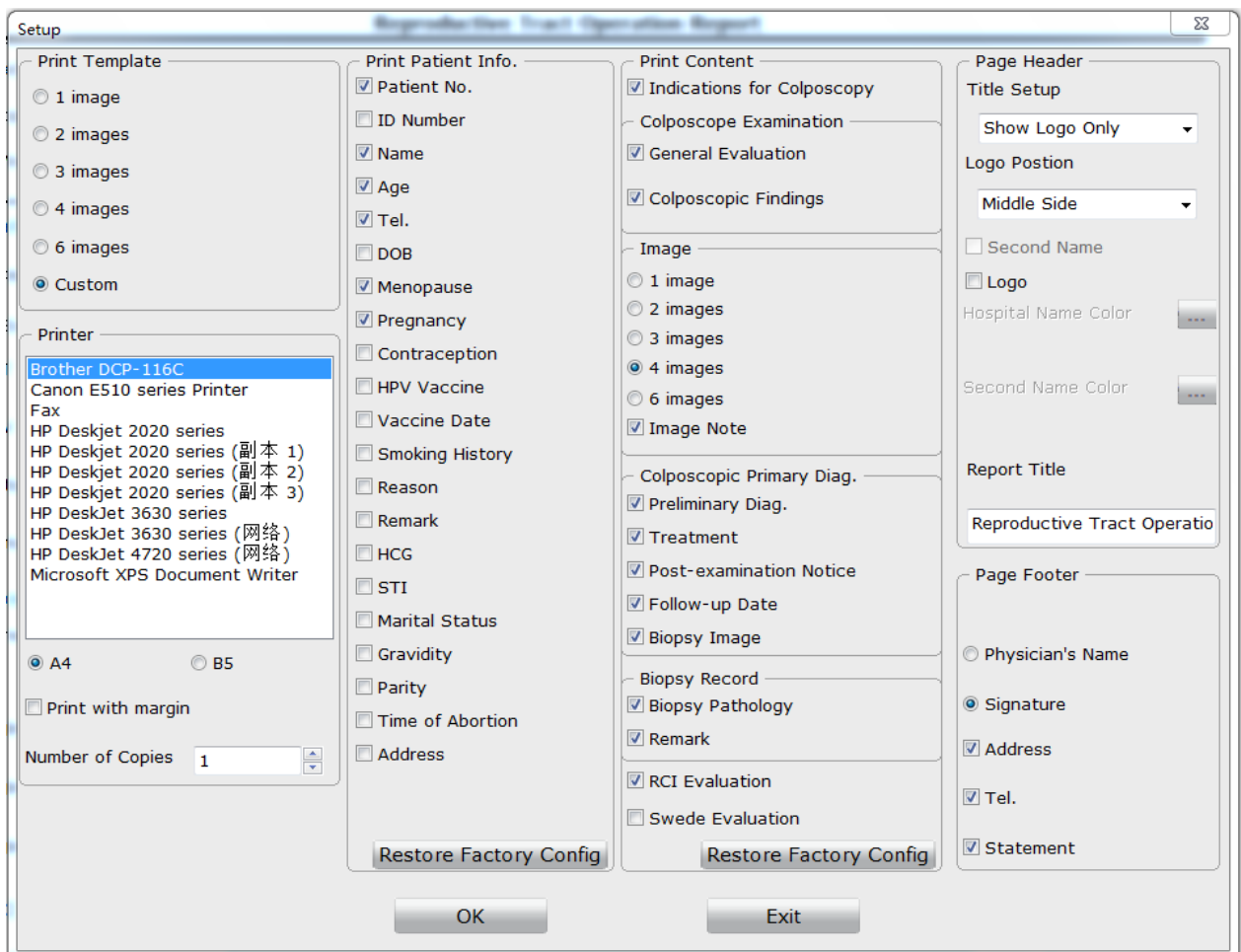


Figure 5-179

Select a print template, a printer and the size of printing paper (A4 or B5), specify the number of copies, then click **OK** to save the settings.

Under **Print Template**, if you select a template other than **Custom**, the default print settings are used and print items are unavailable for selection. If you select **Custom**, the print items are available for selection, and you can select them as desired. The selected items will be shown on the report. You can click the **Restore Factory Config** button under **Print Patient Info.** and **Print Content** to restore to the default settings. (By default, the 4-image print template is used.)


NOTE:

Whichever print template is selected, you can set the color of hospital name and hospital second name, or define the report title. The color setting and report title applies to all print templates.

5.6.3 Selecting a Print Template

Five standard print templates are available: 1-image template, 2-image template, 3-image template, 4-image template and 6-image template. These five templates contain the same print items, except for the number of images.

You can select a print template on the **Setup** page, or you can quickly select the print template by clicking the  **1 image**,  **2 images**,  **3 images**,  **4 images**, or  **6 images** tag on the left of the **Report** interface. The examination report is then displayed in the corresponding template.

You can also click the  **Custom** tag. The examination report is then displayed in the template that you have customized on the **Setup** page.

5.6.4 Exporting the Report

The examination report can be exported to a .pdf and a .dcm file.

On the **Report** interface, click the **Export** tag  on the left, select a directory and then click **Save**. The report is exported to the target directory.

NOTE:

The **Export** tag is shown on the **Report** interface only after you select **Export** on the **General Setup** tab (see section 5.12.2.7 *Enabling the Report Export Function*).

5.6.5 Sending the Report to PACS

You can send the examination report to the PACS (Picture Archiving and Communication System) server.

On the **Report** interface, click the **To PACS** tag  on the left to send the report to PACS.

NOTE:

1. The **To PACS** tag is shown on the **Report** interface only after you select **To PACS** on the **General Setup** tab (see section 5.12.2.8 *Enabling Sending Report to PACS*), and it is available only after you enable DICOM on the **Network Setup** tab (see section 5.12.4.1 *Enabling DICOM*).
2. The tag is unavailable after you click it, and it becomes available again when sending is complete.
3. You can send patient information, examination result, doctor and hospital information, etc. to the server.
4. During the sending process, if the system is disconnected from the server, the system will stay in the sending state. You can restart the software and click **To PACS** again.

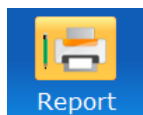
5.6.6 Emailing the Report

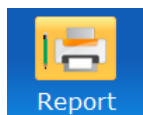
On the **Report** interface, click the **Email** tag  on the left to send the report to the specified email address.

NOTE:

The **Email** tag is shown on the **Report** interface only after you enable the email function (see section 5.12.4.2 *Enabling the Email Function*).

5.7 Report



Click the **Report** button  in the tool bar and open the **Report** interface. Doctor can edit report on the interface directly such as inputting or modifying patient's info, inputting Indications for Colposcopy, selecting images, inputting RCI Evaluation Result, Swede Evaluation Result, Examine Record, Biopsy Record, and Applicant and so on. After finishing the edition, click the **Print** button directly to print the report.

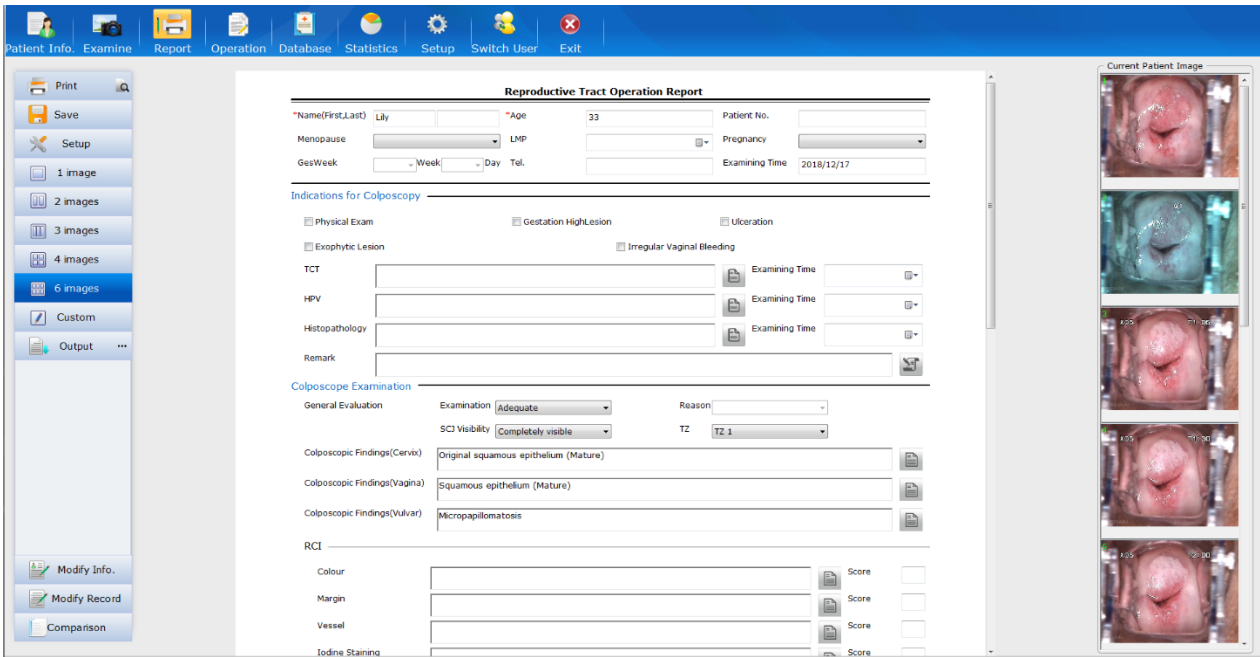


Figure 5-40

NOTE:

The **Report** Module needs to be set in **Setup**, for details please refer to 5.12.2.20 **Module Customization**.

5.8 Operation Record

You can record the operation process and print the operation report.



Click the **Operation** button in the tool bar to open the **Operation** interface.

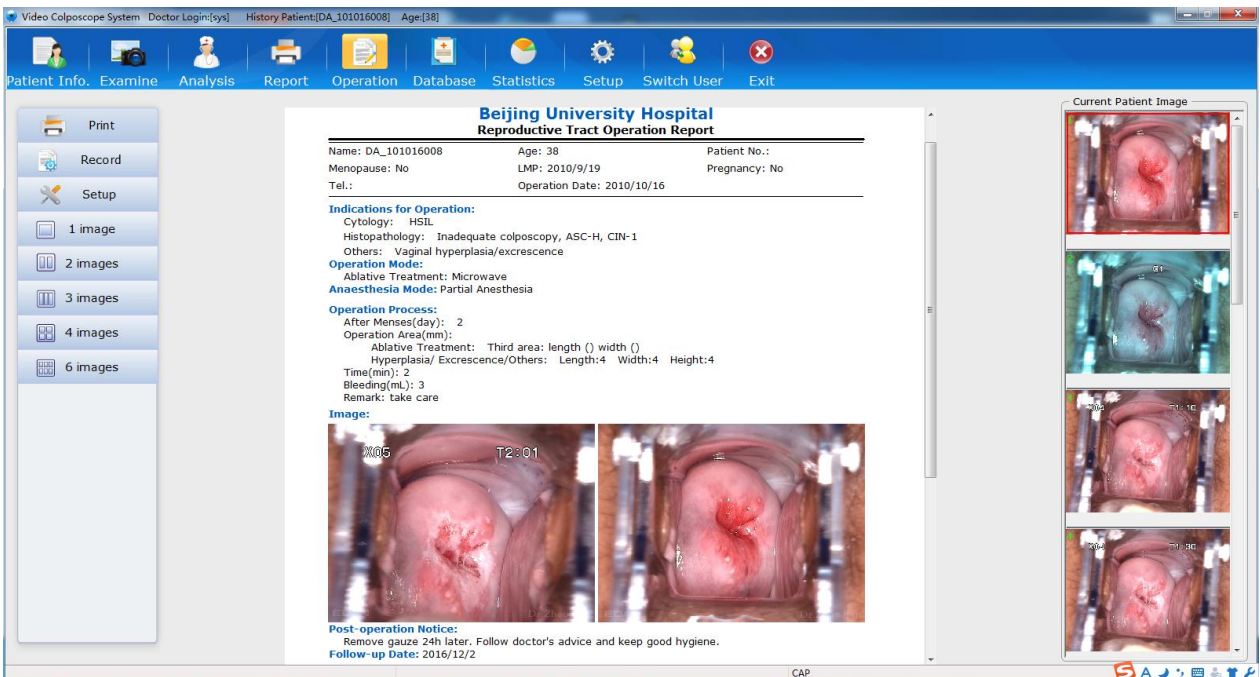



Figure 5-41

5.8.1 Printing the Operation Report

The operation report is shown in detail in the middle of the interface. The captured images are shown on the right. If you want to have an image shown on the report, drag it from the **Current Patient Image** list to the **Image** area of the report.

Click the **Print** tag  on the left of the interface to start printing the report.

5.8.2 Specifying the Record

On the **Operation** interface, click the **Record** tag  on the left to open the **Record** page. On this page, you can specify operation-related information. The specified items will be shown on the operation report.

Figure 5-42

For the follow-up date, you can select a specific date or a period later (for example, 1 month later or 3 months later), or manually input the date.

NOTE:

1. Only when you select a specific date as the follow-up date, **A.M.** and **P.M.** are available for selection.

2. The operation report will not show the post-operation pathology.

5.8.3 Changing Print Settings

On the **Operation** interface, click the **Setup** tag  on the left to open the **Setup** page.

On this page, you can only set the printer type, number of copies, and color of hospital name and hospital second name, or define the report title. The report title is the operation report name, while settings of the other items stay the same as those set for the examination report.

5.8.4 Selecting a Print Template

Five standard print templates are available: 1-image template, 2-image template, 3-image template, 4-image template and 6-image template. These five templates contain the same print items such as patient information, content, page header and footer, except for the number of images.

You can select a print template on the **Setup** page, or you can quickly select the print template by clicking the , , , , or  tag on the left of the **Report** interface. The examination report is then displayed in the corresponding template.

5.8.5 Emailing the Report

On the **Operation** interface, click the **Email** tag  on the left to send the report to the specified email address.

NOTE:

The **Email** tag is shown on the **Operation** interface only after you enable the email function (see section 5.12.4.2 *Enabling the Email Function*).

5.9 History Case Database

Click the **Database** button  in the tool bar to open the **Database** interface.

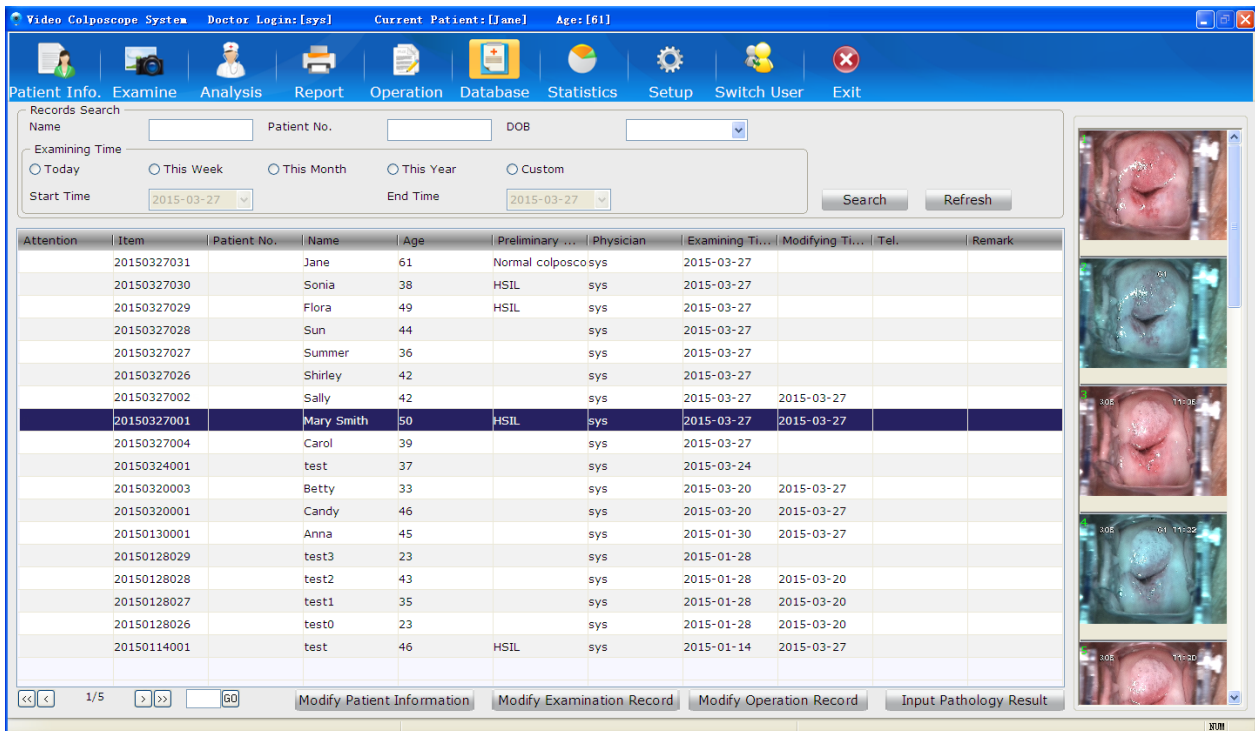


Figure 5-43

On this interface, all the cases of the examined patients are listed. Click one of the cases, the images contained in this case are shown on the right of the interface.

The header of the list can be customized, see section 5.12.2.6 *Customizing the Database Header*.

The list is sorted in the order of **Item** by default. You can click another item name such as **Age**, the list is then sorted in this order. Click it again, the list is sorted in reverse order.

At the lower left corner of the interface, the number of the page (in the form of current page/total page, e.g. 1/10) and page turning buttons are provided. If there are multiple pages, you can click to switch to the first page, click to switch to the previous page, click to switch to the next page, or click to switch to the last page. Alternatively, you can input the page number in the blank and click .

NOTE:

1. You can double-click an image to magnify it, and double-click the magnified image or click on it to exit magnification.
2. If multiple images are available, click on the left or right of the magnified image to view the previous or next image.

5.9.1 Marking Attention Labels

The database list contains the **Attention** column by default.

Click the cell of the **Attention** column, the corresponding case is marked with the default attention label. Or you can right-click to choose another attention label. A case marked with an attention label will be displayed in the colour set for the label.



Figure 5-44

Attention	Item	Patient No.	Name	Age	Preliminary ...	Physician	Examining Ti...	Modifying Ti...	Tel.	Remark
	20150327031		Jane	61	Normal colposc	sys	2015-03-27			
●	20150327030		Sonia	38	HSIL	sys	2015-03-27			
●	20150327029		Flora	49	HSIL	sys	2015-03-27			
	20150327028		Sun	44		sys	2015-03-27			

Figure 5-45

Choose **Clear Attention** or click the cell again, the attention label will be cleared. Choose **Setup**, the following page is displayed.



Figure 5-46

There are five attention labels in total. You can customize the name or color for each label, or change the default label, then click **Save**.

NOTE:

This operation can be performed only by users having the permission of modifying history case. A chief physician having this permission can mark attention labels for cases examined by other physicians, while other types of users having this permission can only mark attention labels for cases examined by themselves.

5.9.2 Searching for a History Case

To quickly search for a history case, perform the following procedures:

Input the name, patient number, or date of birth in the **Records Search** area. You can also specify examining time for search. The more information you input, the more accurate result you will get.

Click **Search**, all the cases that meet the condition will be listed.

Click **Refresh**, the original list is shown.

5.9.3 Browsing Examination Record

Select a case in the list, right-click it and choose **Browse Examination Record**. The examination record is displayed. You can only view it but cannot edit it.

5.9.4 Browsing Patient Report

Select a case in the list, right-click it and choose **Browse Patient Report**. The patient report is displayed. You can only view it but cannot edit it.

5.9.5 Modifying Patient Information

Select a case in the list, right-click it and choose **Modify Patient Information**, or click the **Modify Patient Information** button at the bottom of the interface. On the displayed **Modify Patient Information** page, you can modify the information and then click **OK**. A prompt is issued. Click **Yes** to confirm the modification, or click **No** to cancel it.

NOTE:

This operation can be performed only by users having the permission of modifying history case. A chief physician having this permission can modify the information of patients examined by other physicians, while other types of users having this permission can only modify the information of patients examined by themselves.

5.9.6 Modifying Examination Record

Select a case in the list, right-click it and choose **Modify Examination Record**, or click the **Modify Examination Record** button at the bottom of the interface. The system switches to the **Analysis** interface. You can modify the content and then click **Save&Print** or **Save**. A prompt is

issued. Click **OK** to confirm the modification, or click **Cancel** to cancel it.

NOTE:

This operation can be performed only by users having the permission of modifying history case. A chief physician having this permission can modify the examination records of patients examined by other physicians, while other types of users having this permission can only modify the examination records of patients examined by themselves.

5.9.7 Modifying Operation Record

Select a case in the list, right-click it and choose **Modify Operation Record**, or click the **Modify Operation Record** button at the bottom of the interface. The system switches to the **Operation** interface. Click the **Record** tag on the left, the **Record** page is displayed. You can modify the content and then click **OK**. A prompt is issued. Click **OK** to confirm the modification, or click **Cancel** to cancel it.

NOTE:

This operation can be performed only by users having the permission of modifying history case. A chief physician having this permission can modify the operation records of patients examined by other physicians, while other types of users having this permission can only modify the operation records of patients examined by themselves.

5.9.8 Modifying Patient Report

Double-click a case in the list. The system switches to the **Report** interface, and you can modify the patient report, for example, you can modify print setup, change print template, or replace the images shown on the report, etc.

NOTE:

This operation can be performed only by users having the permission of modifying history case. A chief physician having this permission can modify the reports of patients examined by other physicians. Other types of users having this permission can only modify the reports of patients examined by themselves; if they double-click the cases of patients examined by other physicians, they can only view the patient reports.

5.9.9 Inputting Pathology Result

Select a case in the list, right-click it and choose **Input Pathology Result**, or click the **Input Pathology Result** button at the bottom of the interface. On the displayed **Input Pathology Result** page, you can input biopsy pathology and post-operation pathology and then click **Save**. A prompt is issued. Click **Yes** to confirm the modification, or click **No** to cancel it.

NOTE:

This operation can be performed only by users having the permission of inputting

pathology result.

5.9.10 Deleting Patient Information

Select a case in the list, right-click it and choose **Delete Patient Information**. A prompt is issued. Click **OK** to confirm the deletion, or click **Cancel** to cancel it.

NOTE:

This operation can be performed only by users having the permission of deleting history case. A chief physician having this permission can delete the information of patients examined by other physicians, while other types of users having this permission can only delete the information of patients examined by themselves.

5.9.11 Exporting Patient Data

Select a case in the list, right-click it and choose **Export Data**. On the displayed dialog box, select a directory, and click **OK**. The patient data is exported to the target directory.

You can select multiple cases and export them at the same time.

5.9.12 Importing Patient Data

Select a case in the list, right-click it and choose **Import Data**. On the displayed dialog box, select a directory, and click **OK**. The patient data is imported to the target directory.


5.10 Statistics

NOTE:

If there is a large amount of data in the system, performing statistics or exporting may take a few seconds, and a progress bar will be shown. Please wait patiently and do not perform any operation to avoid system breakdown.

5.10.1 Performing Statistics



Click the **Statistics** button  in the tool bar to open the **Statistics** interface. On this interface, you can perform statistics of the cases by items.

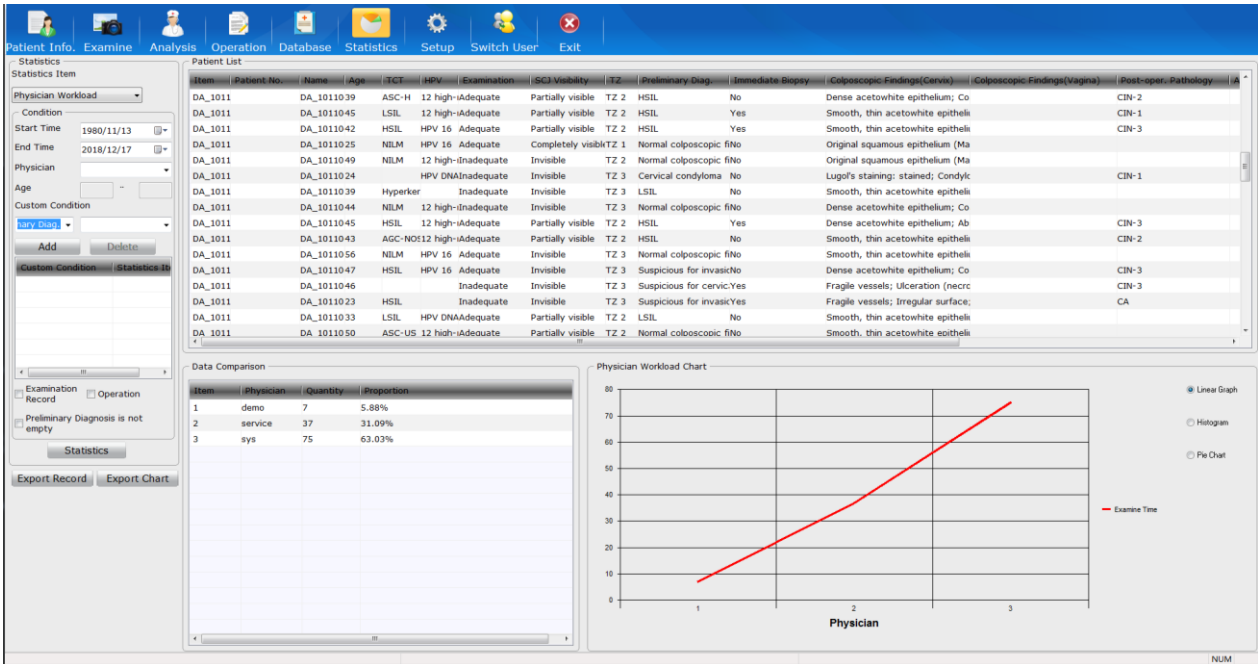


Figure 5-47

Select a statistics item, input the condition, then click **Statistics**. The result is shown on the right, including:

Name	Description
Patient List	It lists all the cases that meet the condition.
Data Comparison	It shows the quantity and proportion of each item that meet the condition.
Chart	It shows data comparison by chart, and three formats are provided: Linear Graph, Histogram and Pie Chart.

Click a chart format, the chart is then shown in the corresponding format.

Linear Graph

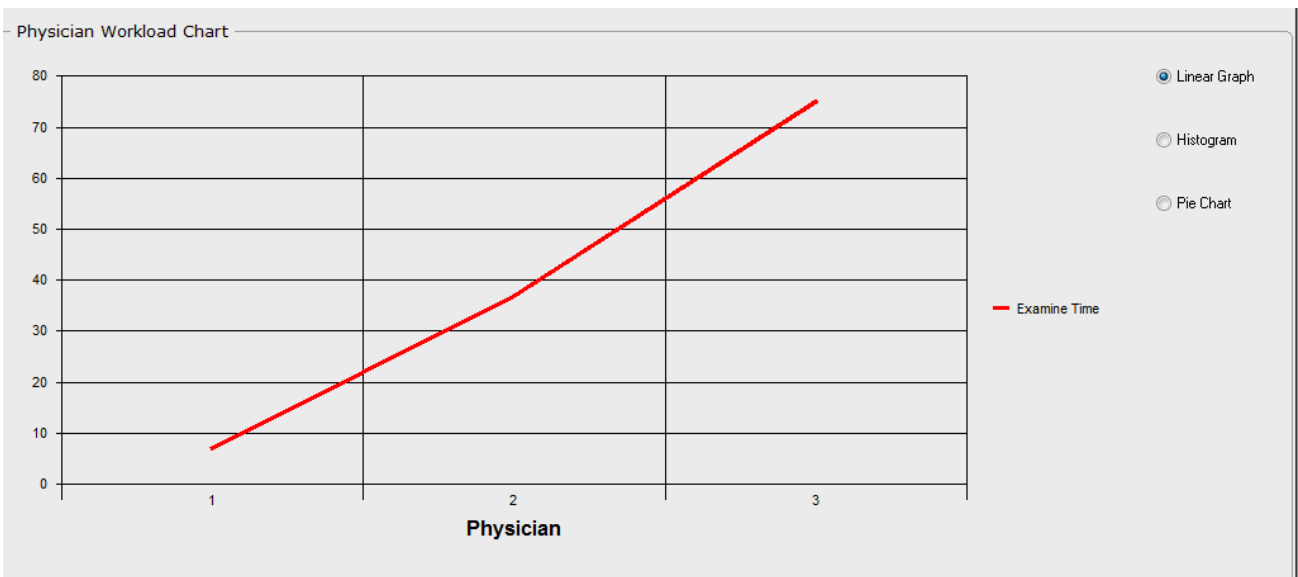


Figure 5-48

Histogram

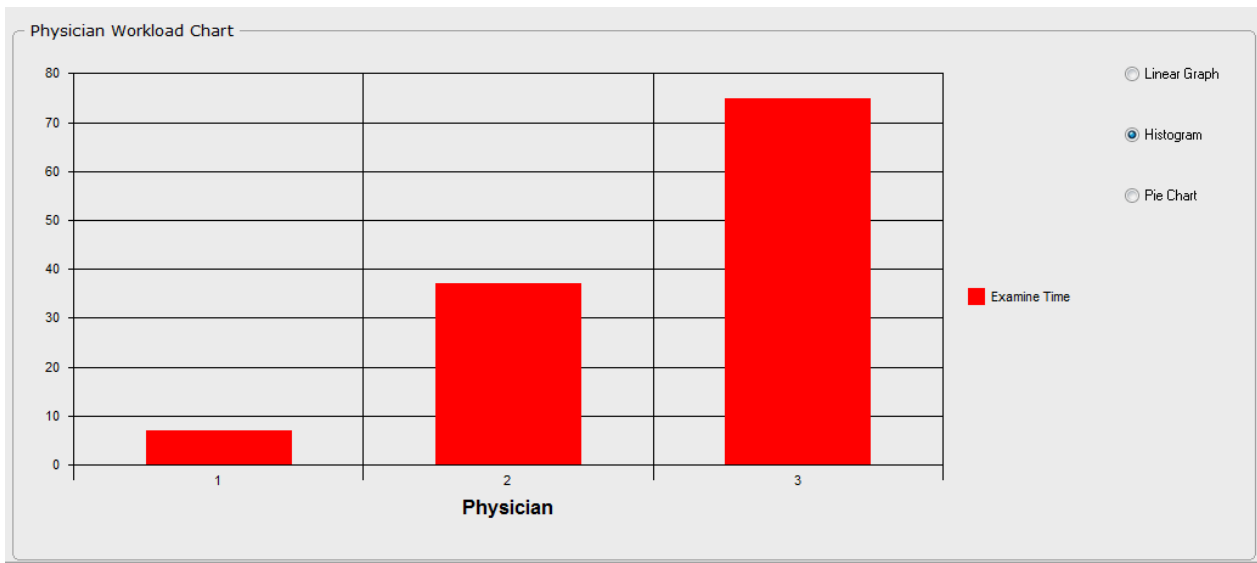


Figure 5-49

Pie Chart

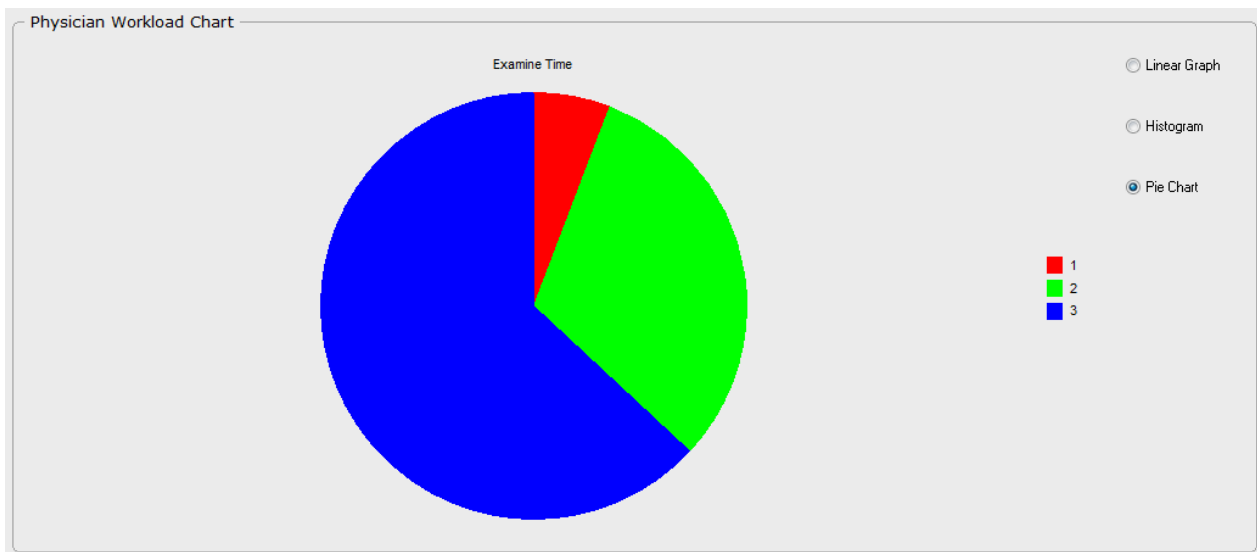


Figure 5-50

5.10.2 Exporting Patient List

The patient list can be exported into an Excel file.

After performing statistics, click the **Export Record** button. Select a directory, input the file name and then click **Save**. The Excel file is saved in the target directory.

NOTE:

1. The operation of exporting patient list or chart can be performed only by users having the permission of exporting record&chart; otherwise, the system will issue a prompt, indicating that you are unauthorized.

2. You should install the Microsoft Office software in the system to open the exported file. A maximum of 60000 records can be exported.

5.10.3 Exporting Chart

The data comparison list and chart can be exported into an Excel file.

After performing statistics, click the **Export Chart** button. Select a directory, input the file name and then click **Save**. The Excel file is saved in the target directory.

5.11 Switching User

You can switch user without exiting the system.



Click the **Switch User** button **Switch User** in the tool bar to open the **Switch User** interface.



Figure 5-51

Select a username and input the correct password. Click **Login**, the user is switched. Or click **Exit**, the previous user remains.

5.12 System Setup

NOTE:


Only users having the permission of system setup can open the **Setup** interface.

5.12.1 User Management Setup

5.12.1.1 Setting Hospital Information

You are recommended to set the hospital information. After the setting, the hospital information will be shown in the examination report and operation report.




- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **User Management** tab, input the hospital name, its second name, address and telephone number in the **Hospital Info.** area. Click the  button to import an image of the hospital logo.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

NOTE:

The hospital logo image should be in .jpg format and cannot exceed 512KB. For clear display on the report, it is recommended that the hospital logo fill the whole image.

5.12.1.2 Adding a User



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **User Management** tab, input the user name, type and password (**Confirm Password** should be the same as **Password**) in the **User Info.** area. Click the  button next to **Signature** to import an image of the user's signature, and select the authority.
- 3) Click **Add**. This user is added to the **User List** on the right.
- 4) Click **OK**.
- 5) Exit the system and restart the software immediately.

NOTE:

1. The user's signature image should be in .jpg format and cannot exceed 512KB. For clear display on the report, it is recommended that the user's signature fill the whole image.
2. The authority that can be selected varies with user types. By default, the administrator has all the authority. For the chief physician, **Setup** cannot be selected, and for the doctor and the nurse, both **Setup** and **Delete History Case** cannot be selected.

5.12.1.3 Modifying User Information




- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **User Management** tab, select a user in the **User List**, his/her information is shown on the left. You can edit the information as required.

- 3) Click **Modify**.
- 4) Click **OK**.
- 5) Exit the system and restart the software immediately.

5.12.1.4 Deleting a User




- 1) Click the **Setup** button  to open the **Setup** interface.
- 2) On the **User Management** tab, select a user in the **User List**.
- 3) Click **Delete**.
- 4) Click **OK**.
- 5) Exit the system and restart the software immediately.

5.12.2 General Setup

5.12.2.1 Changing Date Format




- 1) Click the **Setup** button  to open the **Setup** interface.
- 2) On the **General Setup** tab, choose a date format from the **Date Format** drop-down menu.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

NOTE:

The date is shown in the same format as that of the operating system by default, unless the date format is changed.

5.12.2.2 Setting Follow-up Period



- 1) Click the **Setup** button  to open the **Setup** interface.
- 2) On the **General Setup** tab, choose a period from the **Follow-up Period** drop-down menu.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

5.12.2.3 Setting the Foot Switch

The foot switch can be used to capture images only (the default function) or to freeze and capture images.



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select **Capture Image Only** or **Freeze&Capture Image** in the **Foot Pedal Setup** area.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

5.12.2.4 Setting the Camera Handle Trigger

The camera handle trigger can be used to capture images (the default function), control coordinate display (the default function) and display 6 image.



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select **Capture Image** or **Display Coordinate** in the **Camera Handle Trigger Setup** area.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

5.12.2.5 Setting the Video Capture Card



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, click the **Capture Card Setup** button. On the displayed page, set brightness, contrast, hue, or saturation based on actual requirements by inputting a specific value or dragging the slider. The setting will take effect immediately. (You can click **Restore Factory Config** to restore to the default setting.)
- 3) Click **Exit**.

NOTE:

You can open the capture card setup page only after the camera is connected to the computer and switched on.

5.12.2.6 Customizing the Database Header

The header of the case list on the **Database** interface can be customized.



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, click the **Database Header User-define** button. On the displayed page, select headers as desired, or move headers using the **Up** or **Down** button.
- 3) Click **Save**. (To restore to the default setting, click **Default**, then click **Save**.)
- 4) Exit the system and restart the software immediately.

NOTE:

1. **Name**, **Age**, and **Examining Time** are mandatory and cannot be deselected.
2. **Attention** is always shown in the first row and cannot be moved.

5.12.2.7 Enabling the Report Export Function



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select **Export** in the **Printing** area.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

NOTE:

The **Export** tag is shown on the **Report** interface only after you select **Export** on the **General Setup** tab.

5.12.2.8 Enabling Sending Report to PACS



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select **To PACS** in the **Printing** area.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

NOTE:

The **To PACS** tag is shown on the **Report** interface only after you select **To PACS** on the **General Setup** tab.

5.12.2.9 Enabling Automatic Running on Startup

For operation convenience, you can set the software to run automatically once the host starts up.



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select **Run on Startup** in the **Others** area.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

NOTE:

If you enable automatic running on startup in Windows 7 or Windows 8 system, you need to disable User Account Control (UAC) as follows:

1. Select *Start* button, input *uac* in the search box to enter **Change User Account Control Settings**.
2. If you want to disable UAC, move the slider to **Never notify** and click **OK**. If the system asks you to enter administrator password, please input it and restart your computer.

5.12.2.10 Enabling Patient Appointment



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select **Reservations/Appointments** in the **Others** area.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

5.12.2.11 Enabling R-way Evaluation



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select **R-way Evaluation** in the **Others** area.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

To use the R-way evaluation function, you also need to connect the USB Sentinel for R-way evaluation to the computer.

NOTE:

1. **R-way Evaluation** is selected by default. You can deselect it to disable the function.
2. The R-way evaluation is not available in the United States.

5.12.2.12 Switching Positions of R-way Evaluation and RCI Evaluation

You can switch the position of the **R-way Evaluation** tab with that of the **RCI Evaluation** tab on the **Analysis** interface.



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select **Switch R-way with RCI** in the **Others** area.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

5.12.2.13 Enabling RCI Evaluation



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select **RCI Evaluation** in the **Others** area.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

NOTE:

2. **RCI Evaluation** is selected by default. You can deselect it to disable the function.
3. The RCI evaluation is not available in the United States.

5.12.2.14 Enabling Swede Evaluation



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select **Swede Evaluation** in the **Others** area.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

NOTE:

The Swede evaluation is not available in the United States.

5.12.2.15 Enabling Examination Prompts



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select **Image Capture Prompts** in the **Image Capture Setup**

area.

- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

NOTE:

Image Capture Prompts is selected by default. You can deselect it to disable examination prompts.

5.12.2.16 Enabling Auto Capture



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select **Auto Capture** in the **Image Capture Setup** area.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

You can also click the **Auto Capture** tag on the **Examine** interface to enable or disable auto capture.

5.12.2.17 Setting Capture Mode

Two modes are available: screening (the default mode) and diagnose. The system provides more image capture prompts (if enabled) and captures more images with the auto capture function (if enabled) in diagnose mode than in screening mode.



- 1) Click the **Setup** button to open the **Setup** interface.
- 2) On the **General Setup** tab, select a mode under **Capture Mode**.
- 3) Click **OK**.
- 4) Exit the system and restart the software immediately.

5.12.2.18 Restoring to Factory Configuration

On the **General Setup** tab, click **Restore Factory Config**. Except the date format, capture card and database header, other items on the **General Setup** tab will be restored to the default settings.

5.12.2.19 Setting Bar Code Scanner




- 1) Click the **Setup** button to open the **Setup** interface.

- 2) Click the **Scanner Setup** at the lower right corner of window.
- 3) Select **Enable** and choose **Unicode** mode or **UTF-8** mode.
- 4) Set the **Start Address** and **End Address** of the patient number, first name, second name and birthday according to **Unicode** rule or **UTF-8** rule and click **Save**.
- 5) Exit the system and restart the software immediately.

5.12.2.20 Module Customization

Users can select modules displayed on the main interface through **Module Customization**.




- 1) Click the **Setup** button  and then click the **General Setup** tag.
- 2) Click the **Module Customization** button and select the modules on the displayed page. **Patient's Info** and **Setup** are selected by default and can't be modified. **Examine, Analysis, Report, Operation, Database, Statistics, Switch User** and **Exit** are selected by default and can be modified. **Report (Edit Content)**, **Analysis** and **Report** can't be selected simultaneously.
- 3) After the modification, click **Save** and "The setting change will take effect when running the software next time. Please restart the software." will be displayed. Click **OK** and restart the software, the modified setup will take effect.

5.12.3 Database Management

5.12.3.1 Backing up Database




- 1) Click the **Setup** button  to open the **Setup** interface.
- 2) On the **Database** tab, select the backup path. The default path is D:\DataBaseBackup.
- 3) Select the backup type (**Auto Backup** or **Manual Backup**). If you select **Auto Backup**, you need to select number of days (1-100), and automatic backup is started after the software is restarted. If you select **Manual Backup**, click **Start Backup** to start the backup.
- 4) Click **OK**.
- 5) Exit the system and restart the software immediately.

NOTE:

You can back up images in manual backup but not in auto backup.



5.12.3.2 Restoring Database



- 1) Click the **Setup** button  to open the **Setup** interface.
- 2) On the **Database** tab, select the rebuild path.
- 3) Click **Start Restoring**.
- 4) Click **OK** after restoring is completed.
- 5) Exit the system and restart the software immediately.

5.12.3.3 Exporting Terms





- 1) Click the **Setup** button  to open the **Setup** interface.
- 2) On the **Database** tab, click  in the **Export Term** area to select a directory.
- 3) Click **Export Term**. The system starts to export terms to the target directory.
- 4) Click **OK** after exporting is completed.

NOTE:

For terms with reference images, their reference images will also be exported to the target directory.

5.12.3.4 Importing Terms



- 1) Click the **Setup** button  to open the **Setup** interface.
- 2) On the **Database** tab, click  in the **Import Term** area to select the directory in which terms to be imported are stored.
- 3) Click **Import Term**. The system asks you to confirm the import. Click **Yes**, the system starts importing.
- 4) Click **OK** after importing is completed.
- 5) Exit the system and restart the software immediately.

NOTE:


For terms with reference images, their reference images will also be imported. After importing is succeeded, the original terms and reference images will be replaced with the imported ones.

5.12.4 Network Setup

5.12.4.1 Enabling DICOM

DICOM is short for Digital Imaging and Communications in Medicine.




- 1) Click the **Setup** button  to open the **Setup** interface.
- 2) On the **Network Setup** tab, select **Enable DICOM**.
- 3) Input DICOM Upload Setup, including the **PACS IP**, **Port Number**, **Calling AE Title** and **Called AE Title** according to your server configuration.
 - ◆ PACS IP: PACS server IP address
 - ◆ Port Number: Port number of the PACS server
 - ◆ Calling AE Title: Input it according to the server configuration. If it is not configured by the server, you are advised to specify it in capital English characters.
 - ◆ Called AE Title: Input it according to the server configuration.
 - ◆ You can select **Multiframe Send** and **Send Report**. If you select **Multiframe Send**, the images will be sent in multiframe, otherwise the images will be sent in single frame; if you select **Send Report**, the report will be sent to the PACS server in picture form.
- 4) Input DICOM WORKLIST Setup, including the **PACS IP**, **Port Number**, **Calling AE Title** and **Called AE Title** according to your server configuration.
 - ◆ PACS IP: PACS server IP address
 - ◆ Port Number: Port number of the PACS server
 - ◆ Calling AE Title: Input it according to the server configuration. If it is not configured by the server, you are advised to specify it in capital English characters.
 - ◆ Called AE Title: Input it according to the server configuration.
- 5) Click **OK**.
- 6) Exit the system and restart the software immediately.

NOTE:

1. To use the DICOM function, enable DICOM first and specify DICOM setup items correctly.
2. Before you use the DICOM function, ensure that the system connects to the server successfully.

5.12.4.2 Enabling the Email Function



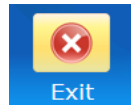
- 1) Click the **Setup** button  to open the **Setup** interface.
- 2) On the **Network Setup** tab, click **Email Setup**.
- 3) On the displayed page, select **Send Email**, and complete email receiver and sender setup.

- 4) Click **Test**.
- 5) If sending the test email succeeded, click **Save**. If sending the test email failed, change the email setting and test again.
- 6) After successful setting, click **Exit**.

NOTE:

You can input several email receiver addresses, separating them with a semicolon (;).

5.13 Exit



Click the **Exit** button in the tool bar. A prompt is issued. Click **Yes** to exit the system, or click **No** to keep the system.

Chapter 6 Maintenance and Cleaning

6.1 Inspection

(1) Visual Inspection

Prior to using the system every time, do the following inspections:

- 1) Check the system and accessories to see if there is any visible evidence of damage that may affect the patient's or operator's safety.
- 2) Check the power cables for damage and connection.
- 3) Check if the system functions properly.

If any damage is detected, stop using the system. Replace the damage part(s) or contact the manufacturer for service before reusing it.

(2) Routine Inspection

The overall check of the system, including safety check and function check, should be performed by qualified personnel every 12 months or according to local regulations, and each time after service.

The equipment should undergo periodic safety testing to ensure proper patient isolation from leakage currents. This should include leakage current measurement and insulation testing. The recommended testing interval is once a year or as specified in the institution's test and inspection protocol.

WARNING

Failure on the part of the responsible individual hospital or institution employing the use of this equipment to implement a satisfactory maintenance schedule may cause undue equipment failure and possible health hazards.

6.2 Daily Maintenance

- ◆ When the camera is not in use, turn off the power and cover the lens with the dust cover.
- ◆ Do not touch the lens with your fingers. The grease on the fingers may damage the plating film on the lens, and the finger print may affect the image quality as well.
- ◆ Keep the lens dry, avoid exposing it in extreme temperature and humidity, and protect it from direct sunshine.

6.3 Cleaning

WARNING

Make sure that the power is off and the power cords are disconnected prior to cleaning or disinfecting the device.

The device should be kept clean from dust, medical solution and reagent. Clean the device when necessary.

The recommended cleaning agents are:

- Mild near neutral detergent
- Ethanol (75%)
- Isopropanol (70%)

Cleaning the external surface:

1. Switch off the system and remove the power cord.
2. Wipe the external surface of the device components, camera and cables using a soft cloth dampened with the cleaning agent.
3. Wipe the surface with a soft dry cloth.

Cleaning the lens:

1. Wipe the dust off the lens with a soft brush.
2. Apply a drop of lens cleanser on a dedicated cleaning cloth, and wipe the lens gently.
3. Clean the lens with a soft dry cloth.

CAUTION

- 1 The device components are not waterproof. Do not immerse any components in water or allow liquids to enter the cases.
 - 2 In case of liquid splashing on the equipment, wipe it with dry cloth immediately to stop the liquid from entering the interior. Stop using the device and contact the service personnel if accidental wetting occurs.
 - 3 Do not allow any remaining solution on the surface of the device, wipe it clean with a cloth.
 - 4 Do not use strong solvent, for example, acetone.
 - 5 Never use an abrasive such as steel wool or metal polish.
 - 6 Make sure that a dedicated cleaning cloth is used when cleaning the lens. Common paper or tissue may scratch the lens.
 - 7 Only dedicated lens cleanser should be used to clean the lens, and it should not be applied on the lens directly.
-
-

6.4 Disinfection

This device does not have direct contact with the patient, and in order to protect the product, disinfection is not recommended unless this is necessary according to your hospital regulation.

The recommended disinfectants are:

- Ethanol (75%)
- Isopropanol (70%)

Clean the device prior to disinfection.

Disinfecting the device:

1. Switch off the system and remove the power cord.
2. Wipe the external surface of the device components, camera and cables using a soft cloth dampened with the disinfectant.
3. Wipe the surface dry with a soft dry cloth.

Make sure that no liquid enters the cases, and the surface must be wiped clean in the end.

Chapter 7 Warranty and Service

7.1 Warranty

The manufacturer warrants that the manufacturer's products meet the labeled specifications of the products and will be free from defects in materials and workmanship that occur within warranty period.

The warranty is void in cases of:

- a) damage caused by mishandling during shipping.
- b) subsequent damage caused by improper use or maintenance.
- c) damage caused by alteration or repair by anyone not authorized by the manufacturer.
- d) damage caused by accidents.
- e) replacement or removal of serial number label and manufacture label.

If a product covered by this warranty is determined to be defective because of defective materials, components, or workmanship, and the warranty claim is made within the warranty period, the manufacturer will, at its discretion, repair or replace the defective part(s) free of charge. The manufacturer will not provide a substitute product for use when the defective product is being repaired.

7.2 Contact information

If you have any question about maintenance, technical specifications or malfunctions of devices, contact your local distributor.

Appendix 1 Product Specifications

A1.1 Environmental Specifications

Working	Temperature:	+5 °C ~ +40 °C (+41 °F ~ +104 °F)
	Relative Humidity:	25% RH ~ 80% RH (non-condensing)
	Atmospheric Pressure:	86 kPa ~ 106 kPa
Transport and Storage	Temperature:	-20 °C ~ +55 °C (-4 °F ~ +131 °F)
	Relative Humidity:	15% RH ~ 95% RH (non-condensing)
	Atmospheric Pressure:	70 kPa ~ 106 kPa

A1.2 Physical Specifications

Dimensions	Vertical stand: the chassis diameter $\leq \varnothing 480$ mm Swing arm stand: the chassis diameter $\leq \varnothing 550$ mm MT-806 trolley: about 500 mm x 500 mm (length x width)
Weight	Vertical stand: ≤ 8 kg Swing arm stand: ≤ 45 kg(Safe Load) MT-806 trolley: ≤ 30 kg
Power Supply	Operating Voltage: 100 V-240 V~
	Input Current: 400 mA-200 mA (Power Adaptor: FW7556M/12)
	Input Current: 500 mA-200 mA(Power Adaptor: ME20A1202F01)
	Operating Frequency: 50 Hz/60 Hz
Standards Compliance	IEC 60601-1:2005+A1:2012, EN 60601-1:2006+A1: 2013, IEC 60601-1-2:2014, EN 60601-1-2:2015
Anti-electric Shock Type	Class II equipment (Power Adaptor: FW7556M/12) Class I equipment (Power Adaptor: ME20A1202F01)
Working System	Continuous operation equipment
Degree of Protection against Harmful Ingress of Water	Device/Camera: ordinary equipment (sealed equipment without liquid proof) Foot switch: IPX8
Degree of Safety in Presence of Flammable Gases	Equipment not suitable for use in presence of flammable gases

Disinfection/Sterilizing Method	Refer to this user manual for details
EMC	CISPR 11 Group 1 Class A

A1.3 Performance Specifications

C3A, C6A:

Essential Performance	
Magnification:	1 ~ 40X (C3A); 1 ~ 50X (C6A)
Operation distance:	200 mm-300 mm
Illumination:	≥1600 lx (C3A) ≥2500 lx (C6A)
Field of view:	3X: ≥φ100 mm (275 mm) OR ≥20.5 ° 18X: ≥φ15 mm (275 mm) OR ≥3 °
Other Performance Specifications	
Pixel:	440000 (PAL), 380000 (NTSC)
Focus mode:	Manual, Auto
Output signal:	S-Video
Video mode:	PAL/NTSC
System resolution:	≥500 TVL
Space resolution:	≥10 lp/mm
Image geometric distortion:	≤3%
Camera light source:	White loop group LED light
White balance:	Auto, Manual
Imaging mode:	White light (3 levels) Electronic green filter (3 levels)
SNR:	≥ 50 dB
Depth of field:	6X: ≥120 mm 18X: ≥5 mm

C6A HD:

Essential Performance	
Magnification:	1 ~ 60X
Operation distance:	200 mm-300 mm
Illumination:	≥3000 lx
Field of view:	3X: ≥φ100 mm (275 mm) OR ≥20.5 ° 18X: ≥φ15 mm (275 mm) OR ≥3 °
Other Performance Specifications	
Pixel:	≥2,130,000
Focus mode:	Manual, Auto

Output signal:	HD signal
System resolution:	≥ 900 TVL
Space resolution:	≥ 14 lp/mm
Image geometric distortion:	$\leq 3\%$
Camera light source:	White loop group LED light
White balance:	Auto, Manual
Imaging mode:	White light (3 levels) Electronic green filter (3 levels)
SNR:	≥ 50 dB
Depth of field:	6X: ≥ 120 mm 18X: ≥ 5 mm

Appendix 2 Troubleshooting

A2.1 No Access to Video Colposcope Software and Error Reporting

Phenomenon	Possible Cause	Solution
Unsuccessful connection to the database.	Start too many tasks when starting the device or start the software before the database is running.	Restart the software.
	Database service does not start.	<ol style="list-style-type: none"> 1. Open the database installation directory. Eg. Open D:\Cx\Cx_Database\data and delete postmaster.pid. 2. Click Start > Control Panel > Administrative Tools > Services and enable postgresql-8.3.

A2.2 Access to Video Colposcope Software with Error Reporting

Phenomenon	Possible Cause	Solution
Video module initialization fails.	The video driver breaks down.	Restart the computer.
	The video capture card is faulty.	Check the video capture card.
	The USB&DC cable (or USB cable) is loose.	Fasten the cable.
	The driver of the video capture card has not been installed.	<ol style="list-style-type: none"> 1. Connect the camera to the computer and switch on the camera. 2. C3A, C6A: Open the software installation package and find the usbdriver\USBCard directory. If the 32-bit operating system is used, open the X32 folder, right-click installUSBCard.bat and choose Run as administrator. If the 64-bit

		operating system is used, open the X64 folder, right-click installUSBCard.bat and choose Run as administrator . C6A HD: Open the software installation package and find hd , double-click and run DRIVER.QP0204_YS.exe.
Insufficient disk space.	The disk space is insufficient.	Release some disk space.
Please connect the camera.	The camera is not switched on.	Connect equipment forming the system as required and switch on the camera.
	The USB-to-COM driver has not been installed.	1. Connect the camera to the computer and switch on the camera. 2. Open the software installation package and find the usbdriver\USBToCOM directory. If the 32-bit operating system is used, open the X32 folder, right-click installUSBtoCOM.bat and choose Run as administrator . If the 64-bit operating system is used, open the X64 folder, right-click installUSBtoCOM.bat and choose Run as administrator .
Unsuccessful connection to the printer.	Select the incorrect printer in the print setup.	Open the print setup page and select the correct printer.
	The printer drive is not installed correctly.	Reinstall the printer drive.
	No connection to the printer.	Connect to the printer.
Please confirm whether PDFCreator 0.9.6.0 is installed.	No PDFCreator 0.9.6.0 is installed.	Install PDFCreator 0.9.6.0.
WorkStation of Colposcope stops working.	The software breaks down.	Restart the software.

A2.3 Trouble with Image Display

Phenomenon	Possible Cause	Solution
The camera power indicator is off.	The USB&DC cable is damaged.	Replace the cable.
	The USB&DC cable is loose.	Fasten the cable.
	The DC cable of the power adapter is loose.	Fasten the cable.
	The signal input cable in the video capture box is loose.	Open the video capture box to check it.
	The connecting cable in the camera is loose.	Remove the plastic cover to check it.
	The board in the camera is damaged.	Replace the board.
The image observation area is blank screen in black or blue.	The USB&DC cable (or USB cable) is damaged.	Replace the cable.
	The parameters of the video capture card are set to incorrect values.	Restore the parameters to default values.
	The connecting cable in the camera is loose.	Remove the plastic cover to check it.
	The board in the camera is damaged.	Replace the board.
	The signal input cable in the video capture box is loose.	Open the video capture box to check it.
	The shooting module is faulty.	Replace the shooting module.
The image observation area is blank screen in white.	The USB&DC cable (or USB cable) is loose.	Close the software, reconnect the cable, and restart the software.
	The USB&DC cable (or USB cable) is damaged.	Replace the cable.
	The DC cable of the power adapter is loose.	Fasten the cable.
	The drive of the video capture card breaks down.	Reinstall the drive of the video capture card.

	The video capture card is faulty.	Replace the video capture card.
	The USB interface of the computer is faulty.	Replace the USB interface.
	The graphics card drive breaks down.	Reinstall the graphics card drive.

NOTE:

The USB&DC cable applies to the fixed video capture box, and the USB cable applies to the movable video capture box.

A2.4 Trouble with the Camera

Phenomenon	Possible Cause	Solution
Annular LED lamps are off.	The annular LED board is faulty.	Replace the annular LED board.
	The drive circuit is faulty.	Replace the control board.
	The connecting cable is damaged.	Replace the connecting cable.
	The connecting cable is loose.	Fasten the connecting cable.
The keys are not sensitive or cannot control the camera.	The circuit is faulty	Replace the control board and key board.
	The connecting cable is damaged.	Replace the connecting cable.
	The connecting cable is loose.	Fasten the connecting cable.
	The shooting module breaks down.	Replace the shooting module.

A2.5 Trouble with the Foot Switch

Phenomenon	Possible Cause	Solution
The foot switch does not respond.	The connecting cable is damaged.	Replace the connecting cable.
	The connecting cable is loose.	Fasten the connecting cable.
	The foot switch breaks down.	Replace the foot switch.

Appendix 3 Ordering Information

CAUTION

Please use the parts/accessories provided or recommended by the manufacturer.

The parts provided by the manufacturer are as follows:

Parts	Part Number
Foot Switch	21.10.027168
Power Adapter (FW7556M/12)	21.21.064212
Power Adaptor (ME20A1202F01)	01.21.064361
Power Plug (European Standard)	01.12.032101
Power Plug (American/Japanese Standard)	01.12.032102
Power Plug (Australian Standard)	01.12.032103
Power Plug (Argentine Standard)	01.12.032104
Power Plug (Indian Standard)	01.12.032105
Power Plug (Brazilian Standard)	01.12.032106
USB&DC cable	01.13.036677
USB cable	01.13.036779
S-Video cable (for C3A,C6A)	01.13.036657
HDMI standard cable (for C6A HD)	01.13.037307
Power Cord (American standard)	21.13.036384
Power Cord (European standard)	01.13.36014

Appendix 4 EMC Information

A4.1 Electromagnetic Emissions

Guidance and manufacture's declaration – electromagnetic emission		
The <i>Video Colposcope</i> is intended for use in the electromagnetic environment specified below. The customer or the user of the <i>Video Colposcope</i> should assure that it is used in such an environment.		
Emission test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The <i>Video Colposcope</i> uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emission CISPR 11	Class A	The <i>Video Colposcope</i> is suitable for use in all establishments, other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

A4.2 Electromagnetic Immunity

Guidance and manufacture's declaration – electromagnetic immunity			
The <i>Video Colposcope</i> is intended for use in the electromagnetic environment specified below. The customer or the user of the <i>Video Colposcope</i> should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 8 kV contact ± 15 kV air	± 8 kV contact ± 15 kV air	Floors should be wood, concrete or ceramic tile. If floor are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2kV for power supply lines Not Applicable	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ±2 kV line(s) to earth	± 1 kV line(s) to line(s) ±2 kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
Power frequency (50Hz/60Hz) magnetic field IEC 61000-4-8	30A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.


<p>Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11</p>	<p>0 % UT; 0,5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°</p> <p>0 % UT; 1 cycle and 70 % UT; 25/30 cycles) Single phase: at 0°</p> <p>0 % UT; 250/300 cycle</p>	<p>0 % UT; 0,5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°</p> <p>0 % UT; 1 cycle and 70 % UT; 25/30 cycles) Single phase: at 0°</p> <p>0 % UT; 250/300 cycle</p>	<p>Mains power quality should be that of a typical commercial or hospital environment. If the users of the VideoColposcope require continued operation during power mains interruptions, it is recommended that the <i>VideoColposcope</i> be powered from an uninterruptible power supply.</p>
<p>NOTE: 1. U_T is the a.c. mains voltage prior to application of the test level.</p>			

NOTE:

The video colposcopes above include C3A, C6A, C6A HD (configured with SMD light source).

A4.3 Electromagnetic Immunity

Guidance and manufacture's declaration – electromagnetic immunity			
The <i>Video Colposcope</i> is intended for use in the electromagnetic environment specified below. The customer or the user of the <i>Video Colposcope</i> should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 V _{rms} 150 kHz to 80 MHz 6V _{rms} ^{c)} in ISM bands between 0,15 MHz and 80 MHz	3 V _{rms} 150 kHz to 80 MHz 6V _{rms} ^{c)} in ISM bands between 0,15 MHz and 80 MHz	Portable and mobile RF communications equipment should be used no closer to any part of the <i>Video Colposcope</i> including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1.2\sqrt{P}$ 150 kHz to 80 MHz
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.7 GHz	3 V/m 80 MHz to 2.7 GHz	$d = 1.2\sqrt{P}$ 80 MHz to 800 MHz $d = 2.3\sqrt{P}$ 800 MHz to 2.7 GHz $d = 6\sqrt{P}/E$ at RF wireless communications equipment bands (Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the <i>Video Colposcope</i> , including cables specified by the manufacturer).

			<p>Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,^{a)} should be less than the compliance level in each frequency range.^{b)}</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
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NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

- a) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the *VideoColposcope* is used exceeds the applicable RF compliance level above, the *Video Colposcope* should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the *Video Colposcope*.
- b) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.
- c) The ISM (industrial, scientific and medical) bands between 0,15 MHz and 80 MHz are 6,765 MHz to 6,795 MHz; 13,553 MHz to 13,567 MHz; 26,957 MHz to 27,283 MHz; and 40,66 MHz to 40,70 MHz. The amateur radio bands between 0,15 MHz and 80 MHz are 1,8 MHz to 2,0 MHz, 3,5 MHz to 4,0 MHz, 5,3 MHz to 5,4 MHz, 7 MHz to 7,3 MHz, 10,1 MHz to 10,15 MHz, 14 MHz to 14,2 MHz, 18,07 MHz to 18,17 MHz, 21,0 MHz to 21,4 MHz, 24,89 MHz to 24,99 MHz, 28,0 MHz to 29,7 MHz and 50,0 MHz to 54,0 MHz.

NOTE:

The video colposcopes above include C3A, C6A, C6A HD (configured with SMD light

source).

Table-Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment

Test Frequency (MHz)	Brand ^{a)} (MHz)	Service ^{a)}	Modulation ^{b)}	Maximum Power(W)	Distance (m)	IMMUNITY TEST LEVEL (V/m)
385	380-390	TETRA 400	Pulse modulation ^b) 18Hz	1.8	0.3	27
450	430-470	GMRS 460, FRS 460	FM ^{c)} ±5 kHz deviation 1kHz sine	2	0.3	28
710	704-787	LTE Brand 13, 17	Pulse modulation ^b) 217 Hz	0.2	0.3	9
745						
780						
810	800-960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation ^b) 18 Hz	2	0.3	28
870						
930						
1720	1700-1990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4,25; UMTS	Pulse modulation ^b) 217 Hz	2	0.3	28
1845						
1970						
2450	2400-2570	Bluetooth, WLAN,802.11 b/g/n, RFID 2450, LTE Brand 7	Pulse modulation ^b) 217 Hz	2	0.3	28
5240	5100-5800	WLAN 802.11 a/n	Pulse modulation ^b) 217 Hz	0.2	0.3	9
5500						
5785						

Note: If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM maybe reduce to 1m. The 1 m test distance is permitted by IEC 61000-4-3.

a) For some services, only the uplink frequencies are included.

b) The carrier shall be modulated using a 50% duty cycle square wave signal.

c) As an alternative FM modulation, 50% pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case

A4.4 Recommended Separation Distances

Recommended separation distances between portable and mobile RF communications equipment and the Video Colposcope

The *Video Colposcope* is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the *Video Colposcope* can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the *Video Colposcope* as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)		
	150 kHz to 80 MHz $d = 1.2\sqrt{P}$	80 MHz to 800 MHz $d = 1.2\sqrt{P}$	800 MHz to 2.5 GHz $d = 2.3\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

NOTE:

The video colposcopes above include C3A, C6A and C6A HD.

Appendix 5 Abbreviation

The abbreviations and their full names are listed below:

Abbreviation	Full Name
AE	Application Entity
AF	Auto Focus
AGC	Atypical Glandular Cells
AGC-FN	Atypical Glandular Cells Favoring Neoplasia
AGC-NOS	Atypical Glandular Cells Not Specified
AIS	Adenocarcinoma in Situ
ASC-H	Atypical Squamous Cells Cannot Exclude HSIL
ASC-US	Atypical Squamous Cells of Undetermined Significance
ASIL	Anal Squamous Intraepithelial Lesion
CIN	Cervical Intraepithelial Neoplasia
DC	Direct Current
DICOM	Digital Imaging and Communications in Medicine
DOB	Date of Birth
ECC	Endocervical Curettage
EMC	Electro Magnetic Compatibility
HCG	Human Chorionic Gonadotropin
HPV	Human Papillomavirus
HSIL	High-grade Squamous Intraepithelial Lesion
ID	Identity
LED	Light-emitting Diode
LEEP	Loop Electrosurgical Excision Procedure
LMP	Last Menstrual Period
LSIL	Low-grade Squamous Intraepithelial Lesion
MF	Manual Focus
NILM	Negative for Intraepithelial Lesion or Malignancy
NTSC	National Television System Committee
PACS	Picture Archiving and Communication System
PAL	Phase Alteration Line
RCI	Reid Colposcopic Index
RF	Radio Frequency
SCC	Squamous Cell Carcinoma
SCJ	Squamocolumnar Junction

SMTP	Simple Message Transfer Protocol
SSL	Security Socket Layer
STI	Sexually Transmitted Infections
TCT	Thin Prep Cytologic Test
TZ	Transformation Zone
VAIN	Vaginal Intraepithelial Neoplasia
VIN	Vulvar Intraepithelial Neoplasia

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EDAN INSTRUMENTS, INC.

#15 Jinhui Road, Jinsha Community, Kengzi Sub-District
Pingshan District, 518122 Shenzhen, P.R.China

Email: info@edan.com.cn

TEL: +86-755-2689 8326 FAX: +86-755-2689 8330



EC REPRESENTATIVE

Shanghai International Holding Corp. GmbH
Eiffestrasse 80, 20537 Hamburg Germany

TEL: +49-40-2513175

E-mail: shholding@hotmail.com