

# IDEXX Digital Cytology

Instrument

Operator's Guide



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# Getting started

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## Introduction

The IDEXX Digital Cytology\* Instrument allows you to scan and transmit high-resolution whole-slide images directly to IDEXX Reference Laboratories and receive interpretation from a clinical pathologist in 2 hours or less, 24/7/365.

With IDEXX Digital Cytology, you have access to personalized guidance for routine, critical, and complex pathology cases. You can also review images alongside your cytology results for a comprehensive view of your patient's health—provided exclusively in VetConnect\* PLUS.

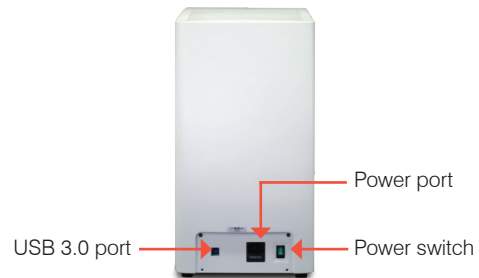
## Workflow

Once you've prepared and stained a slide, load it into the instrument for scanning. Once loaded, preview the slide, edit the scanned area, and then submit 1–2 scanned slides for the patient to IDEXX Reference Laboratories. For more information on preparing and staining slides, see the *Preparing Slides for IDEXX Digital Cytology\** key ring cards and the *Staining Slides for IDEXX Digital Cytology\** mat (both were provided with the instrument at installation).

## Instrument components



Front and right side of the instrument



Back of the instrument



Monitor and barcode scanner

## Installing the instrument

**Note:** When installing the instrument, consider these dos and don'ts:

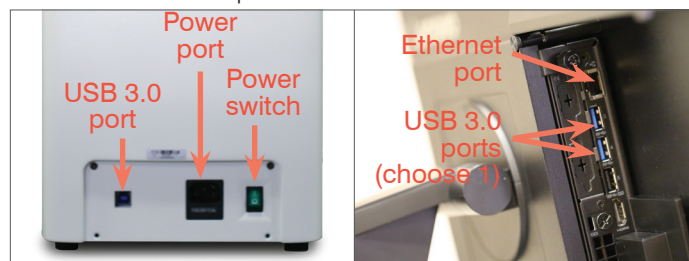
- Do place the instrument on a flat surface.
- Do place the instrument in an environment with good ventilation.
- Do not place the instrument in a position that makes it difficult to disconnect the power cord.
- Do not place objects on the instrument.
- Do not place the instrument in an environment with direct sunlight, dust, mechanical vibrations, high temperature, or high humidity.

### To install the instrument

1. Remove the zip tie and protective foam inside the scanner:
  - a. Unscrew the two hand screws under the front panel.
  - b. Pull the panel up to remove it from the instrument.
  - c. Cut the zip tie and remove the foam from inside the instrument.
  - d. Replace the panel removed in step a.



2. Connect the cables:
  - a. Connect the instrument to the computer using the USB 3.0 cable. (The USB 3.0 ports on the computer are blue.)
  - b. Connect the Ethernet cable to the computer and to an Ethernet port.
  - c. Connect the computer to a power source using the cord that came with the PC for the monitor.
  - d. Ensure the power switch on the instrument is in the off position and then connect the instrument to a power source.



3. Power on the instrument.

**IMPORTANT:** Ensure the scanner is powered on for 60 seconds before you turn on the computer.

4. Power on the computer.

When prompted, enter the PC password provided by the IDEXX Field Support Representative.

5. Set up the bar code scanner:
  - a. Plug the bar code scanner into a USB port on the PC.
  - b. When prompted, follow the on-screen installation instructions.
6. Allow the IDEXX Field Support Representative to finalize the instrument settings and setup.



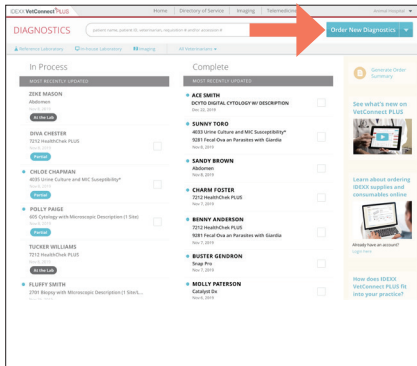
## Analyzer status

The status light on the front of the instrument will change color and/or flash depending on the status of the analyzer.

<b>When the status light appears...</b>	<b>And is...</b>	<b>The instrument...</b>
Green	Solid	Is on and ready for use
Green	Flashing	Is operating or requires user attention

# Using the IDEXX Digital Cytology Instrument

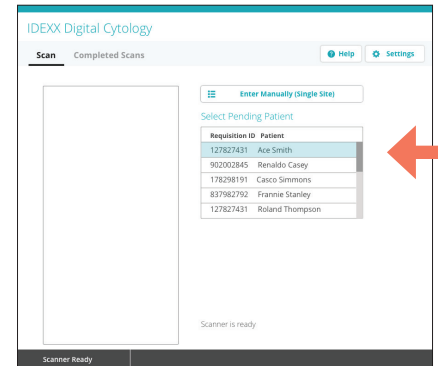
## Submitting slides to IDEXX Reference Laboratories



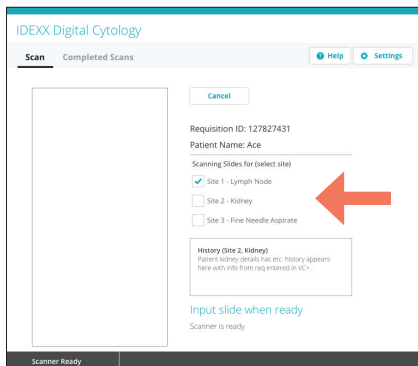
1. Using VetConnect\* PLUS or your compatible practice management system, click **Order New Diagnostic** and select the code you want to order (e.g., DCYTO or DCBCPR). Print the patient requisition form, if desired.



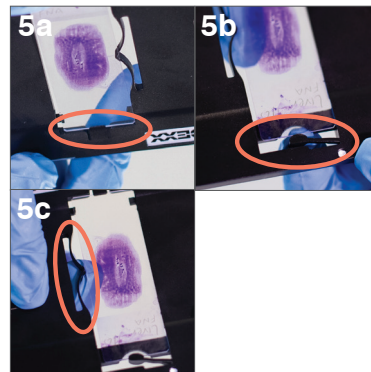
2. Launch the IDEXX Digital Cytology\* Instrument software from the computer desktop.



3. From the Home screen, select the patient whose slide you are scanning from the **Select Pending Patient** list.  
OR  
Tap **Enter Manually (Single Site)** and use the handheld scanner to scan the bar code on the printed requisition form (or enter the code manually).



4. Select which site you would like to scan (the sites autopopulate based on the information entered in step 1).

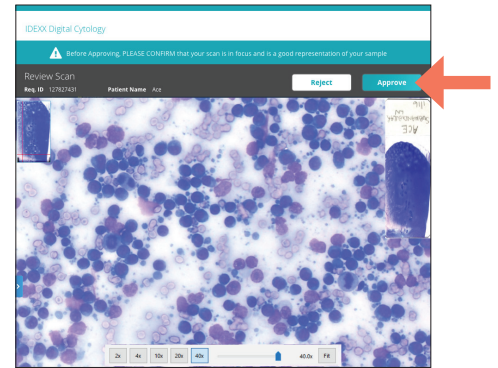
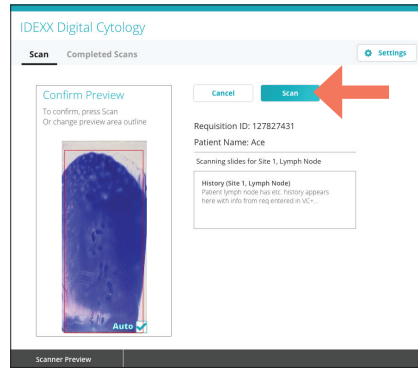
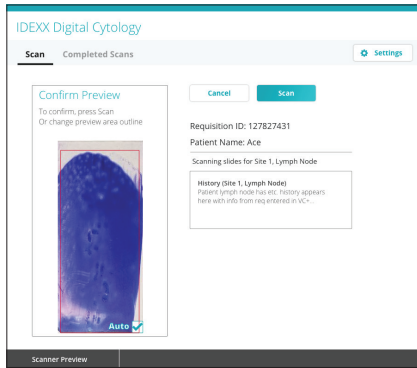


5. Insert the stained slide into the slide tray:
  - a. Holding the slide face up by the labeled/frosted end, slide the opposite end of the slide under the black tab in the tray.
  - b. Pull back the arm on the labeled/frosted end of the slide and align the arm with the end of the slide.
  - c. Pull back the bow near the top of the slide to lock the slide into place.

**IMPORTANT:** To avoid blurry images and/or the need to resubmit, ensure the slide is right-side up and the slide is flush with the slide tray.



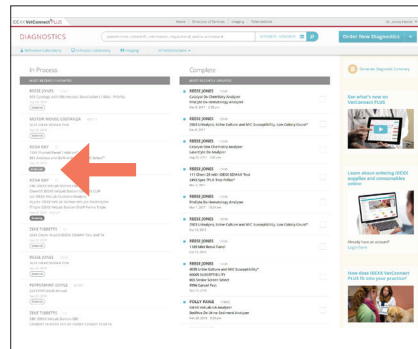
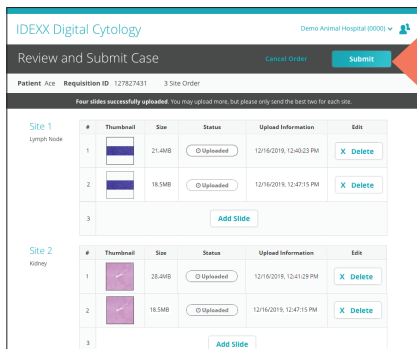
6. Gently insert the slide tray into the instrument until it stops (do not force it in as scan errors may result). The instrument will automatically pull in the slide tray.



7. Review the scan preview. It is recommended that you use the default scan area for all sample types other than blood smears.
8. Tap **Scan**. Total scan time and time remaining are displayed. After completion of the scan, the Review Scan screen appears.
9. Verify that the image is in focus, has good resolution, and that you're satisfied with the representation of the sample and cells. Then tap **Approve**.

**For blood smears:** If the feathered edge is not included in the scan preview, clear the **Auto** checkbox on the lower-right corner of the preview image and then redraw the scan area to include the feathered edge.

**Note:** If you are not happy with the slide image, tap **Reject** and scan a new slide.



10. Review the case slides, keeping the best 1–2 slides per site.  
If you're finished scanning slides for the patient, tap **Submit** to send your slides to an IDEXX pathologist.  
OR  
If you need to submit additional slides for this case, tap **Add Slide** and repeat steps 4–9.  
**Note:** Up to two slides can be submitted per site (exception: up to six slides can be submitted for lymph nodes).

After submitting, you can check VetConnect PLUS for results status. Slide images have successfully reached the IDEXX Pathology laboratory when the VetConnect PLUS status has changed from "Ordered" to "At the Lab."



## Accessing results

Your pathology results can be accessed via VetConnect\* PLUS or your compatible practice information management system. Please refer to your system's documentation for more information.

# Maintenance and troubleshooting

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## Cleaning the case

Clean the case with a soft cloth moistened with water and/or mild detergent. Do not use full-strength or diluted organic solvents (such as alcohol, ether, etc.) for cleaning.

## Rebooting the instrument and computer

IDEXX recommends shutting down and restarting the IDEXX Digital Cytology Instrument and its computer at least once per week.

- To shut down the IDEXX Digital Cytology Instrument, use the power switch on the back of the instrument to power it off. Then, on the IDEXX Digital Cytology Instrument computer, select **Shut down** from the Windows\* Start menu (located in the lower-left corner of the screen).
- To restart the IDEXX Digital Cytology Instrument:
  1. Power on the IDEXX Digital Cytology Instrument computer and then wait 60 seconds.
  2. Power on the instrument's computer using the power button in the lower-right corner of the monitor.

## Upgrading the software

As new features and functionality are added to the instrument, you will receive software upgrades from IDEXX. These updates will be sent automatically to your IDEXX Digital Cytology computer via your SmartService\* Solutions connection.

### **IMPORTANT:**

- Do not interrupt or shut down your system during the upgrade process.
- Be sure to upgrade your system as soon as possible so that you don't miss out on new features.
- The upgrade process takes 5 minutes or less to complete.

### To upgrade your software:

1. Tap **Upgrade Now**, when prompted.
2. Tap the **Help** button on the Digital Cytology monitor and then select **Upgrade Now**. The upgrade process is complete when you are prompted to tap **Finish**.

## Troubleshooting

### Scanned image quality has worsened

If the scanned image quality has worsened or scanned images look checkered, this may indicate that the instrument requires recalibration.

If images appear to have debris in the field of view, the objective may require cleaning.

To discuss recalibration or cleaning, contact IDEXX Customer and Technical Support.

# Appendix

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## Technical specifications

### Dimensions

<b>Material description</b>	<b>Weight</b>	<b>Depth</b>	<b>Width</b>	<b>Height</b>
Instrument	Approximately 12 lb (approximately 5.45 kg)	15.1" (38.35 cm)	7.6" (19.30 cm)	14.75" (37.47 cm)
Monitor	12.92 lb (5.86 kg)	11.11" (28.22 cm)	21.25" (53.98 cm)	15.72" (39.93 cm)
Computer	2.91 lb (1.32 kg)	7.05" (17.91 cm)	7.0" (17.78 cm)	1.36" (3.45 cm)

### General specifications

Slide tray capacity: 1 slide

Slide tray dimension: 120 mm × 100 mm × 5.8 mm

Slide dimension: 76 mm × 25 mm × 1 mm

Objective plan: APROCHROMAT 20×/0.50

Resolution: Under 20X magnification, scanner resolution is 0.52 μm/pixel tolerance.

Light illumination: 10 W LED, auto-control intensity (99 grade)

Main camera: 5 megapixels

Communication port: USB 3.0

### Digital camera system specifications

Resolution: 2048 × 1536

Pixel dimension: 3.45 × 3.45 μm

Port: USB 3.0

### Electrical specification

Input voltage: 100–240 V ~ 50–60 Hz

Input power: 96 W

Fuse: 250 V T2.5 AL (If damaged, replace with a fuse with the same specifications.)

Over voltage category (II)

Pollution category (II)

## Operating conditions

Indoor use only

Altitude: 2,000 meters (Higher altitudes should be revised based on the international coefficient.)

Voltage: Power supply voltage fluctuation should not be more than  $\pm 10\%$  of nominal voltage.

Air pressure: 75k Pa–106k Pa

	<b>Operating</b>	<b>Storage</b>
Temperature	5°C–40°C (41°F–104°F)	-20°C– 55°C (-4°F–131°F)
Relative humidity	30%–75%	10%–90%

## Safety precautions

Note: If the equipment is used in a manner other than specified, the protection provided by the equipment may be impaired.

The instrument does not contain any user-serviceable components. DO NOT disassemble.

Line voltage for the IDEXX Digital Cytology Instrument AC power adapter is 100–240 V AC, 50–60 Hz. Be sure to plug all equipment into properly grounded electrical outlets.

Use only the AC power adapter and AC power cable supplied.

Disconnect the power cable:

- If the cable becomes frayed or otherwise damaged.
- If anything is spilled onto the equipment.
- If your equipment is exposed to excessive moisture.
- If your equipment is dropped or the case has been damaged.
- If you suspect that your analyzer needs service or repair.
- Whenever you clean the case.

When moving the devices, disconnect the power and USB cables.

Lift equipment base plate from both sides when lifting and handling to maintain balance of the instrument and prevent rollover.

Automatic voltage selection device is applicable to worldwide voltage configuration, but it is recommended to use the power cable that matches with the rated voltage of your area. Incorrect use of power cable may cause fire or damage to the device.

To prevent electric shock, make sure the power switch is turned off before connecting the power cable.

Connect the power cable to a grounded electrical outlet.

If an emergency occurs, remove the power cord.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

## Care of the instrument

IDEXX recommends shutting down and restarting the system at least once every week. For detailed instructions, see page 8.

It is recommended that you do not stack other equipment or containers on top of the instrument.

Keep instrument away from sources of heat or flames.

PROTECT your equipment from damp conditions, wet weather, or liquid spills.

Take care not to spill water or other liquids on the unit.

DO NOT use solvents, ink markers, sprays containing volatile liquids, or polish on the instrument as it may damage the outer case. Clean only with a mild soap and slightly moist cloth and only when the analyzer is not in use.

Clean only with a mild soap and slightly moist cloth and only when the instrument is not in use.

Keep the slide tray clean (especially the back side of the slide tray) to ensure it can slide smoothly in and out of the instrument.

Dragging the instrument along a surface (i.e., when cleaning) can affect its accuracy.

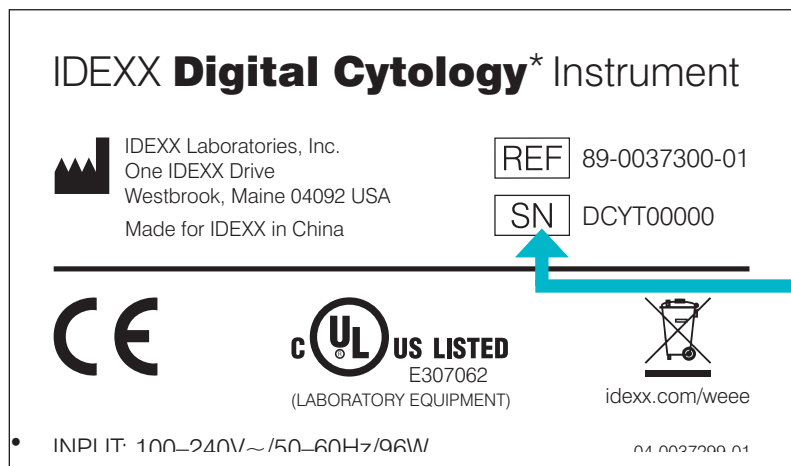
The instrument should not be placed near direct sunlight, dust, mechanical vibrations, high temperature, or high humidity.

Please keep this device in an environment with good ventilation.








Install the device in a place where you can easily disconnect the power cable.

## International symbol descriptions

International symbols are often used on packaging to provide a pictorial representation of particular information related to the product (such as expiration date, temperature limitations, batch code, etc.). IDEXX Laboratories has adopted the use of international symbols on our analyzers, product boxes, labels, inserts, and manuals in an effort to provide our users with easy-to-read information.



For example: "SN" denotes the serial number

Symbol	Description	Symbol	Description
	<p><b>Authorized Representative in the European Community</b>            Représentant agréé pour la C.E.E.            Autorisierte EG-Vertretung            Rappresentante autorizzato nella Comunità Europea            Representante autorizado en la Comunidad Europea            EC内の正規販売代理店</p>		<p><b>Consult instructions for use</b>            Consulter la notice d'utilisation            Gebrauchsanweisung beachten            Consultare le istruzioni per l'uso            Consultar las instrucciones de uso            取扱説明書をご参照ください。</p>
	<p><b>Manufacturer</b>            Fabricant            Hersteller            Ditta produttrice            Fabricante            製造元</p>		<p><b>WEEE Directive 2002/96/EC</b>            Directive 2002/96/CE (DEEE)            WEEE-Richtlinie 2002/96/EG            Directiva 2002/96/CE RAEE            Direttiva RAEE 2002/96/CE            廃電気電子機器指令 (WEEE Directive 2002/96/EC)</p>
	<p><b>Caution, consult accompanying documents</b>            Attention, consulter les documents joints            Achtung, Begleitdokumente beachten            Attenzione, consultare la documentazione allegata            Precaución, consultar la documentación adjunta            注意、添付文書をご参照ください。</p>		<p><b>Temperature limitation</b>            Température limite            Zulässiger Temperaturbereich            Temperatura limite            Limitación de temperatura            保存温度 (下限)</p>
	<p><b>Serial number</b>            Numéro de série            Seriennummer            Numero di serie            Número de serie            シリアル番号</p>		

## IDEXX Customer and Technical Support contact information

IDEXX sales representative: \_\_\_\_\_

Phone: \_\_\_\_\_

United States: 1-800-248-2483

Netherlands: 31 (0)70 700 7033

Australia: 1300 44 33 99

New Zealand: 0800 83 85 22

Austria: 43 (0)1 206 092 729

Norway: 47 24 05 51 10

Belgium: 32 (0)27 00 64 38

Poland: 48 22 853 40 01

Brazil: 0800-777-7027

Russia: 7-4999-511-255

Canada: 1-800-248-2483

Singapore: 65 6807-6277

China (PRC): 400-678-6682

Slovakia: 421-268622417

Czech Republic: 420-239018034

South Korea: 080 7979 133

Denmark: 45 (0) 43 31 04 39

Spain: 34 932 672 660 or 34 916 376 317

Finland: 358 (0)9 7252 2253

Sweden: 46 (0)8 5198 9566

France: 33 (0) 173 431 333

Switzerland: 41 (0)44 511 22 37

Germany: 49 (0)69 153 253 290

Taiwan: 0800 291 018

Ireland: 353 (0)1 562 1211

United Kingdom: 44 (0)20 3788 7508

Italy: 39 02 87 10 36 76

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