UltraLinQ Healthcare Solutions, Inc.

Instructions for Use

IFU-ULQ-EU Rev 16

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About UltraLinQ Healthcare Solutions, Inc.

Introduction

PRECAUTION

The user must carefully read this user guide to understand the software.

1.1 About UltraLinQ

The UltraLinQ Core System (UltraLinQ) is a cloud-based software application for accessing, viewing, and processing medical images and data from a web-enabled computer. UltraLinQ conforms to the ACR/NEMA DICOM 3.0 standard for interoperability with other DICOM-compliant systems.

UltraLinQ allows you to:

- Review reports and exams.
- Download and save reports and exams.
- Share reports and exams with other UltraLinQ users.
- Route reports and exams to other UltraLinQ users.
- Send reports and exams to EMR systems.

The UltraLinQ Core System has four main parts: the **server**, the **database**, **UpLinq**, and **UltraLinQ**.

- Cloud-based **servers** host the UltraLinQ application and database.
- The **database** stores all exam, user, and account data.
- **UpLinq** transfers exams and data to UltraLinQ.
- **UltraLinQ** serves as a user interface that allows physicians and other medical professionals to evaluate exams and data, create reports, and send finalized reports to authorized recipients.

Patient exam images and data are captured at the imaging modality, then transferred over your local network to a server with UpLinq. UpLinq encrypts and compresses all exam images and related data. After encryption and compression, UpLinq securely sends the exam images and related data to UltraLinQ's HIPAA-compliant cloud. There, any authorized user with a web-enabled device can access the exam images and data.

1.2 About This User Guide

These *Instructions for Use* are a guide on operating the UltraLinQ Core System (UltraLinQ). Read this entire document before using UltraLinQ. This guide does not provide training on obtaining images or clinical practices.

This guide uses warnings, precautions, and notices to highlight important information.

Warnings show hazards that could result in injury or death. A warning in this guide looks like:

WARNING!

This is a warning.

Precautions show hazards that could impede safe, effective use of this system. A caution in this guide looks like:

PRECAUTION

This is a precaution.

Notices show best practices for using this system. A notice in this guide looks like:

NOTICE: This is a notice.

2 List of Warnings and Precautions

The following is a list of warnings and precautions that apply to the UltraLinQ Core System.

2.1 Warnings

WARNING!

Clinicians must carefully review exams to determine acceptable image quality prior to use.

Users must carefully review all information for proper data population and clinical accuracy.

It is the physician's responsibility to make diagnoses or interpretations based on all available information. UltraLinQ is not intended to perform diagnosis. UltraLinQ Healthcare Solutions, Inc. will not be responsible for diagnoses or interpretations made by physicians.

The use of browsers or hardware other than those supported by UltraLinQ is not recommended as it may result in errors. UltraLinQ Healthcare Solutions, Inc. will not be responsible for misdiagnosis resulting from using system requirements and browsers not recommended by UltraLinQ Healthcare Solutions, Inc.

In certain circumstances, UltraLinQ utilizes lossy compression. This compression may result in a small loss of information on these images, and therefore clinical judgment should be used to confirm that clinical quality has been retained.

2.2 Precautions

PRECAUTION

The user must carefully read this user guide to understand the software.

This product is intended for use by trained and qualified professionals, e.g. physicians, radiologists, nurses, medical technicians, and assistants.

Do not use computers or browsers that do not meet the minimum requirements published by UltraLinQ Healthcare Solutions, Inc.

3 Indications and Contraindications

WARNING!

It is the physician's responsibility to make diagnoses or interpretations based on all the available information. UltraLinQ is not intended to perform diagnosis. UltraLinQ Healthcare Solutions, Inc. will not be responsible for diagnoses or interpretations made by physicians.

PRECAUTION

This product is intended for use by trained and qualified professionals, e.g. physicians, radiologists, nurses, medical technicians, and assistants.

The UltraLinQ System stores, communicates, and displays medical images and data across computer systems. This system runs on a web-enabled computer. UltraLinQ is compatible with other PACS.

UltraLinQ's intended users are qualified medical professionals who are trained in the use of this system, such as clinicians, nurses, medical technicians, and assistants.

3.1 Indications

UltraLinQ is a cloud-based software image management system intended to receive, process, review, display, and archive medical images and data from imaging modalities (e.g. ultrasound and magnetic resonance). Images and data can be stored, communicated, and displayed across computer systems. UltraLinQ is a single system that can run on a web-enabled computer and may be interfaced with other PACS. Diagnosis is not performed by the software but by qualified clinicians. Typical users of this system are trained and qualified professionals,
e.g. physicians, radiologists, nurses, medical technicians, and assistants.

UltraLinQ is used to:

- Share reports and exams with other UltraLinQ users.
- Review reports and exams.
- Download and save reports and exams.
- Send reports and exams to EMR and EHR systems.
- Route reports and exams to other UltraLinQ users.

3.2 Intended Users

The intended users of UltraLinQ are qualified medical professionals who are trained in the use of this system, such as clinicians, nurses, medical technicians, and assistants.

3.3 Contraindications

UltraLinQ is **not** to be used for **mammography**.

3.4 Supported Modalities and Exam Types

To request a template for a new exam type, contact Technical Services.

3.4.1 Supported Modalities

- Ultrasound (US)
- Nuclear medicine (NM)
- X-ray angiogram (XA)
- Digital radiography X-ray (DX)
- Computed radiography (CR)
- Magnetic resonance (MR)
- Intravascular Ultrasound (IVUS)
- SR Document (SR)

3.4.2 Supported Exam Types

Cardiac

- Cath
- Echocardiogram
- Echocardiogram ASE
- Limited echocardiogram
- Nuclear stress exercise
- Nuclear stress pharmacological
- Screening
- Stress
- Transesophageal echocardiogram
- X-ray chest

General Ultrasound

- Abdominal
- Breast
- Generic
- Obstetrics
- Pelvic female
- Pelvic male
- Renal

Screening simple

- Testicular
- Thyroid

Vascular

- Abdominal aorta
- Arterial upper
- Carotid
- Renal artery Doppler
- Venous insufficiency
- Venous lower
- Venous upper

4 System Requirements

WARNING!

The use of browsers or hardware other than those supported by UltraLinQ is not recommended as it may result in errors. UltraLinQ Healthcare Solutions, Inc. will not be responsible for misdiagnosis resulting from using system requirements and browsers not recommended by UltraLinQ Healthcare Solutions, Inc.

UpLinq, UltraLinQ also support newer versions of the requirements defined below.

Note: Make sure your computer's operating system is up-to-date for best performance.

4.1 UpLinq

4.1.1 All UpLinq Deployments

Minimum requirements:

- Internet connection (direct or via proxy)
- Access to UltraLinQ API and web servers (via the Internet)
- Internet bandwidth dependent on business needs 4.1.2
- Operating system: Microsoft Windows Server 2019
- Processor: Intel E7, i7, AMD Ryzen 7 or equivalent
- RAM: at least 8 GB
- Available disk space: SSD with at least 50 GB dedicated to UpLinq

Recommended requirements:

- Operating system: Microsoft Windows Server 2019
- Processor: Intel E7, i7, AMD Ryzen 7 or equivalent
- RAM: at least 8 GB
- Available disk space: SSD with at least 50 GB dedicated to UpLinq

Virtual Server Minimum requirements:

- Operating system: Microsoft Windows Server 2012 R2
- Processor: Intel Xeon E5, at least four physical cores dedicated to guest
- RAM: at least 4 GB dedicated to guest

- Available disk space: at least 50 GB dedicated to UpLinq

4.1.2 Workstation

Minimum requirements:

- Operating system: Microsoft Windows 8.1 SP1 (64-bit)
- Processor: Intel i5, AMD Ryzen 5
- RAM: 4 GB
- Available disk space: at least 40 GB dedicated to UpLinq

Recommended requirements:

- Operating system: Microsoft Windows 10 Pro or Enterprise (64-bit)
- Processor: Intel i7, AMD Ryzen 7 or equivalent
- RAM: at least 8 GB
- Available disk space: SSD with at least 50 GB dedicated to UpLinq

4.1.3 Physical Server

Minimum requirements:

- Operating system: Microsoft Windows Server 2012 R2
- Processor: Intel E5, i7, or equivalent
- RAM: at least 4 GB
- Available disk space: at least 40 GB dedicated to UpLinq Recommended

Recommended requirements:

Operating system: Microsoft Windows Server 2016

Processor: Intel E7, i7, or equivalent

RAM: at least 8 GB

Available disk space: SSD with at least 50 GB dedicated to UpLinq

4.1.4 Virtual Server

Minimum requirements:

- Operating system: Microsoft Windows Server 2012 R2
- Processor: Intel Xeon E5, at least four physical cores dedicated to guest
- RAM: at least 4 GB dedicated to guest
- Available disk space: at least 50 GB dedicated to UpLinq

Recommended requirements:

Operating system: Microsoft Windows Server 2016

Processor: Intel E7, i7, or equivalent

RAM: at least 8 GB

Available disk space: SSD with at least 50 GB dedicated to UpLinq

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4.2 UltraLinQ

Minimum requirements:

- Operating system: Microsoft Windows 7 SP1 or Apple OS X (10.11)
- Processor: Intel i5 2.5 Ghz processor or better

- RAM: 4 GB
- Internet connection: access to UltraLinQ web services
- Internet bandwidth: at least 10 mbps
- Web browser:

- Internet Explorer 11 without compatibility mode (discouraged)

- Microsoft Edge 39.x or 40.x
- Firefox 55.x or 56.x
- Chrome 61.x or 62.x (recommended)

- Browser plugin: Adobe Flash 26.x plugin or browser-embedded equivalent
- Other hardware:

- Dedicated video card for Quad viewer
- Monitor with a diagonal greater than 20 in. and a minimum resolution of 1600 x 1200 px

Recommended requirements:

- Operating system: Microsoft Windows 7 SP1 or Apple OS X (10.15)
- Processor: Intel i5 2.5 Ghz processor or better
- RAM: 4 GB
- Internet connection: access to UltraLinQ web services
- Internet bandwidth: at least 10 mbps
- Web browser:

  o Microsoft Edge 88.x
  o Firefox 91.x
  o Chrome 96.x

- Other hardware:

  o Dedicated video card for Quad viewer
  o Monitor with a diagonal greater than 20 in. and a minimum resolution of 1600 x 1200 px

- Operating system: Microsoft Windows 10 or Apple OS X (10.12)
- Processor: Intel i7 at 2.4 GHz or equivalent

- RAM: at least 8 GB
- Internet connection: access to UltraLinQ web services
- Available Internet bandwidth: at least 30 mbps
- Web browser:

- Chrome 61.x or 62.x
- Other hardware:
- Dedicated video card for Quad viewer with at least 1 GB video RAM
- Widescreen monitor with a diagonal greater than 20 in. and a minimum resolution of 1920 x 1080 px

Recommended requirements:

- Operating system: Microsoft Windows 10 or Apple OS X (11.7)
- Processor: Intel i7 at 2.5 GHz, AMD Ryzen 7 at 3.6 GHz
- RAM: at least 8 GB
- Internet connection: access to UltraLinQ web services
- Available Internet bandwidth: at least 30 mbps
- Web browser:
  - Chrome 105.x
  - Firefox 103.x
- Other hardware:
  - Dedicated video card for Quad viewer with at least 1 GB video RAM
  - Widescreen monitor with a diagonal greater than 20 in. and a minimum resolution of 1920 x 1080 px

4.3 Supported Exam File Types

DICOM

Images converted by SiteLink 3 or 4 (SonoSite)

Multimedia and rich text files generated by CypressViewer (Cypress)

Multimedia and XML files generated by MyLab devices (Biosound Esaote)

5 Contacting Technical Services

UltraLinQ Technical Services is available Monday–Friday, 8 AM–8 PM EST.

Phone: 0203 3183403 (Select option 1.)

Email: support@UltraLinQ.com

For emergency support in the United States and, contact UltraLinQ Technical Services at 0203 3183403, and select option 1 to leave a message with UltraLinQ's answering service. An on-call technician will return your call within two hours.

6 UpLinq

WARNING!

The use of browsers or hardware other than those supported by UltraLinQ is not recommended as it may result in errors. UltraLinQ Healthcare Solutions, Inc. will not be responsible for misdiagnosis resulting from using system requirements and browsers not recommended by UltraLinQ Healthcare Solutions, Inc.

WARNING!

Users must carefully review all information for proper data population and clinical accuracy.

NOTICE: Do not shut down your computer while running UpLinq. This results in database corruption or duplicated exams uploaded to UltraLinQ.

UpLinq transfers exams and data to UltraLinQ. UpLinq encrypts and compresses all exam images and related data. After encryption and compression, UpLinq securely sends the exam images and related data to UltraLinQ's HIPAA-compliant cloud.

6.1 Installing UpLinq

Install UpLinq 2.7.9 or 2.7.10 by following these steps.

NOTICE: If you have installed an earlier version of UpLinq before, follow steps **1** and **2** to delete any existing files and to uninstall the application.

1. If you have an earlier version of UpLinq installed on your computer, delete any processed files from your source file folders.
    a. Open your existing version of UpLinq. Open **Preferences**.
    b. Locate the source directory and encoded directory folders.
    c. Close UpLinq.
    d. Using Windows Explorer, navigate to the source directory folder and the encoded directory found in step **1b**. Delete the **contents** of both folders. **Do not** delete the folders themselves.
2. If you have an earlier version of UpLinq installed on your computer, uninstall the earlier version of UpLinq as well as Quicktime.
    a. In Microsoft Windows, navigate to the **Control Panel**.
    b. Under **Programs and Features**, select **Uninstall a program** (Control Panel > Programs > Programs and Features > Uninstall or change a program).
    c. Select the earlier version of UpLinq, then click **Uninstall**. If Quicktime is installed on your computer, uninstall the application using the same process.
3. Download UpLinq 2.7.9 by entering the following address in your web browser: **http://downloads.UltraLinQ.net/uplinq/uplinq-2.7.9.exe**. **If** you have trouble downloading the file or need to download 2.7.10, contact Technical Services.
4. In Windows Explorer, run **uplinq-2.7.9.exe** from the **Downloads** folder.
5. Follow the prompts from the Setup Wizard.

Radiology Support:

A company that has access to the Radiology Viewer can upload radiology exams using UpLinq 2.8 and higher.

Radiology Exams will need to be sent to the “(DICOM with Radiology Support)” watch folder. Any uploaded exams through this folder will give users access to the Radiology Viewer.

Additionally, users can manually search for exams by clicking the “Find” button in UpLinq and selecting “DICOM (with Radiology Support)” before selecting the exams they wish to upload.

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6.2 Setting Up UpLinq

Before transferring exams with UpLinq, make sure the program is set up for your practice's needs.

- Use the UpLinq Setup Wizard.
- Set UpLinq to run continuously as a service.
- Adjust the data rate for encoding clips.

6.2.1 Using the UpLinq Setup Wizard

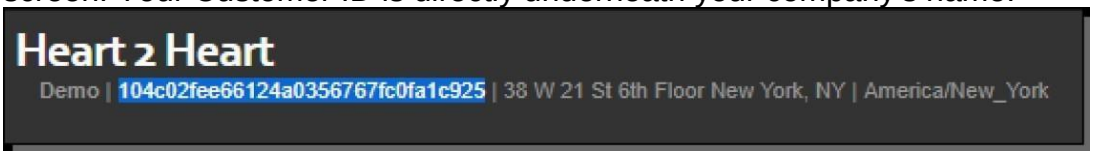
When you run UpLinq for the first time, set your preferences by following these steps.

Run UpLinq from your desktop shortcut. Follow the prompts in the Setup Wizard.

If you are using a proxy server, enter your proxy information when prompted. For help setting up a proxy server, contact Technical Services.

Enter your Customer ID.

Your organization's account administrator can find your Customer ID by signing into UltraLinQ on a web browser and clicking **Admin** in the upper right of the screen. Your Customer ID is directly underneath your company's name.



Select the types of devices you plan to use with UpLinq:

Biosound: XML and multimedia files exported from Esaote devices

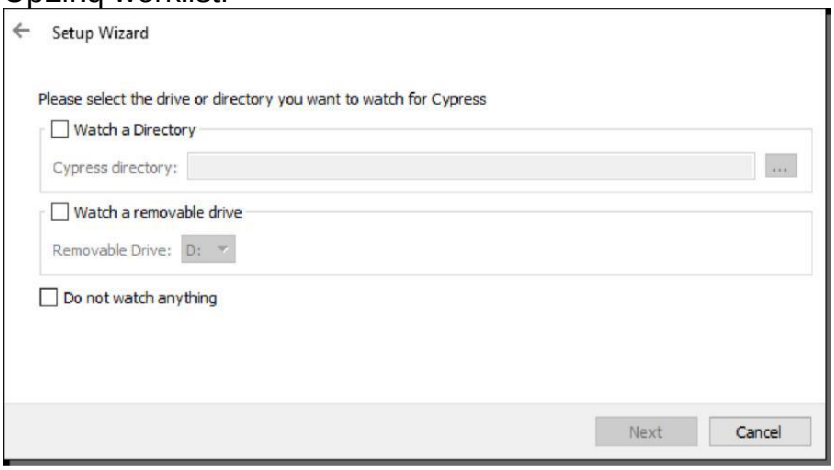
Cypress: RTF files created using multimedia exports in CypressViewer

DICOM: DICOM files sent by any device

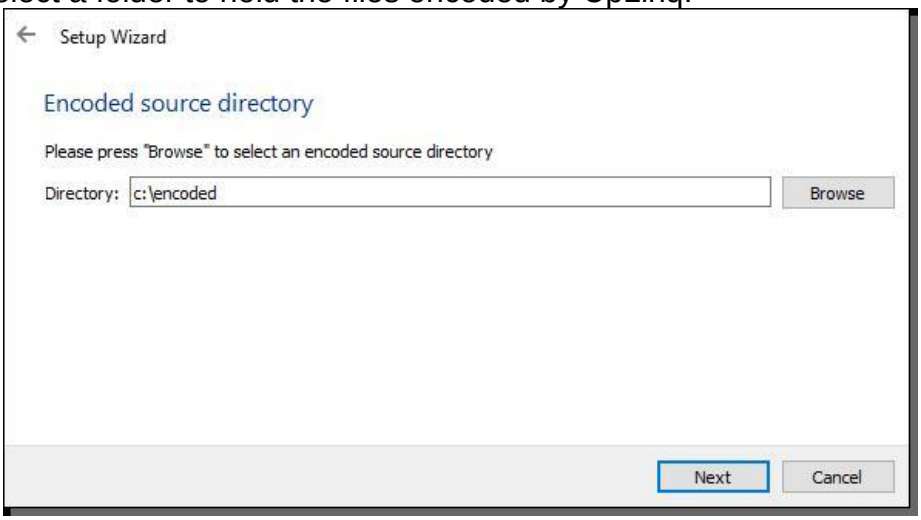
SonoSite: files converted by SiteLink versions 3 or 4

Single File: not used (Do not select.)

Set Watch Directory options for each type of device you selected in step **4**. Bywatching a directory, UpLinq monitors the file system for changes and adds new files to the UpLinq worklist.



Select a folder to hold the files encoded by UpLinq.



Set the retention settings for UpLinq. This allows UpLinq to automatically delete locally-stored files after the specified number of days. **Do not** use the **Delete exam on upload?** option.

Review your settings. Make any changes by clicking **Back** in the Setup Wizard. When your settings are correct, click **Finish**.

6.2.2 Running UpLinq as a Service

NOTICE: Do not shut down your computer while running UpLinq. This results in database corruption or duplicated exams uploaded to UltraLinQ.

You can set up UpLinq to run continuously in the background to monitor for new exams without having to manually open the application.

Run UpLinq as a service by following these steps.

In Windows Explorer, navigate to **C:\UltraLinQ_DICOM**. Double click **FireDaemonUI.exe**.

Click .

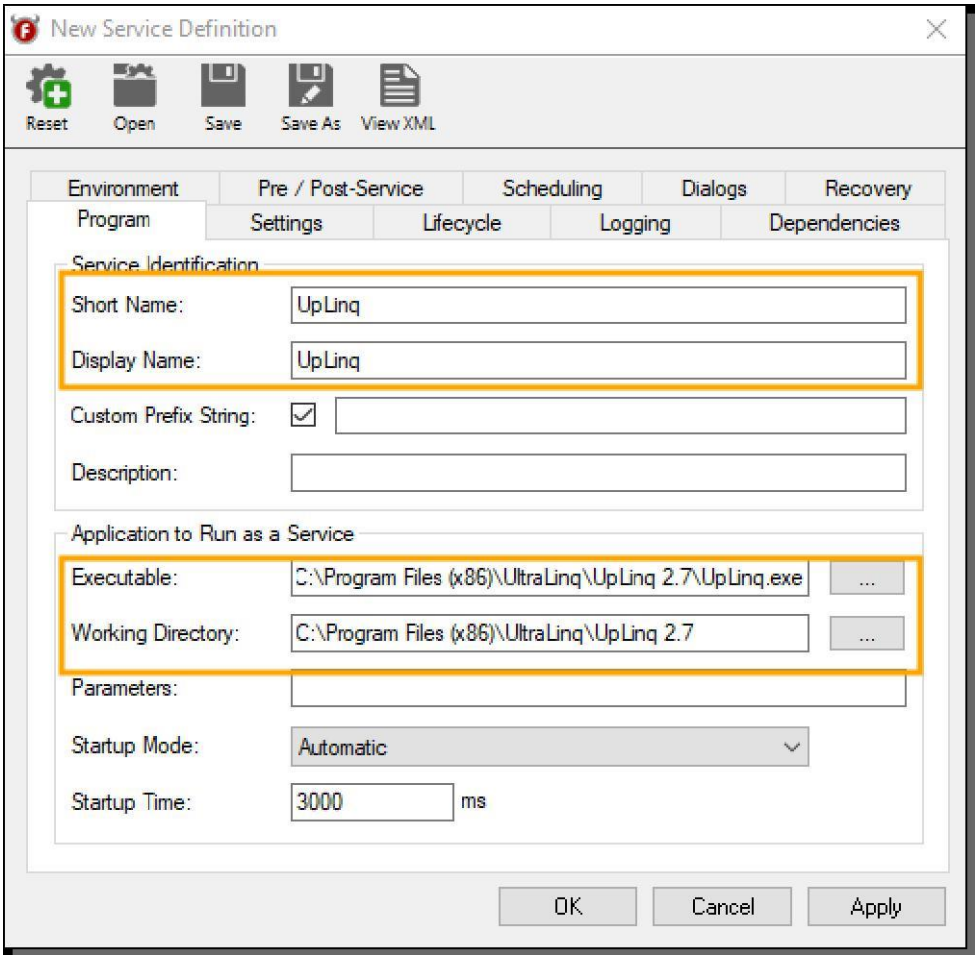
. Fill in the **Program** tab.

Enter **UpLinq** in the **Short Name** field.

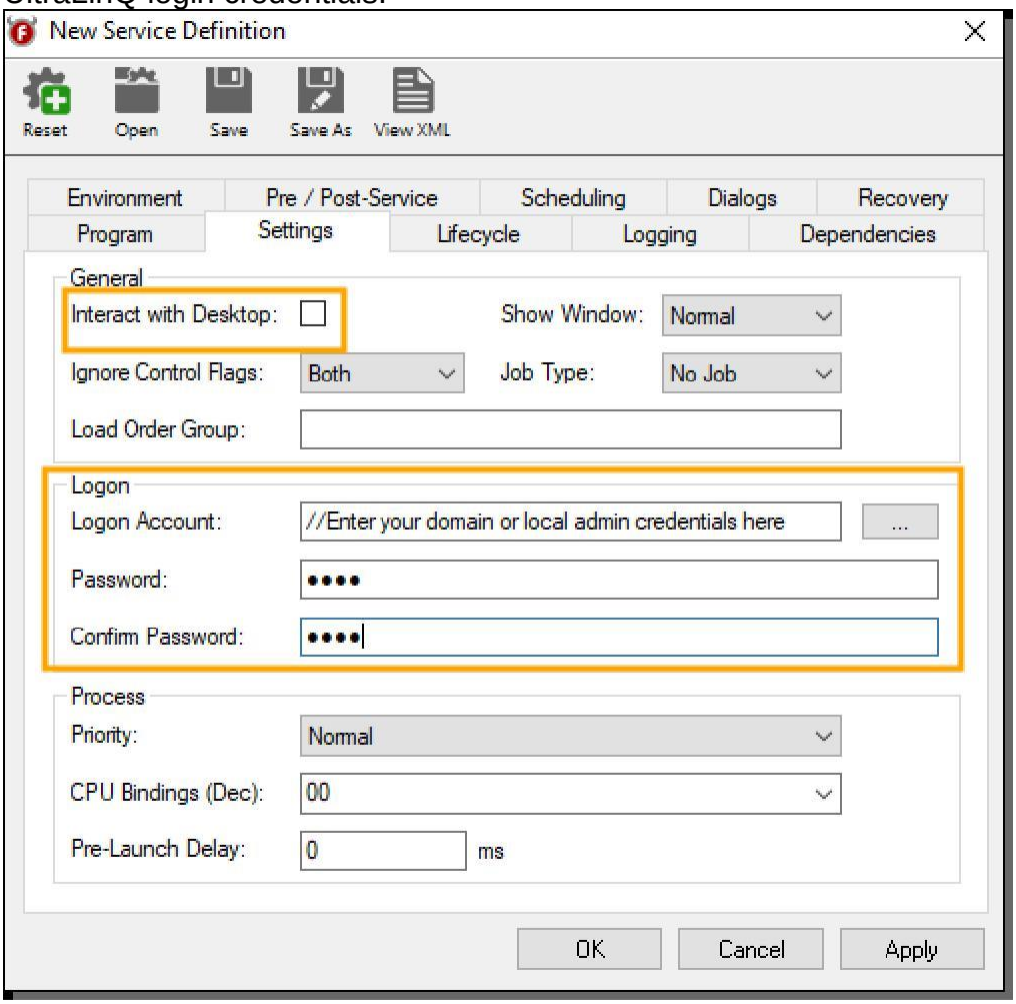
Enter **UpLinq** in the **Display Name** field.

Enter **C:\Program Files (x86)\UltraLinQ\UpLlinq 2.7\UpLinq.exe** in the **Executable** field.

Enter **C:\Program Files (x86)\UltraLinQ\UpLinq 2.7** in the **Working Directory** field.



In the **Settings** tab, uncheck the box by Interact with Desktop, and enter your UltraLinQ login credentials.



Click **OK** to save all changes.

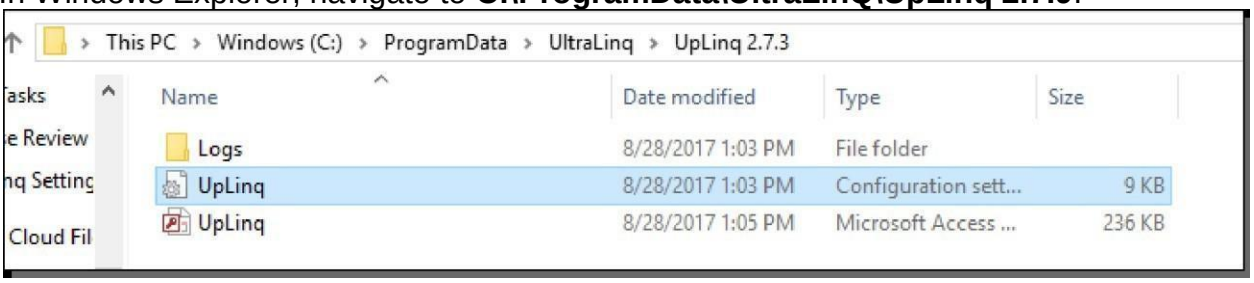
6.2.3 Adjusting the Data Rate

UpLinq uses an encoding tool called FFMPEG to process files into JPEG and MP4 formats.

You can adjust the data rate of the encoding process to improve the playback quality of clips. This can fix long load times, extensive buffering, and "jerky" playback.

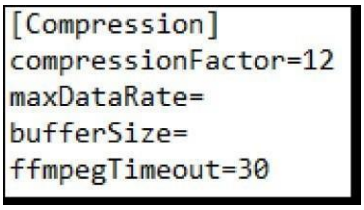
Adjust the data rate by following these steps.

In Windows Explorer, navigate to **C:\ProgramData\UltraLinQ\UpLinq 2.7.9**.

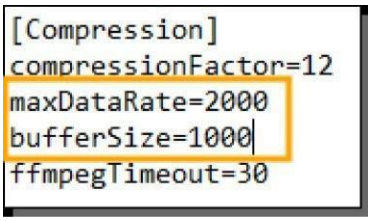


Open **UpLinq.ini**.

Scroll down until you reach the Compression section. The **maxDataRate** and **bufferSize** settings are linked. You must change both values to adjust the data rate.



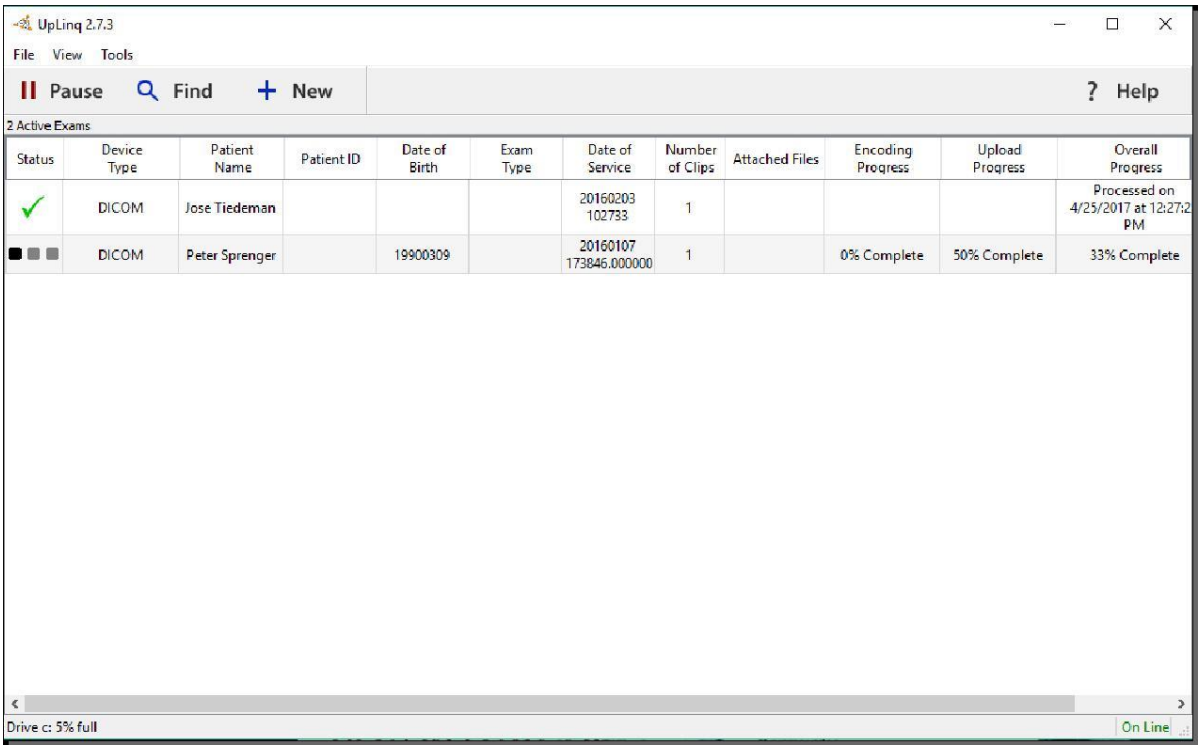
Set the **maxDataRate** value at **2000**. Set the **bufferSize** value at **1000**.



Save your changes to the file. Close and reopen UpLinq to implement the new settings.

6.3 UpLinq Navigation

The UpLinq **Exam List** shows active and existing, processed exams. UpLinq processes exams in the order they appear.



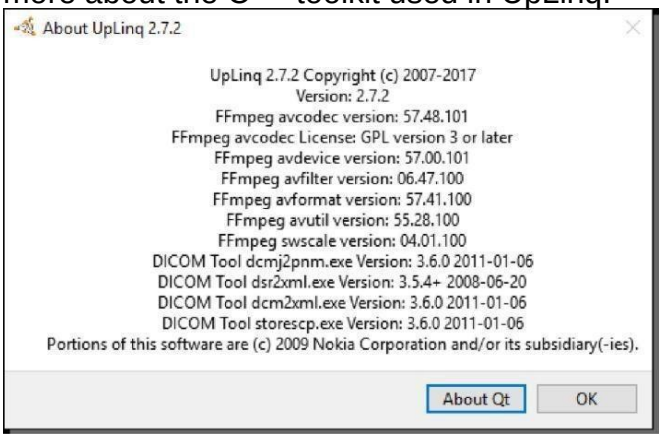
6.3.1 Menu Bar and Options

The Menu Bar helps you manage exams at a more detailed level.

Menu	Optio	Descriptio
File	About	Opens the About UpLinq 2.7 window
	Preferences	Changes UpLinq configurations
	Exit	Closes and exits UpLinq
View	Active Exams	Shows only exams that are processing or in the processingqueue
	View Exams Added in the Last 24 Hours	Shows only exams added to UpLinq in the last 24 hours
	View Last 7 Days Exams	Shows only exams added to UpLinq in the last 7 days (If the retention period is set to less than 7 days, this option only shows exams processed during the retention period.)
	View Last 30 Days Exams	Shows only exams added to UpLinq in the last 30 days (If the retention period is set to less than 30 days, this option only shows exams processed during the retention period.)
	View Log	Opens the Log View window, which shows a detailed log of UpLinq operations
Tools	Send Log	Sends your log data to Technical Services

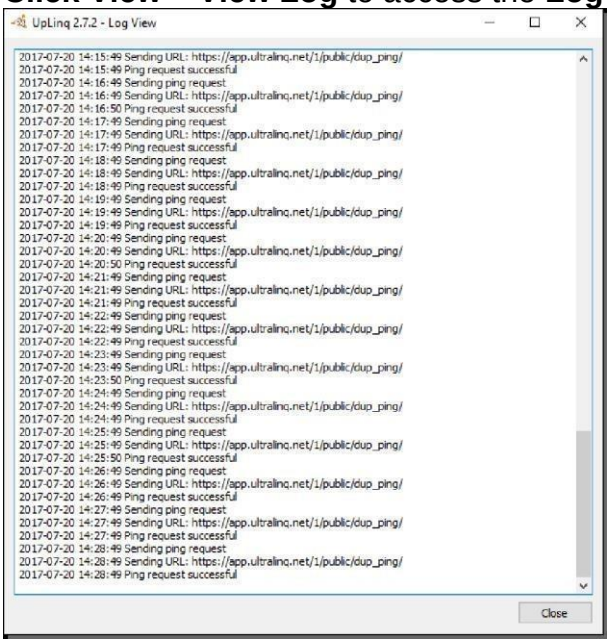
6.3.1.1 About UpLinq Window

Click File > About to access the **About UpLinq 2.7** window. Click **About Qt** to learn more about the C++ toolkit used in UpLinq.



6.3.1.2 Log View Window

Click View > View Log to access the **Log View** window.



6.3.2 Exam List Toolbar

The Exam List toolbar allows you to add exams to the Exam List. The toolbar also allows you to manually process exams and pause exam processing.

The Exam List toolbar shows the following options:

- Process starts processing exams.
- Pause pauses all exam processing.
- Find searches for exams in your local file directory.
- New manually creates a new exam.
- Help opens UltraLinQ's website in your browser.

6.3.3 Exam List Column Headings

The columns of the UpLinq Exam List give important information about individual exams.

Exams in UpLinq can be marked with the following statuses:

Status:

■■■ shows that the exam is processing.

✓ shows that the exam processed successfully.

! shows that an error occurred during exam processing. Right click an exam with this status, and click **Reprocess Exam**. If an error remains, contact Technical Services.

shows that the exam skipped processing. To process a skipped exam, right click an exam with this status, and click **Enable Exam** or **Reprocess Exam**.

Device Type shows the imaging modality that captured the exam.

Patient Name shows the patient's name.

Patient ID shows the patient's MRN or other unique identifier.

Date of Birth shows the patient's birth date in YYYYMMDD format.

Exam Type shows the type of exam that was performed.

Date of Service shows the date the exam was performed in YYYMMDD format.

Number of Clips shows the number of clips included in the exam.

Attached Files shows the number of files attached to the exam.

Encoding Progress shows the encoding progress as a percentage.

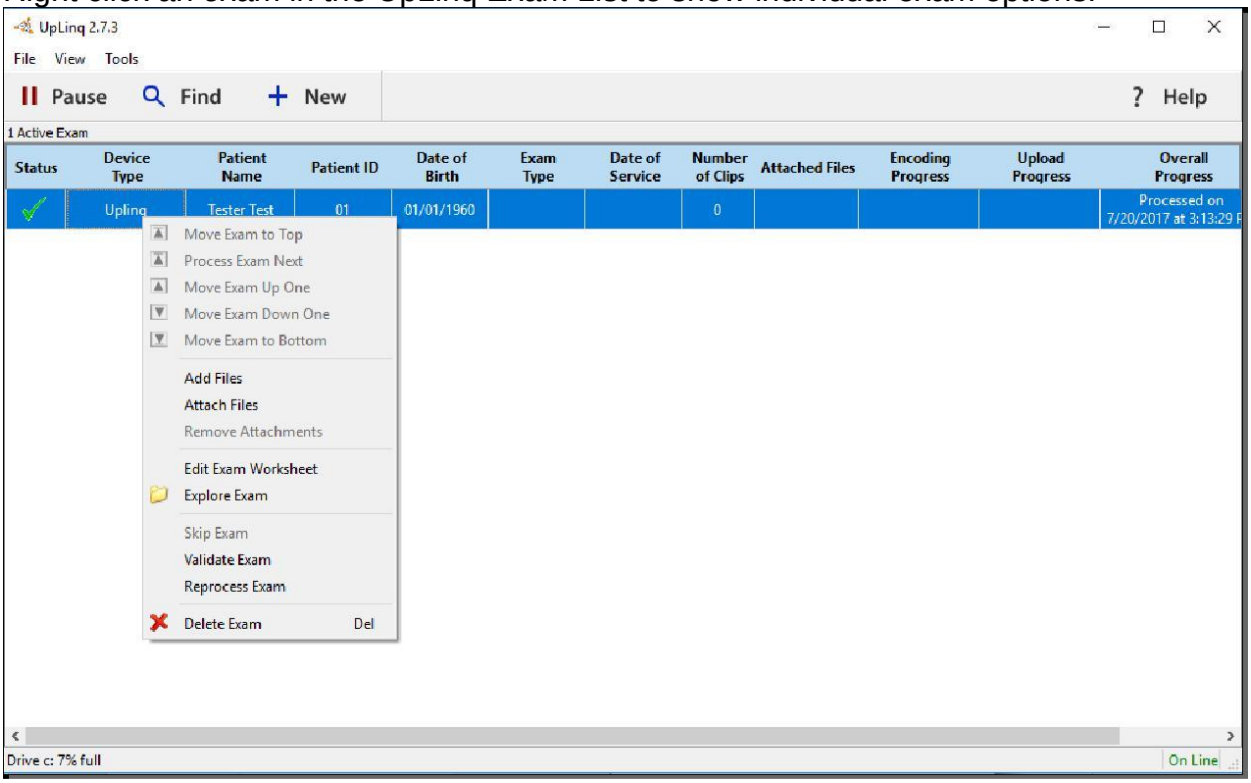
Upload Progress shows the uploading progress as a percentage.

Overall Progress shows the encoding and uploading progress together as a percentage.

6.3.4 Individual Exam Options

Note: Exams must be present in the UpLinq Exam List to access individual exam options.

Right click an exam in the UpLinq Exam List to show individual exam options.



UpLinq offers the following individual exam options:

Move Exam to Top moves the exam to the top of the Exam List.

Process Exam Next moves the exam to the second position in the Exam List.

Move Exam Up One moves the exam up one position in the Exam List.

Move Exam Down One moves the exam down one position in the Exam List.

Move Exam to Bottom moves the exam to the bottom of the Exam List.

Attach Files uploads a file as an attachment, which appears in the Attachments tab on the UltraLinQ Exam page.

Remove Attachments removes attached files from the exam.

Edit Exam Worksheet opens the Worksheet Editor window.

Explore Exam opens a folder containing the exam's files in Windows Explorer.

Skip Exam stops the exam from being processed or uploaded.

Enable Exam allows a skipped exam to be processed.

Validate Exam validates the exam.

Reprocess Exam processes and uploads the exam again, overwriting the existing exam.

Delete Exam deletes the exam and all its files from UpLinq.

6.3.5 Status Indicator

Find the UpLinq Status Indicator on the bottom of the application window.

The Drive status on the left shows the hard drive space used as a percentage. If hard drive space is running low, a red warning notification appears.

The UpLinq Connection status on the right is dependent on your Internet connection.

On Line, in green, shows that UpLinq can successfully communicate with UltraLinQ's server.

Unknown, in red, shows that UpLinq cannot communicate with UltraLinQ's server. If the UpLinq status is Unknown, exams can be added and processed (encoded). However, they will not upload to UltraLinQ until UpLinq can communicate with UltraLinQ's server.

6.4 UpLinq Exam Tasks

UpLinq manages the transfer of exams from an imaging modality to UltraLinQ.

With UpLinq, you can:

- Add existing exams.
- Create new exams.
- View an exam's files.
- Reorder the exam list.
- Edit an exam's worksheet.

6.4.1 Adding Existing Exams to UpLinq

NOTICE: Do not shut down your computer while running UpLinq. This results in database corruption or duplicated exams uploaded to UltraLinQ.

NOTICE: The exam file size limit for still images is **10 MB**.

If using an Internet connection of 1 mbps, and if the image size is less than 200 KB, an exam uploaded through UpLinq can be viewed in UltraLinQ within 20 minutes. When multiple exams are uploaded as a group under these conditions, the exams can be viewed in UltraLinQ within 20 minutes *multiplied by* the number of exams:

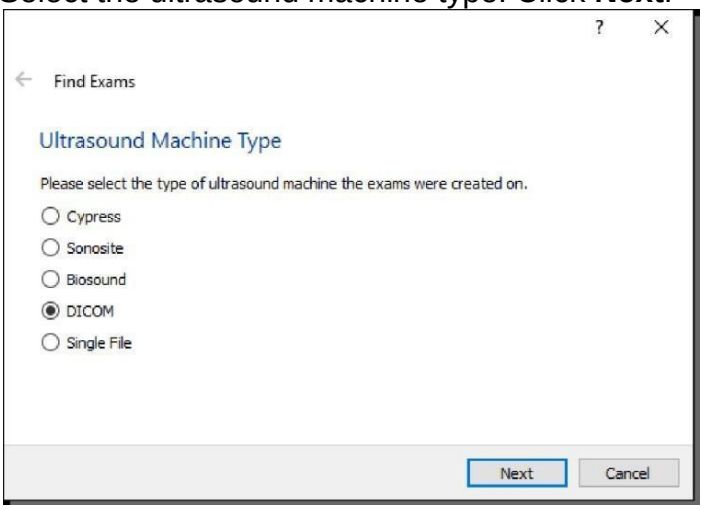
For example, if 3 exams, each less than 200 KB, are uploaded through a 1 mbps Internet connection, those exams are available to view in UltraLinQ within 60 minutes (20 minutes x 3 exams).

Add existing exams to UpLinq by following these steps.

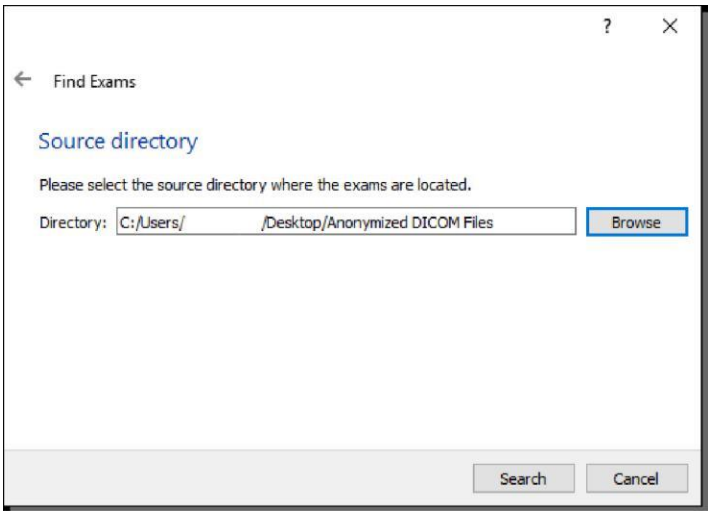
Note: If the error, "Editor form data not set" appears, no worksheet has been configured within UpLinq. Contact Technical Services to enable the worksheet, and then restart UpLinq.

Click Find on the Exam List toolbar.

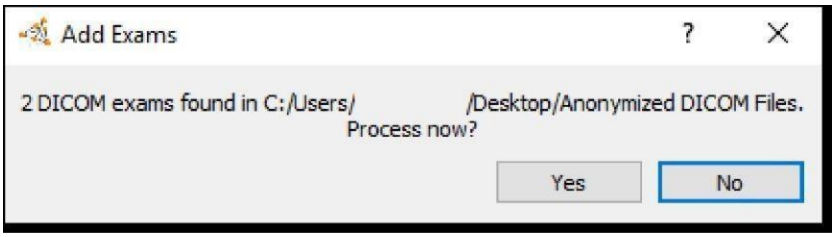
Select the ultrasound machine type. Click **Next**.



Click **Browse** to select the source directory where the exam files can be found. Then click **Search**.



Click **Yes** to add the found exams.



In the Exam List toolbar, click Process to process the exam.

6.4.2 Creating a New Exam in UpLinq

NOTICE: Do not shut down your computer while running UpLinq. This results in database corruption or duplicated exams uploaded to UltraLinQ.

NOTICE: The exam file size limit for still images is **10 MB**.

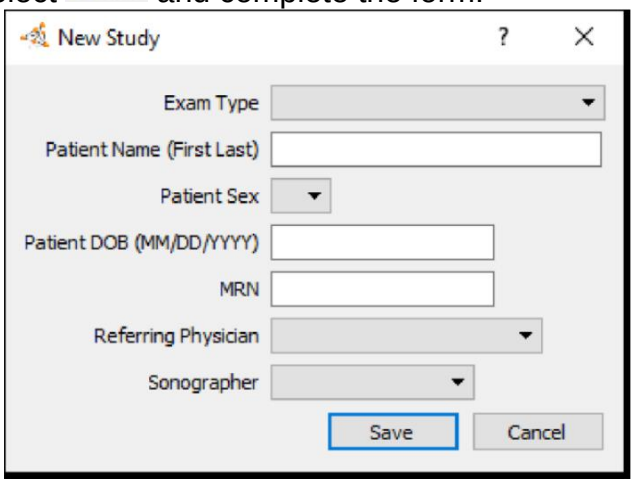
If using an Internet connection of 1 mbps, and if the image size is less than 200 KB, an exam uploaded through UpLinq can be viewed in UltraLinQ within 20 minutes. When multiple exams are uploaded as a group under these conditions, the exams can be viewed in UltraLinQ within 20 minutes *multiplied by* the number of exams:

For example, if 3 exams, each less than 200 KB, are uploaded through a 1 mbps Internet connection, those exams are available to view in UltraLinQ within 60 minutes (20 minutes x 3 exams).

Manually create a new exam in UpLinq by following these steps.

Note: If the error, "Editor form data not set" appears, no worksheet has been configured within UpLinq. Contact Technical Services to enable the worksheet, and then restart UpLinq.

Select + New and complete the form.



Click **Save**. The new exam appears in the Exam List.

799268272. Add images and clips to the new exam. Right click the new exam in the Exam List to show individual exam options. Select **Add Files**.

UpLinq supports AVI, BMP, JPG, MP4, and PNG file types for images and clips.

Files added using the Add Files feature will be available through UltraLinQ's Exam page.

799268273. Add attachments to the new exam. Right click the new exam in the Exam List to show individual exam options. Select **Attach Files**.

UpLinq supports AVI, BMP, DOC, JPEG, MP4, PNG, PDF, and XLS file types for attachments.

Note: Unwanted attachments can be removed from an exam. Right click the exam and select **Remove Attachments**

799268274. In the Exam List toolbar, click

to process the exam.

6.4.3 Viewing an Exam's Files in UpLinq

To view an exam's files, right click on the exam to show individual exam options. Select **Explore Exam**.

Windows Explorer opens, showing the exam's files.

6.4.4 Reordering the UpLinq Exam List

UpLinq processes exams in the order they appear in the Exam List.

To change the processing order, right click on an exam to show individual exam options.

Select one of the following options:

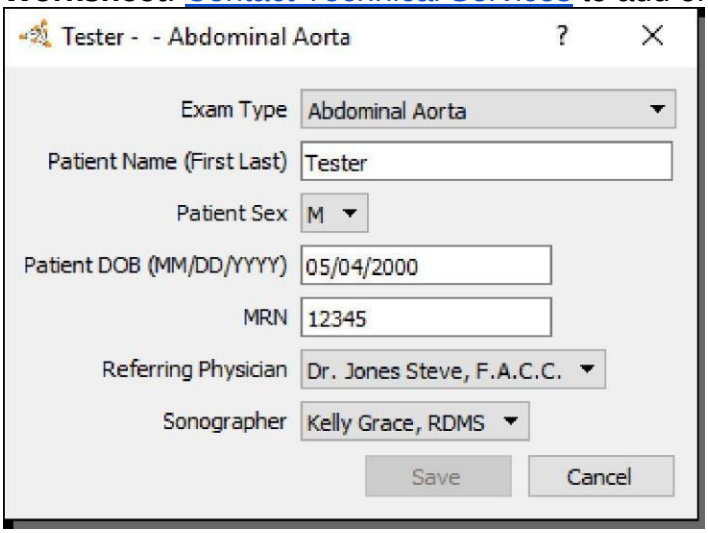
- Move Exam to Top
- Process Exam Next
- Move Exam Up One
- Move Exam Down One
- Move Exam to Bottom

6.4.5 Editing an Exam's Worksheet in UpLinq

Change an exam's metadata by editing its worksheet.

Edit the exam's worksheet by following these steps.

Right click on the exam to show individual exam options. Select **Edit Exam Worksheet**. Contact Technical Services to add or remove fields from the worksheet.



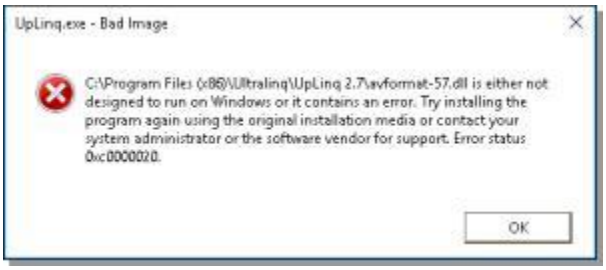
Edit or add information in the form. Click **Save**.

6.5 UpLinq Troubleshooting

When using UpLinq, you may encounter the following issues. Try these fixes to resolve them. If you still have trouble, contact Technical Services.

6.5.1 Bad Image

There is a known issue with UpLinq and McAfee Total Protection, which causes a "Bad Image" error to appear when launching UpLinq. Solving this issue requires uninstalling McAfee Total Protection and reinstalling UpLinq. Using another antivirus program is recommended.



In Windows 10, uninstall McAfee Total Protection and reinstall UpLinq by following these steps.

On the Windows Start menu, click **Settings**, and then click **Apps**.

Select **McAfee Total Protection**, and then click **Uninstall**. Follow the on-screen instructions.

Restart your computer.

On the Windows Start menu, click **Settings**, and then click **Apps**.

Select **UpLinq 2.7**, and then click **Uninstall**. Follow the on-screen instructions.

Restart your computer.

Reinstall UpLinq.

6.5.2 A Program Running on This Computer Is Trying to Display a Message

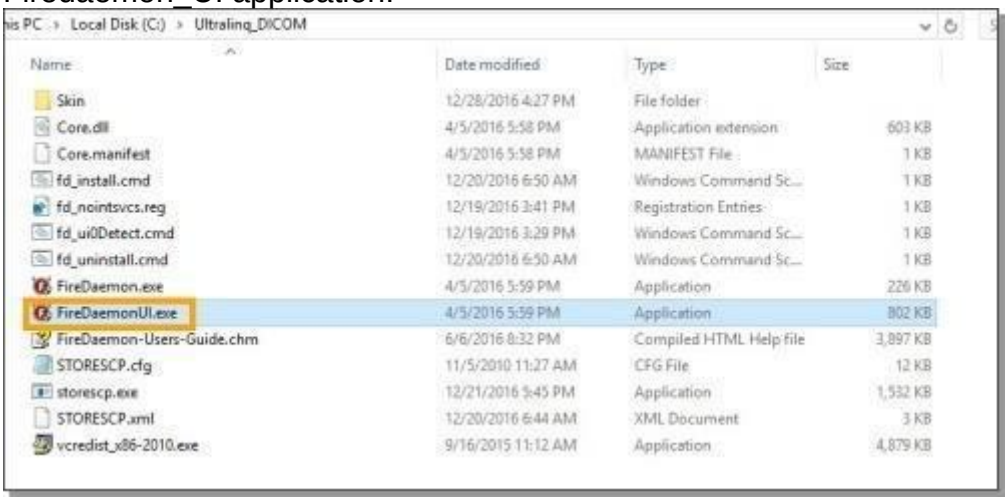
UpLinq includes a software component that runs in the background, allowing DICOM transfers from your modality. Because this component runs as a Windows service, you may sometimes receive a flashing prompt on your taskbar.

The prompt indicates that a program is trying to display a message:

Viewing the message can temporarily lock you out of your desktop. Remove the prompt by following these steps.

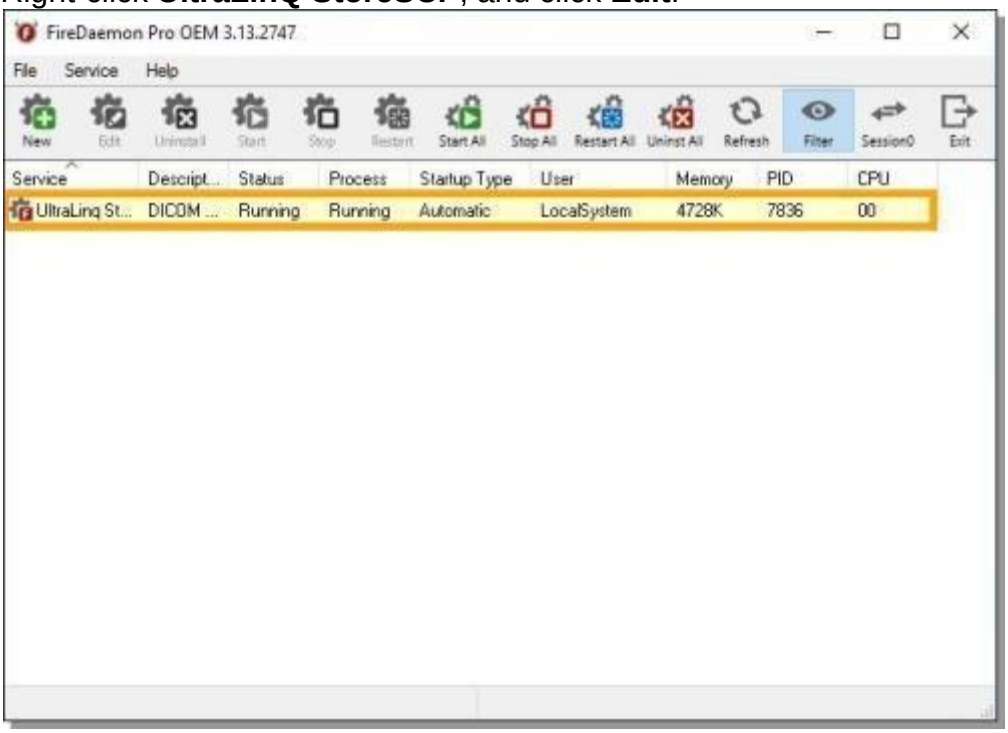
Note: You must be logged in as an administrator to follow these steps.

On your computer, navigate to C:\UltraLinQ_DICOM. Select the Firedaemon_UI application.



799268384. Double click **FireDaemonUI.exe** to launch the application.

799268385. Right-click **UltraLinQ StoreSCP**, and click **Edit**.



799268386. Click the Settings tab. Uncheck the **Interact with Desktop** box.

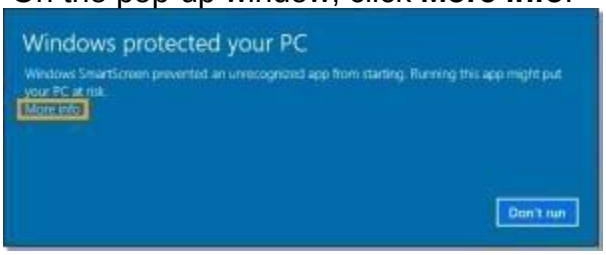
799268387. Click **OK** to save these changes.

6.5.3 "Windows Protected Your PC"

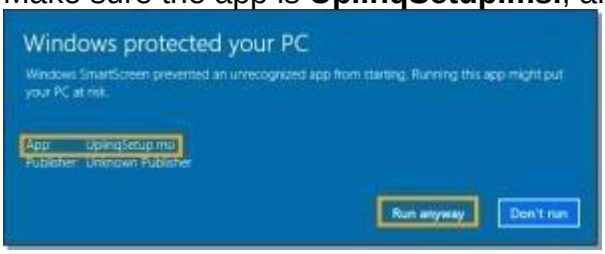
The Windows 10 SmartScreen filter prevents unrecognized apps from running. If you encounter a pop-up window with the title, "Windows protected your PC," when installing UpLinq, you can let Windows know that the program is safe to run.

Run UpLinq by following these steps.

On the pop-up window, click **More info**.



Make sure the app is **UplinqSetup.msi**, and then click **Run anyway**.



6.5.4 "Editor Form Data Not Set"

When using UpLinq, a pop-up window stating, "Editor form data not set" may appear. This message means that no worksheet has been configured within UpLinq.

Contact Technical Services to enable the worksheet. Once Technical Services has enabled the worksheet, restart UpLinq.

7 UltraLinQ

WARNING!

It is the physician's responsibility to make diagnoses or interpretations based on all available information. UltraLinQ is not intended to perform diagnosis. UltraLinQ Healthcare Solutions, Inc. will not be responsible for diagnoses or interpretations made by physicians.

WARNING!

Clinicians must carefully review exams to determine acceptable image quality prior to use.

WARNING!

Users must carefully review all information for proper data population and clinical accuracy.

WARNING!

The use of browsers or hardware other than those supported by UltraLinQ is not recommended as it may result in errors. UltraLinQ Healthcare Solutions, Inc. will not be responsible for misdiagnosis resulting from using system requirements and browsers not recommended by UltraLinQ Healthcare Solutions, Inc.

WARNING!

In certain circumstances, UltraLinQ utilizes lossy compression. This compression may result in a small loss of information on these images, and therefore, clinical judgment should be used to confirm that clinical quality has been retained.

Access UltraLinQ at any time by navigating to https://app.UltraLinQ.net/.

Most exam images are stored as 8-bit images, using JPEG and H.264 lossy compression. No uncompressed images are stored in the UltraLinQ Application Server for these modalities. This results in a small loss of information on these images. All other modalities are stored at their original bit depth using PNG lossless compression.

The files in UltraLinQ contain confidential patient information belonging to the sender that is legally privileged. This information is intended only for the use of individuals who have been authorized by the sender and UltraLinQ to view this information. Individuals who receive this patient information are prohibited from disclosing this information to any other party that has not been approved by the sender.

If you have accessed this information in error or have obtained this information without the prior authorization of the sender or UltraLinQ, please notify UltraLinQ (0203 3183403) and the sender immediately, destroy any information that has been sent to your computer or which is otherwise in your possession, and keep any information that you may have viewed or have become aware of confidential.

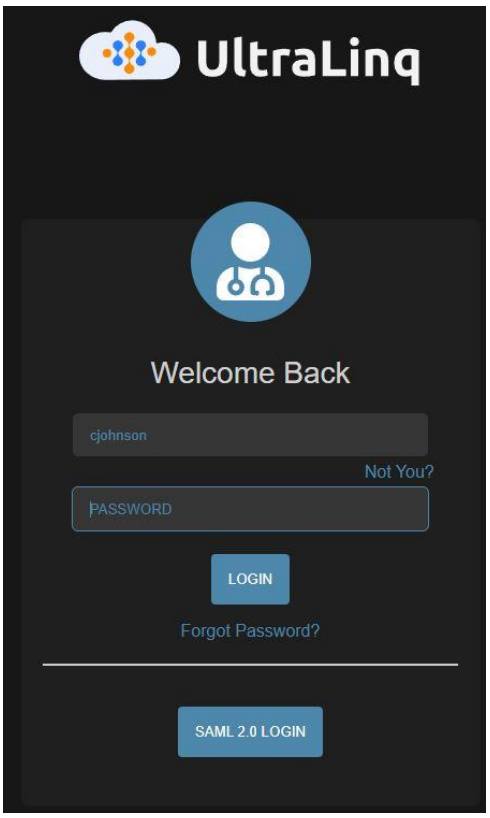
7.1 Logging into UltraLinQ

Note: UltraLinQ deactivates your account after seven failed login attempts. In this scenario, reset your password to reactivate your account. If you are a new user and your account is still inactive after resetting your password, contact your organization's HIPAA officer to activate your account.

Log into UltraLinQ's cloud-based platform by following these steps.

Navigate to **https://app.UltraLinQ.net/**.

Log into UltraLinQ with the credentials sent to you by your account administrator or Technical Services.



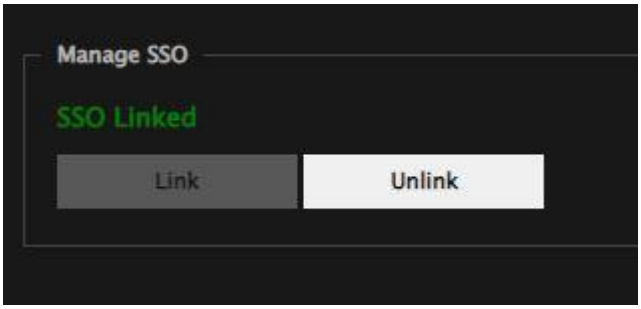
Click **Login**.

Single Sign-On

(SSO) can be linked to a user's account once the user has logged in.

Click the **Preferences** link. Then click **Manage Single Sign-On**.
From there, a user can click the **Link** button to manage their SSO account.

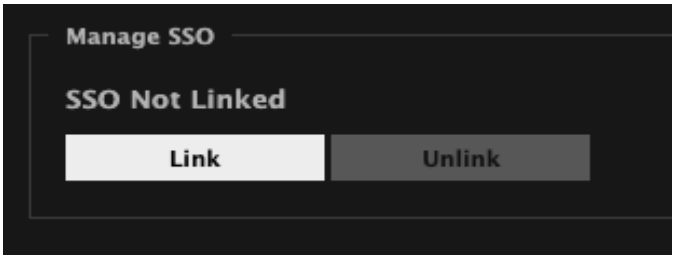
The user will see "**SSO Linked**" displayed on the page if their account has been linked successfully.



They can then use the **SAML 2.0 LOGIN** button to log in to their account from the Login page.

To **Unlink** SSO, click the Unlink button.

The status on the page will now display “**SSO Not Linked**”.



Multi-Factor Authentication

(MFA) can be accessed and managed by clicking the **Preferences** link. Click the **Manage MFA** link. From there, a user can click the Link button, and will be required to use an authentication app on their device to scan the QR code.

The user will then input the unique code they are given and click the **Activate MFA** button. The user will then be required to use this form of verification each time they log in to UltraLinQ.

If successful, the user will see a confirmation message, and will be returned to the previous page.

On the user's authentication app, they will see "UltraLinQ", followed by their UltraLinQ username and a unique time-based code. For example, UltraLinQ (testuser).

In order to **disable** a user's MFA, the user must click the **Unlink MFA** button. The user will then be required to enter in the current code of their authentication app in order to complete the disabling process.

7.2 Resetting Your Password and PIN

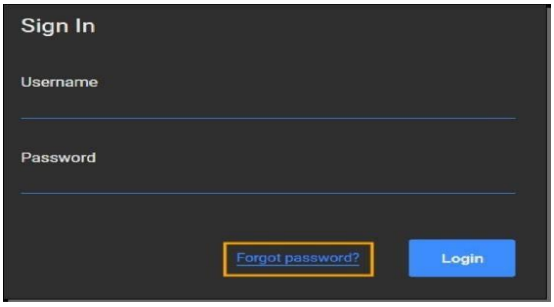
Reset your password if you have forgotten it or if you believe its security has been compromised. UltraLinQ does not email or show your current password for security purposes.

Note: UltraLinQ deactivates your account after seven failed login attempts. In this scenario, reset your password to reactivate your account. If you are a new user and your account is still inactive after resetting your password, contact your organization's HIPAA officer to activate your account.

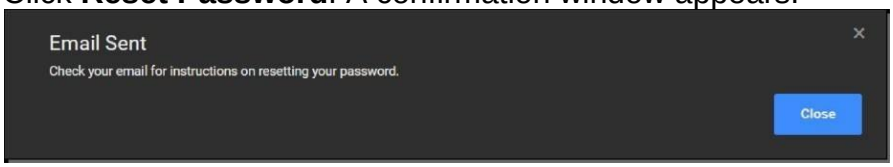
Reset your password by following these steps.

From UltraLinQ's Login page, click the **Forgot password?** link.

Enter your username and email address. If you do not know your username and email combination, contact your organization's account administrator.



Click **Reset Password**. A confirmation window appears.



Finish resetting your password by following the instructions in the email sent to you by UltraLinQ.

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In order for a user to have their **PIN** reset, they will need to contact their organization's account administrator to reset their PIN in their user profile.

Finish resetting your PIN by following the instructions in the email sent to you buy UltraLinQ.

7.3 Setting Your Preferences

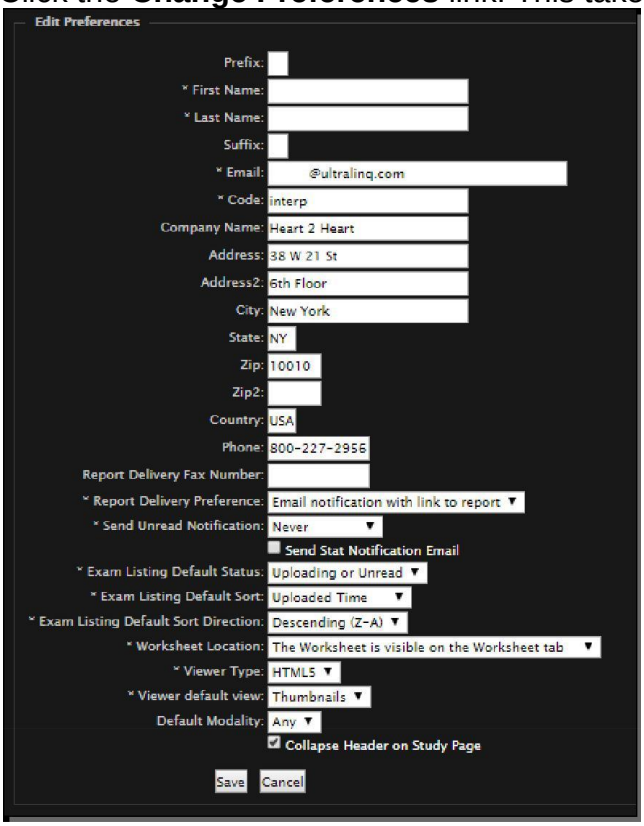
The Preferences page shows your account preferences.

Navigate to the Preferences page from the header link at the top of the page:

If you are on the Exam page, you may need to click

to see the link.

Click the **Change Preferences** link. This takes you to the Edit Preferences page.



Edit your preferences:

Prefix, First Name, Last Name, Suffix: Your name as it appears within UltraLinQ and on reports.

Email: For delivering reports and resetting passwords

Code: Matches an exam to a user, used in some workflows in whichthe modality designates who is assigned to an exam

Company Name, Company Address: For report header information

Report Delivery Fax Number: For delivering reports by fax (if enabled on your account)

Report Delivery Preference: For selecting a preferred delivery format

Note: Selecting a delivery preference does not guarantee that you receive a copy of the report. Report delivery is controlled by settings only available to account administrators.

Send Unread Notification: How often email notifications are sent to interpreting physicians when a new exam is assigned

Send Stat Notification: When checked, immediately sends an email when a stat exam is assigned

Exam Listing Default Status: Determines how the Exam List is sortedby status

Exam Listing Default Sort: Determines how the Exam List is sorted by several criteria, usually the exam date

Exam Listing Default Sort Direction: Determines the direction of the Exam List's order (for example, ascendign or descending alphabetically, or by chronological order)

Worksheet Location: Not used

Viewer Type: Switches between the Flash and HTML Viewers

Viewer Default View: Sets a default view when loading exam images

Default Modality: Filters the Exam List to exams captured by the selected modality

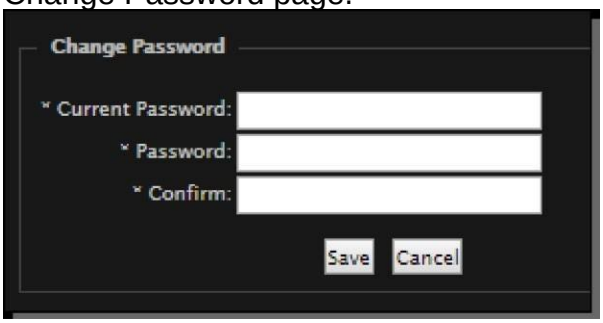
Collapse header on Study Page: When checked, hides patient demographics in the exam viewer.

Click **Save** to save these preferences. Most preferences are applied automatically. To apply the Exam Listing Default Status, Exam Listing Default Sort, and Exam Listing Default Sort Direction preferences, log out and log back intoUltraLinQ.

7.3.1 Changing Your Password

Change your password by following these steps.

From the Preferences page, click the **Change Password** link. This takes you tothe Change Password page.



Enter your current password, then your new password. Confirm your new password. Click **Save**.

7.3.2 Changing Your PIN

Change your password by following these steps.

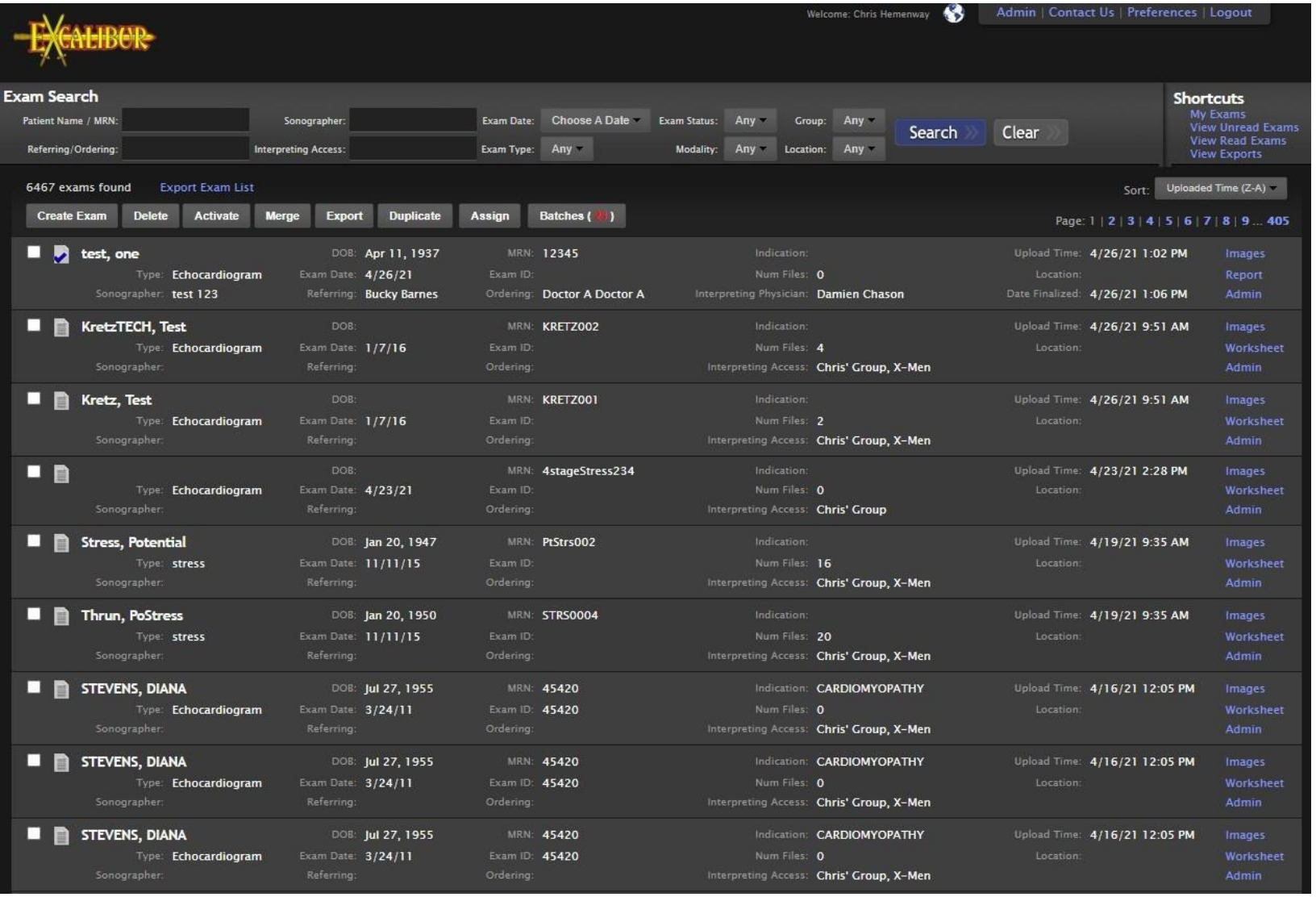
From the Preferences page, click the **Change PIN** link. This takes you to the Change PIN page.

Enter your current PIN, then your new PIN. Confirm your new PIN. Click **Save**.

7.4 Exam List Navigation

Access exams through the Exam List page. The Exam List is the default page in UltraLinQ.

You can view exams with different statuses through the Exam Search function.

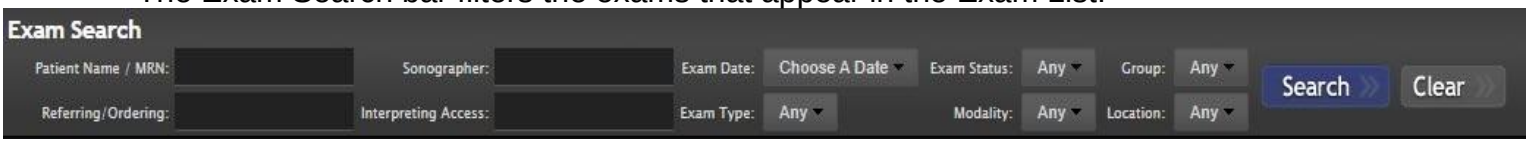


7.4.1 Header

The Header shows your practice and username. In the upper right corner of the screen, the Header menu links to the Admin (for account administrators), Contact Us, and Preferences pages. The **Learn What's New** link takes you to a page with release notes for the latest version of UltraLinQ.

7.4.2 Exam Search

The Exam Search bar filters the exams that appear in the Exam List.



You can filter the Exam List with the following search criteria:

- Patient Name/MRN (text entry)
- Referring (text entry)
- Sonographer (text entry)
- Interpreting Access (text entry)
- Exam Date (drop-down list)
- Exam Type (drop-down list)
- Exam Status (drop-down list)
- Modality (drop-down list)
- Location (drop-down list)
- Group (drop-down list)
- Exam Stage (drop-down list)

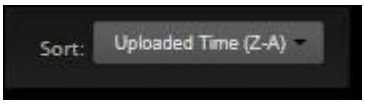
After selecting your search parameters, click **Search**. To clear your search parameters, click **Clear**.

7.4.3 Shortcuts

The Shortcuts panel can quickly filter the Exam List or let you view exported exams. Find the Shortcuts panel to the right of the Exam Search bar. The links available in the Shortcuts panel depend on the user's permissions.

7.4.4 Exam Sort

Sort the Exam List by selecting an ordering scheme from the Exam Sort drop-down list. Find the Exam Sort drop-down list on the right side of the screen, below the Shortcuts panel and above the Exam List entries.

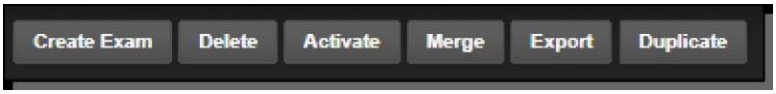


The Exam List can be sorted by the following parameters in numerical and reverse numerical or alphabetical and reverse alphabetical order:

- Uploaded Time
- Exam Date
- Modified Time
- Date Finalized
- Indication
- Patient First Name
- Patient Last Name
- MRN
- Patient DOB
- Sonographer
- Exam ID
- Referring
- Exam Status
- Location
- Exam Type

7.4.5 Admin Menu

The Admin menu is only visible to study administrators.



Create Exam adds a new exam in UltraLinQ.

Delete removes exams.

Activate restores deleted exams.

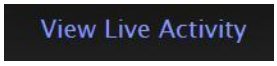
Merge combines two exams.

Export exports exams.

Duplicate creates copies of exams.

7.4.6 View Live Activity

View a list of users that are currently logged on. Live activity is only visible to account administrators.



Clicking on View Live Activity leads to the "Realtime" page which lists the users that are logged in and how long they have been idle.

7.4.7 Exam Entry

Individual exam entries populate the Exam List.

The status icon shows the current state of an individual exam.

: Stat exams always appear at the top of the Exam List.

: Unread exams have not been marked as final.

: Error exams contain errors in the exam file.

: Finalized exams have been reviewed by the interpreting physician.

: Unknown device exams have been received by UltraLinQ, but UltraLinQ cannot map its fields. Contact Technical Services to troubleshoot this issue.

: Deleted exams have been marked as deleted through UltraLinQ or UpLinq.

: Amended exams have been finalized and then reopened. Amended exams show earlier versions of reports.

: Batch exams have been selected for review and finalization as part of a batch.

Each exam in the Exam List can include the following study metadata fields:

Type shows the exam's category. UltraLinQ automatically assigns an exam category when an exam is uploaded. Change an exam type at any time by adding or editing patient information.

Sonographer shows the sonographer that performed the exam.

DOB shows the patient's date of birth (DOB).

Exam Date shows the date the exam was performed.

Referring shows the exam's referring physician.

MRN shows the patient's medical record number (MRN).

Exam ID shows any unique identifier transferred from the modality or added manually.

Interpreting Access shows the physician interpreting the exam.

Indication shows the exam's indication, prepopulated from the modality. Change the exam's indication from the worksheet.

Num Files shows the number of images and clips uploaded with the exam.

Upload Time shows when the exam was uploaded.

Location shows the exam's assigned facility.

Find shortcuts to the exam's Clips & Stills (image), Worksheet, and Admin tabs on the right side of each exam entry. The availability of these shortcut links depends on the user's permissions.

7.5 Exam Page Navigation

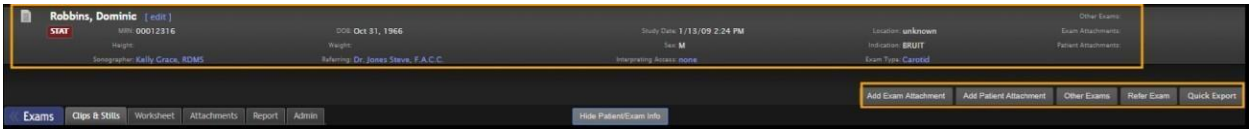
Users with permission to access exams can navigate to the Exam page by clicking on the patient's name on an individual entry in the Exam List. The Exam page allows you to:

- View an exam's images and clips.
- Add and edit patient demographics.
- Mark exams as stat.
- Refer exams to other UltraLinQ users.
- Export exams.

Read exams in UltraLinQ with the Flash viewer or HTML5 viewer. Switch between the Flash and HTML5 viewers by selecting an option from the Viewer Type drop-down list on the Edit Preferences page.

The Exam page opens to the Clips & Stills tab by default. Select a default view for the Clips & Stills tab on the Edit Preferences page. The screenshot below shows the Clips & Stills tab in Thumbnail view.

Patient demographics, exam information, and additional options may be hidden according to your preferences. Click Show Patient/Exam Info to show these fields.



When the above fields are shown, the following options are available from any tab on the Exam page:

[edit] by the patient's name allows you to edit patient demographics.

Add Exam Attachment adds file attachments to this exam.

Add Patient Attachment adds file attachments to all exams for this patient.

Other Exams allows you to view other exams for this patient.

Refer Exam sends the exam to other UltraLinQ users.

Export exports this exam as an ISO or ZIP file.

Click Hide Patient/Exam Info at any time to only view exam items.

7.5.1 Clips & Stills Tab

Note: Screenshots of icons in this section are from the HTML5 viewer. Appearances in the Flash viewer may vary.

The Clips & Stills tab is the default tab on the Exam page. This tab shows the images and clips associated with an exam.

Switch between views by clicking the icon in the View menu.

Two categories of view options are available from the View menu: Standard and Dynamic.

Standard Views include:

switches to Single view which displays one image or clip simultaneously.

switches to Dual view which displays two sequential images and/or clips simultaneously.

switches to Quad view which displays four sequential images and/or clips simultaneously.

Dynamic Views include:

switches to Dual view which displays the two images and/or clips selectedby the user simultaneously.

switches to Quad view which displays the four images and/or clips selected by the user simultaneously.

Once a view is selected, two additional icons appear on the View menu.

- switches to Thumbnail view which shows all images and clips as thumbnails.

shows/hides the Thumbnail strip on the left-hand side where users can select image(s) and/or clip(s) for viewing.

Additional options are available in Single, Dual, and Quad views:

downloads the current image or clip to the local computer.

navigates to the previous frame in the current clip.

navigates to the next frame in the current clip.

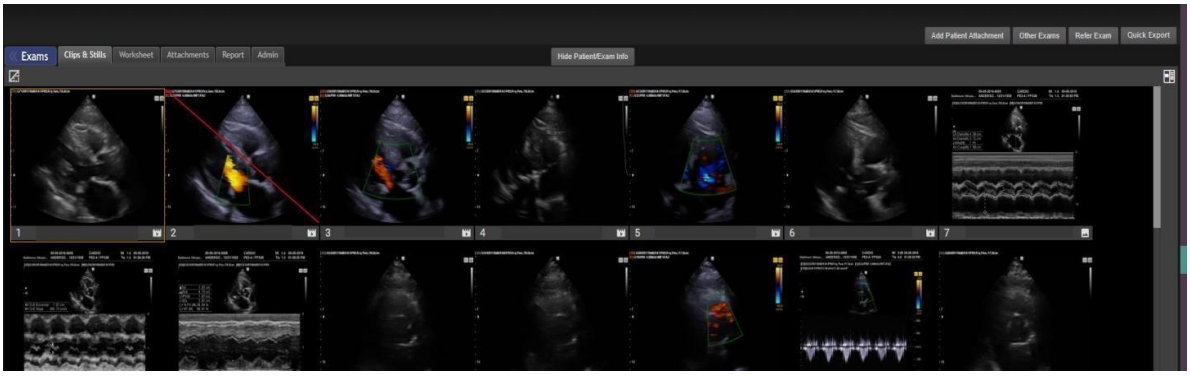
navigates to the previous image or clip.

navigates to the next image or clip.

enables the split-screen option which displays the selected image(s) and/or clip(s) and the worksheet side-by-side. The split-screen icon is only visible if your browser window is large enough to support the split-screen option.

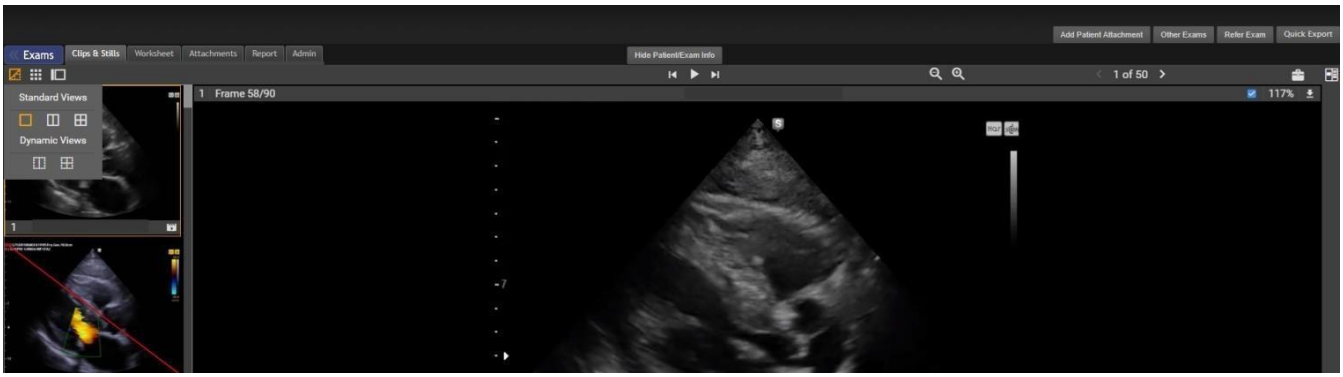
7.5.1.1 Thumbnail View

The Thumbnail view shows all images and clips of an exam as thumbnails.

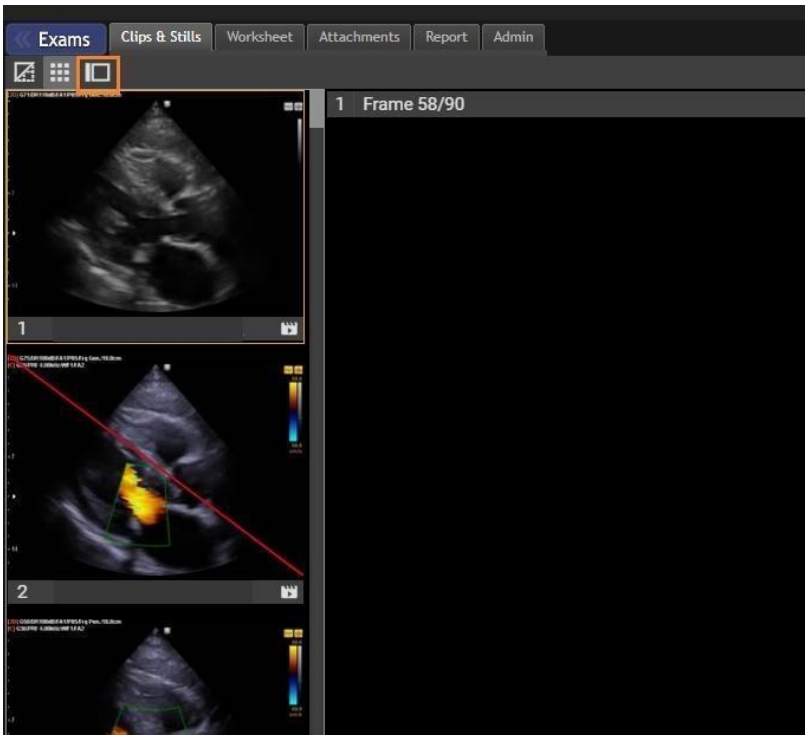


7.5.1.2 Single View

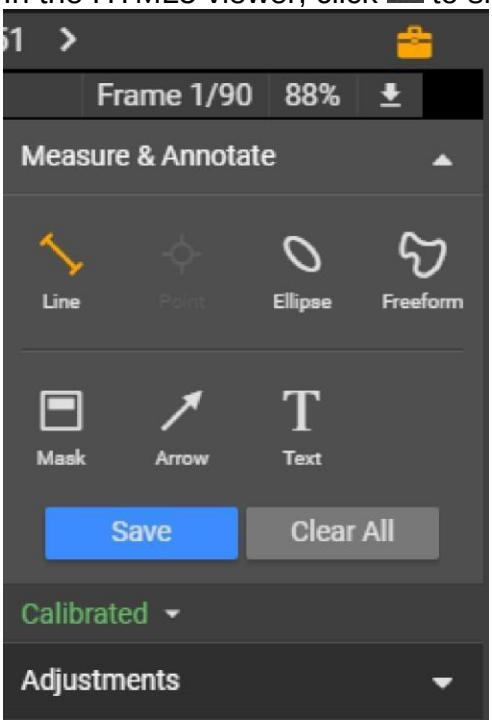
Single view shows one image or clip at a time. Access Single view by clicking under “Standard Views” or double-clicking a Thumbnail on the Thumbnail view.



Click to hide the thumbnail strip in the left panel. Click the same icon again, which appears as , to show the thumbnail strip.



In the HTML5 viewer, click to show the Image Tools panel.



In the Flash viewer, click to show the Measurements toolbar.

7.5.1.3 Standard Dual View

Standard Dual view displays two sequential images and/or clips simultaneously. Access Standard Dual View by selecting under “Standard Views”.

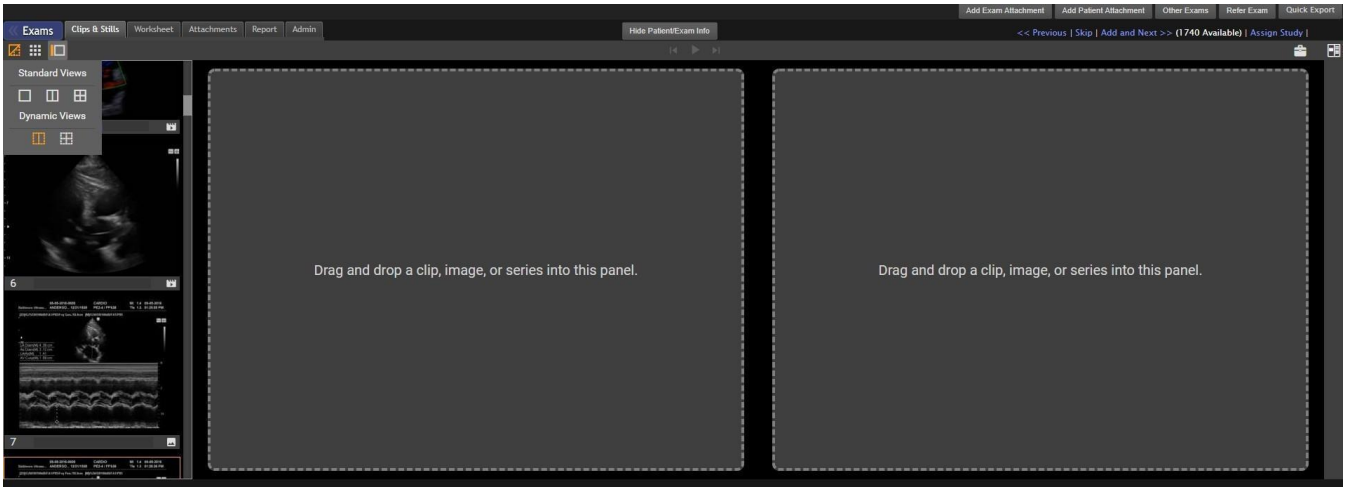
7.5.1.4 Standard Quad View

Standard Quad View displays four sequential images and/or clips simultaneously. Access Standard Quad View by selecting under “Standard Views”.

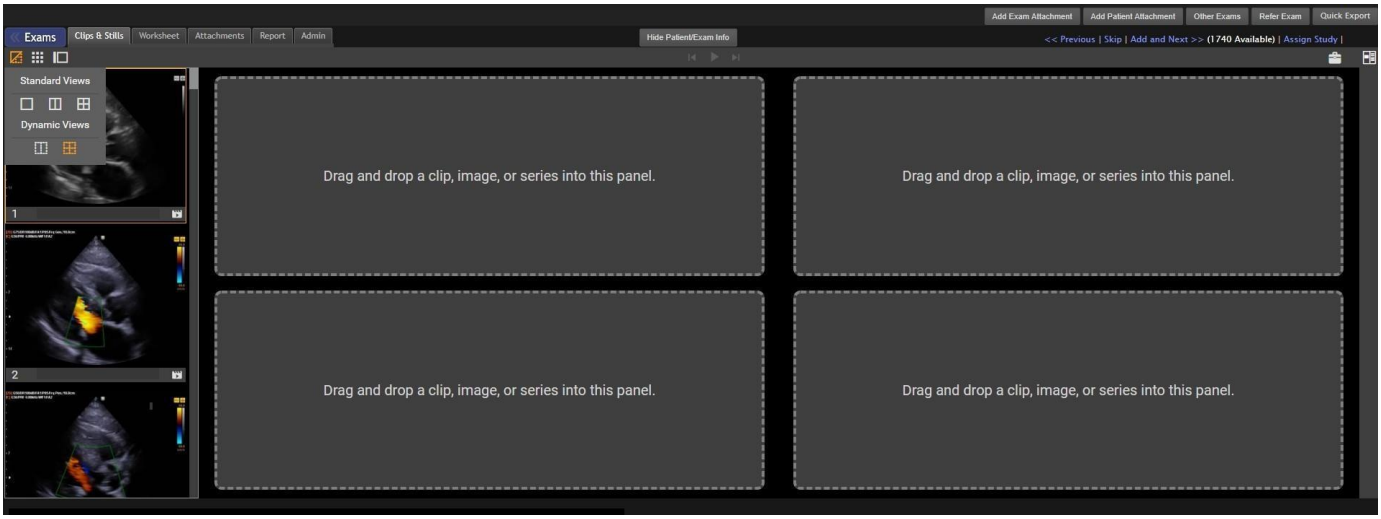
7.5.1.5 Dynamic View

There are two dynamic view options: Dual view and Quad view.

Dynamic Dual View allows user to select any two images and/or clips of an exam to display simultaneously. To access Dynamic Dual View, select under “Dynamic Views”.

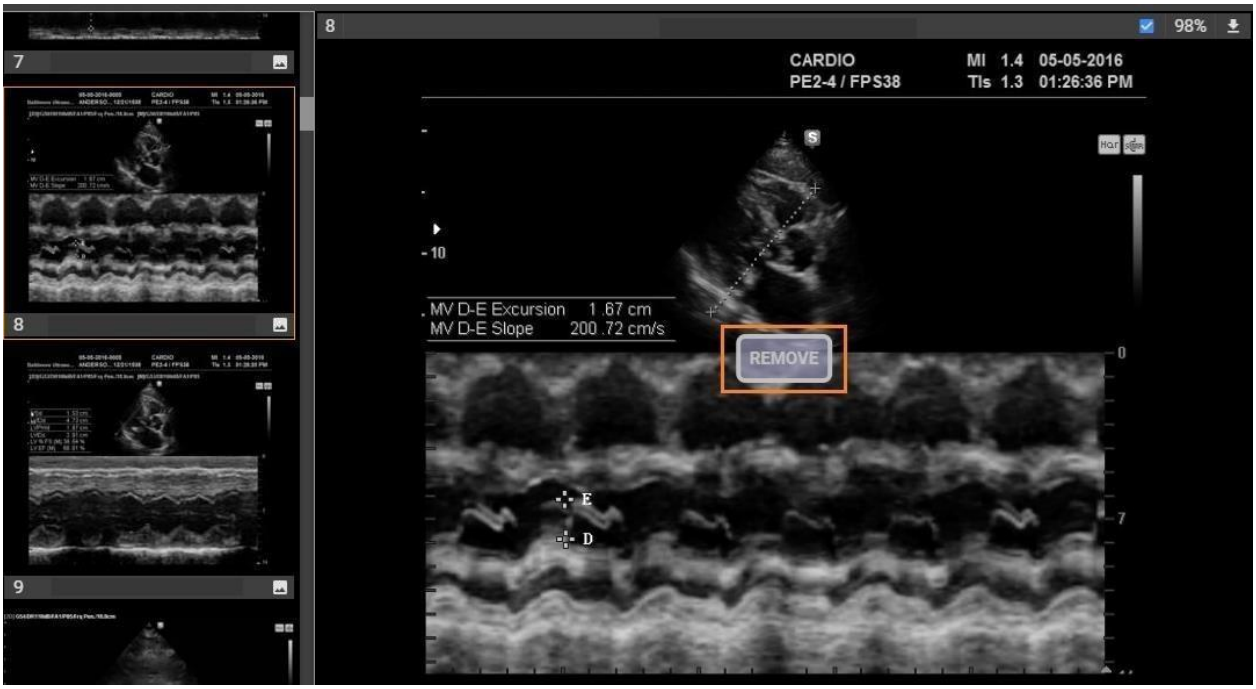


Dynamic Quad View allows user to select any four images and/or clips of any exam to display simultaneously. To access Dynamic Quad View, select under “Dynamic Views”.



A thumbnail strip of all images and clips is available on the left-hand side to select images and/or clips to view. To view, drag and drop a thumbnail into one of the panels.

Hover over an image or clip and select “Remove” at the center of the image/clip to remove from panel.



In the Flash viewer, click to access Dynamic view. Dynamic view shows one to four selected items that you can arrange on your screen. Dynamic view can also show series data.

To see items in Dynamic view, double click or drag and drop thumbnails from the left panel to the main panel. If multiple, related series studies are selected, UltraLinQ displays scout lines to help you navigate the multidimensional data.

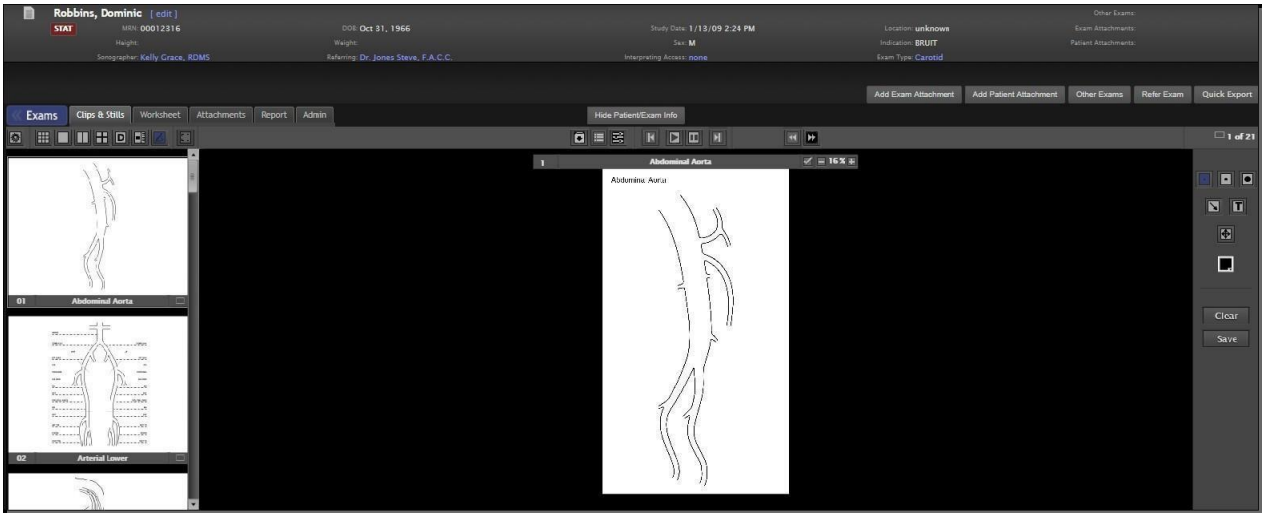
Click to open Dynamic view controls. Dynamic view controls allow you to save the current arrangement of images as a set and view series.

7.5.1.6 Worksheet View

In the Flash viewer, click to access Worksheet view. Worksheet view shows a worksheet panel on the right side of the Exam page. The Worksheet view must be configured by an account administrator. Currently, Worksheet view is only available in the Flash viewer.

7.5.1.7 Drawing Annotation View

In the Flash viewer, click to access Drawing Annotation view. Drawing Annotation view shows drawing and annotation tools and templates. Currently, Drawing Annotation view is only available in the Flash viewer.



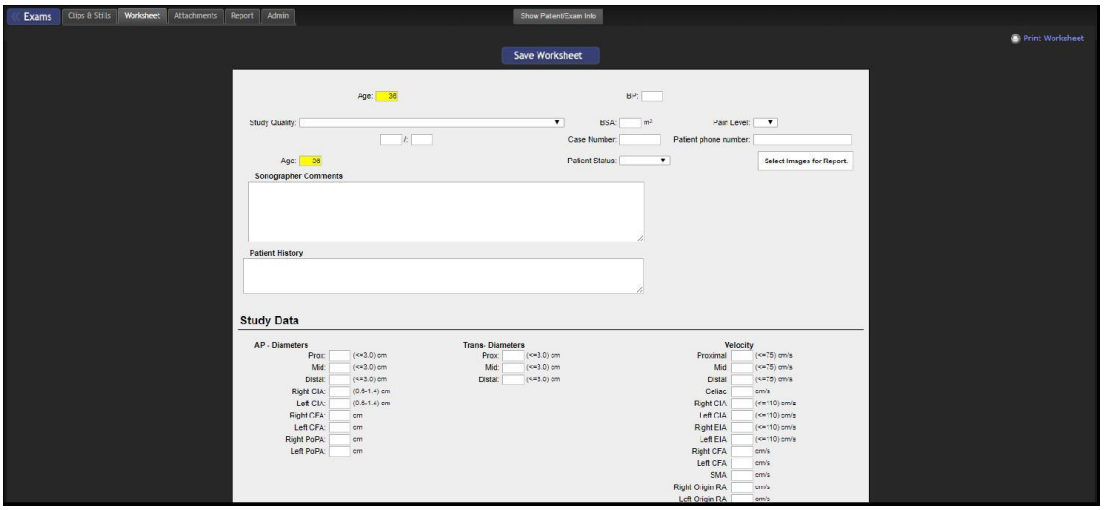
The Drawing Annotation toolbar is on the right side of the main panel.

7.5.2 Worksheet Tab

NOTICE: Any changes in the worksheet must be saved to appear in the exam report. However, not all worksheet fields appear in the report.

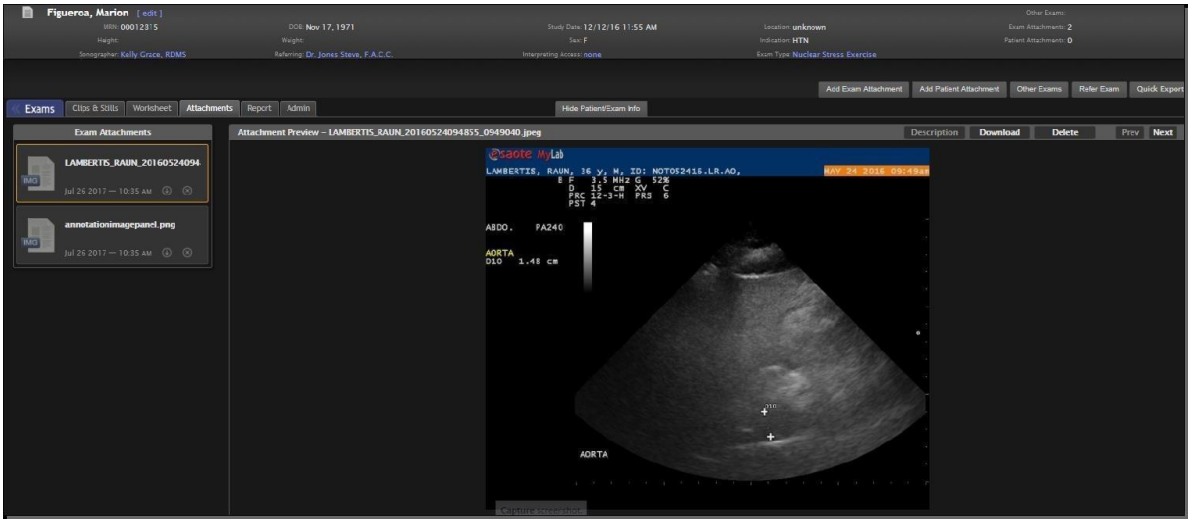
The Worksheet tab shows the exam's full worksheet. Worksheets are customized to the exam type.

See Section 7.8 UltraLinQ Worksheet Tasks for more information.



7.5.3 Attachments Tab

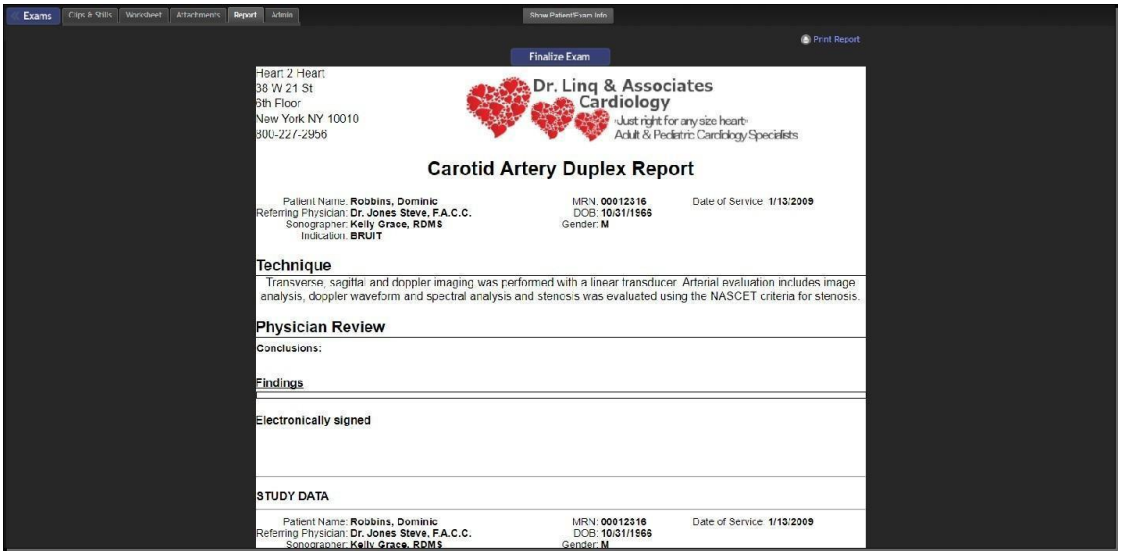
The Attachments tab shows all attachments associated with an exam. You can download or delete attachments from the Attachments tab. You can also see previews of PDF, JPG, and PNG attachments.



7.5.4 Report Tab

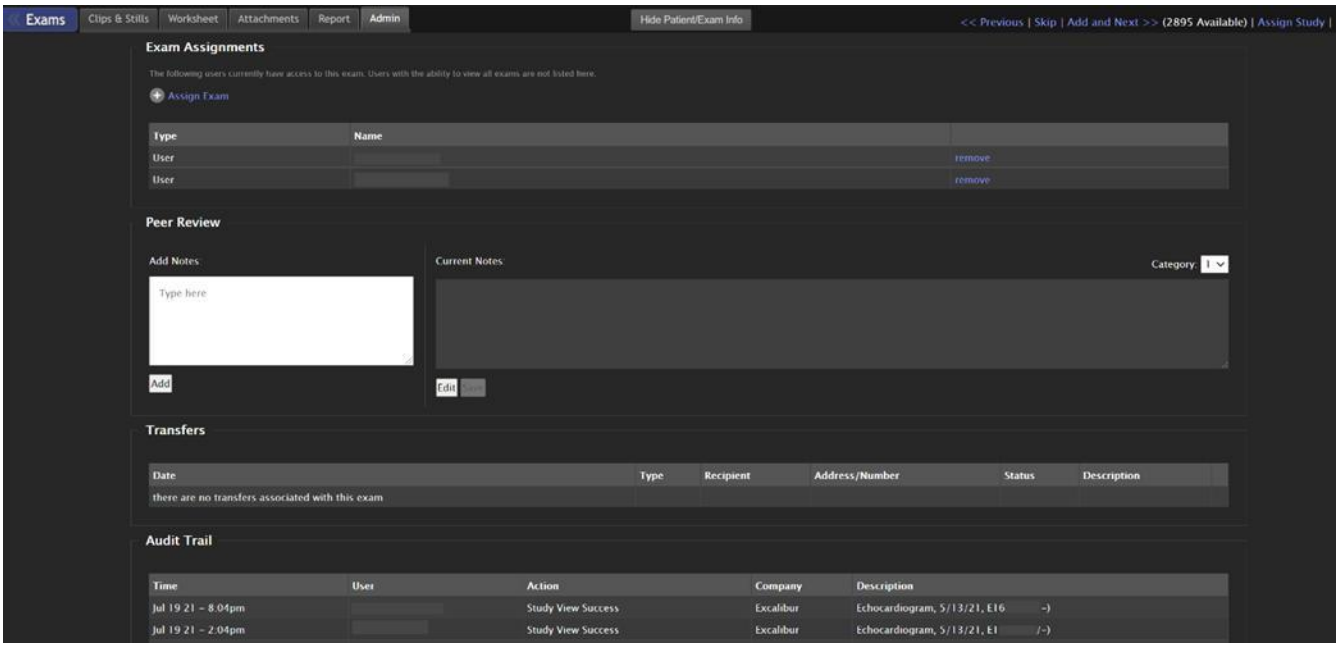
The Report tab shows the exam report.

See Section 7.9 UltraLinQ Report Tasks for more information.



7.5.5 Admin Tab

The Admin tab is only visible to account administrators. From the Admin tab, you can assign users to the current exam, mark reports as amendable, view exam transfers, and view the audit trail, and add, edit or view peer review notes.



7.6 UltraLinQ Exam Settings

Customize how you view exams.

From the Clips & Stills tab of the Exam page, you can:

- Use keyboard shortcuts.
- Zoom in and out.
- Adjust images and clips.
- Calibrate images and clips.
- Access Split-screen option.
- Save an arrangement of images as a set.
- Set up new exam notifications.

7.6.1 HTML5 Viewer Keyboard/Mouse Shortcuts

Zoom		
In	Z + right click & drag down	
Out	Z + right click & drag up	

Brightness		
Increase	B + right click & drag up	
Decrease	B + right click & drag down	

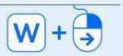
Contrast		
Increase	C + right click & drag up	
Decrease	C + right click & drag down	

Play/Stop Clip		
Play	space bar	Spacebar
Stop	space bar	Spacebar

Keyboard/Mouse Navigation of Thumbnail View		
Navigate through thumbnails	Left / Right arrow	
Scroll through thumbnails	Mouse scroll wheel	
Enter single view	Enter key	Enter

Keyboard/Mouse Navigation of Single, Dual, and Quad View		
Navigate through thumbnails	Up / Down arrow	
Scroll up/down thumbnails	Mouse scroll wheel	

Paused clips		
Move back one frame	Left arrow	
Move forward one frame	Right arrow	

Window Leveling		
Increase brightness / decrease window level	W + right click & drag up	
Decrease brightness / increase window level	W + right click & drag down	
Increase contrast / shrink window width	W + right click & drag right	
Decrease contrast / expand window width	W + right click & drag left	

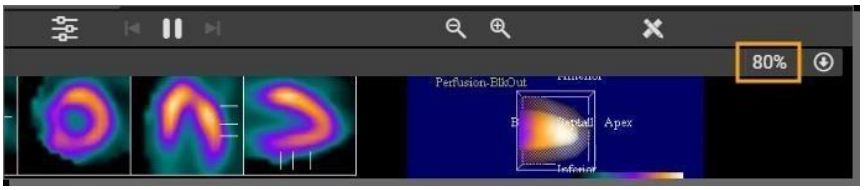
7.6.2 Zooming In and Out

When viewing images and clips, you can zoom in and out at a global level, changing the zoom level of all items in an exam. You can also zoom in and out at an individual level, changing the zoom level of a single item.

7.6.2.1 Global Zoom

In the HTML5 viewer, change the zoom level of all images and clips in an exam by clicking one of the zoom buttons in the Single view of the Exam page's Clips & Stills tab.

increases the zoom level. decreases the zoom level. The zoom percentage is displayed in the upper right corner of the main panel.



Reset the zoom level by clicking the Single view icon or going to anotherview.

In the Flash viewer, change the zoom level by clicking and on the item's header.

The zoom level is shown as a percentage, displayed between the and icons.
Reset the zoom level by clicking the Single view icon or going to another view.

7.6.2.2 Individual Zoom in the HTML5 Viewer

To zoom in or out on a single image or clip in the HTML5 viewer, use keyboard shortcuts:

Zoom in by holding down the Z key and dragging your mouse up.

Zoom out by holding down the Z key and dragging your mouse down.

7.6.3 Adjusting Images, Clips, and Series

When viewing images, clips, or series, you can adjust brightness, contrast, and clip playback rate settings at a global level, changing the appearance of all items in an exam. You can also adjust brightness and contrast at an individual level, changing the appearance of a single item.

Note: The clip playback rate cannot be adjusted for a single clip.

You can also edit an individual image or paused clip by:

- Rotating it in 90° increments.
- Inverting its color mapping.
- Flipping it horizontally.
- Flipping it vertically.

7.6.3.1 Global Adjustments in the Flash Viewer

Change the brightness, contrast, and clip playback rate of all items in an exam by clicking in the Single view of the Exam page's Clips & Stills tab.

A window appears. Drag the sliders to adjust brightness, contrast, and clip playback rate.

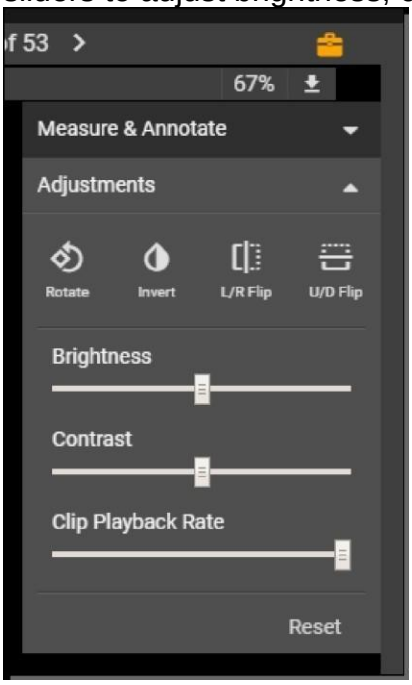
Click to enable window leveling, which adjusts the window and level on images with bit depths greater of 16 bits or greater. When window leveling is enabled, the cursor changes to a four-headed green arrow. Hold down the left mouse button and move the mouse left and right to adjust the window width. Hold down the left mouse button and move the mouse up and down to adjust the level.

Click **Reset** to return all parameters to default settings.

7.6.3.2 Global Adjustments in the HTML5 Viewer

Change the brightness, contrast, and clip playback rate of all items in an exam by clicking in the Single view of the Exam page's Clips & Stills tab.

The Image Tools panel appears. Click **Adjustments** to show Adjustment tools. Drag the sliders to adjust brightness, contrast, and clip playback rate.



Click **Reset** to return all parameters to default settings.

7.6.3.3 Individual Adjustments in the HTML5 Viewer

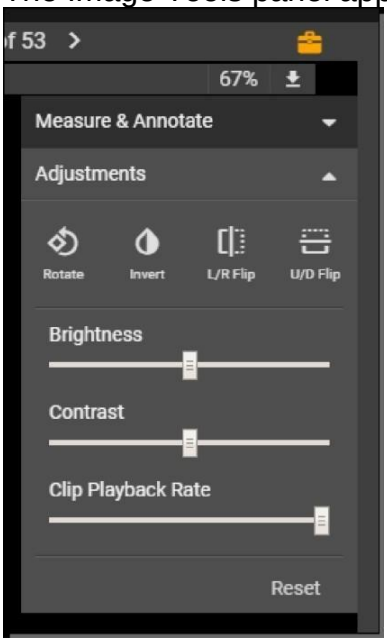
To adjust brightness and contrast for a single image or clip, use keyboard shortcuts:

Increase brightness by holding down the B key and dragging your mouse up, and decrease brightness by holding down the B key and dragging your mouse down.

Increase contrast by holding down the C key and dragging your mouse up, and decrease contrast by holding down the C key and dragging your mousedown.

To edit the appearance of a single image or paused clip, click in the Single view of the Exam page's Clips & Stills tab.

The Image Tools panel appears. Click **Adjustments** to show Adjustment tools.



The following options are available:

rotates the image or paused clip in 90° increments clockwise.

inverts the image's or paused clip's color mapping.

flips the image or paused clip horizontally.

flips the image or paused clip vertically.

Click the Window Level toggle to enable window leveling, which adjusts the window and level on images with bit depths of 16 bits or greater. When window leveling is enabled, the cursor changes to a four-headed green arrow. Hold down the left mouse button and move the mouse left and right to adjust the window width. Hold down the left mouse button and move the mouse up and down to adjust the level.

You can also use keyboard shortcuts for window leveling:

- To increase brightness (window level goes down), press down W, and click and drag your mouse up.
- To decrease brightness (window level goes up), press down W, and click and drag your mouse down.
- To increase contrast (window width shrinks), press down W, and click and drag right.
- To decrease contrast (window width expands), press down W, and click and drag left.

Click **Reset** to return all parameters to default settings.

7.6.4 Calibrating Images and Clips

NOTICE: Users are responsible for proper calibration. UltraLinQ is not responsible for any incorrect calibrations.

Calibrate images and clips to enable measurements.

UltraLinQ automatically calibrates DICOM exams. DICOM exams may need to be re-calibrated.

7.6.4.1 Calibrating Images and Clips in the Flash Viewer

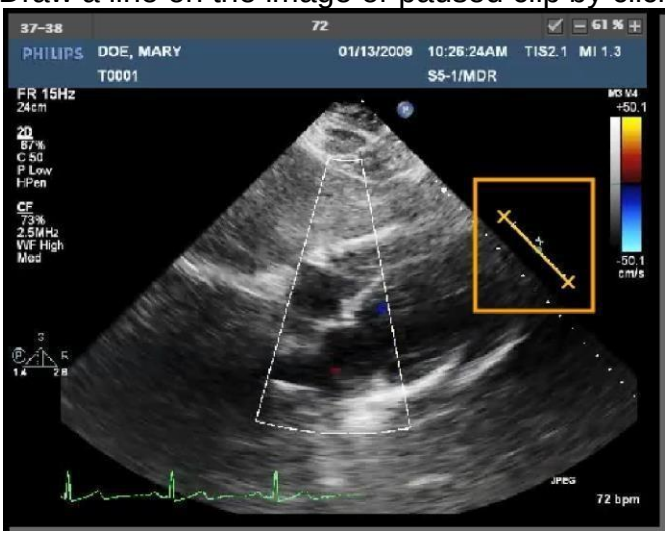
Note: Pause a clip before calibrating it.

Calibrate images and clips in the Flash viewer by following these steps.

From the Single view of the Clips & Stills tab on the Exam page, click to show the Measurements toolbar.

Click on the Measurements toolbar. The Measurements toolbar switchesto Calibrate mode.

Draw a line on the image or paused clip by clicking and dragging.



Type the appropriate value in the Calibration value field on the Measurements toolbar.

Select the calibration unit from the Calibration unit drop-down list on the Measurements toolbar.

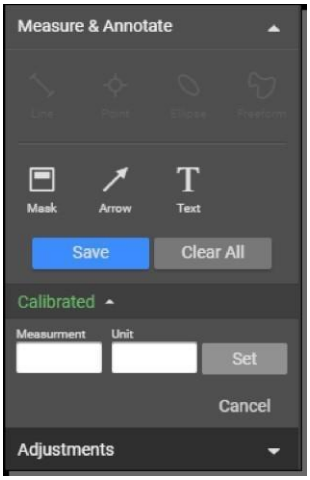
Click **Calibrate** on the Measurements toolbar.

7.6.4.2 Calibrating Images and Clips in the HTML5 Viewer

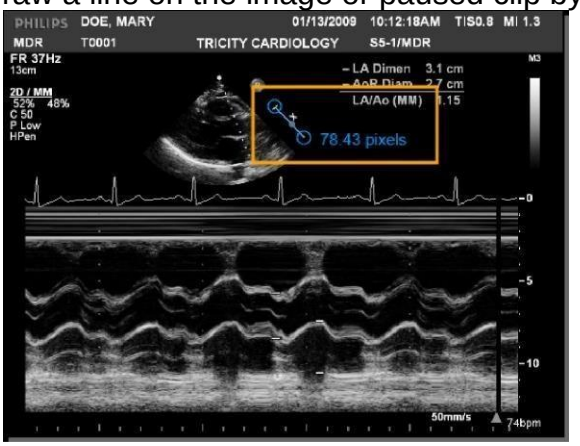
Calibrate images and clips in the HTML5 viewer by following these steps. Pause a clip before calibrating it.

From the Single view of the Clips & Stills tab on the Exam page, click .
The Image Tools panel appears.

Click the text **Calibrated** or **Uncalibrated** to expand calibration options.



Draw a line on the image or paused clip by clicking or dragging.



Enter a corresponding value in the Measurement field.

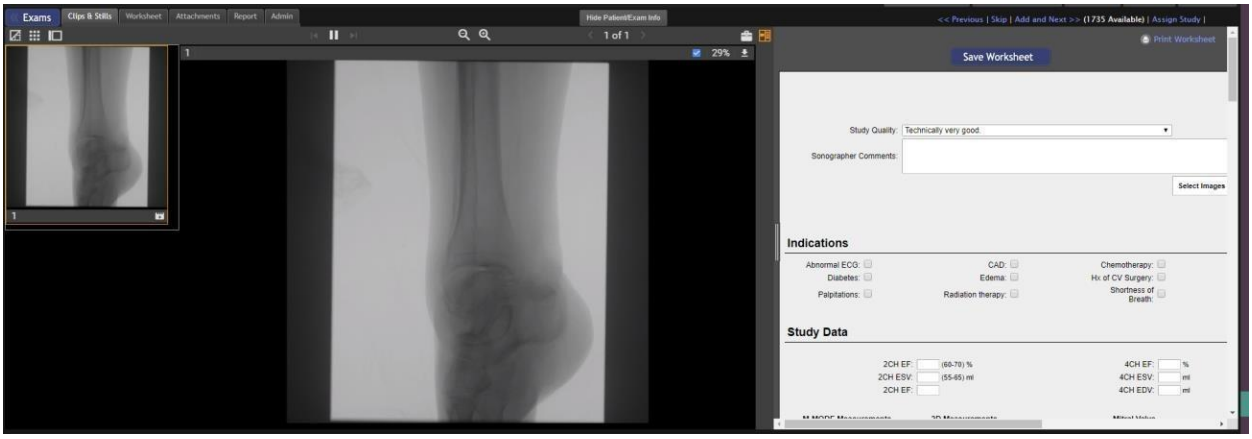
Select a unit from the Unit drop-down list.

Click **Set**.

7.6.5 Accessing the Split-Screen Option

The Split-screen option allows you to view images and clips as well as the full worksheet on the same screen. The split-screen option requires a browser window with a minimum size of 1590 x 790 pixels and images to be at 100% zoom.

Access the split-screen option in the HTML5 viewer by clicking , which only appears if the browser window is large enough for the split-screen option. You can click and drag the left edge of the worksheet to adjust its size.



Access the Split-screen option in the Flash viewer by following these steps.

From the Single view of the Exam page's Clips & Stills tab, click .

A menu appears. Click **View Options**. Click **Large Monitor Support**. A checkmark appears. If your browser window is large enough, the Split-screen option is enabled.

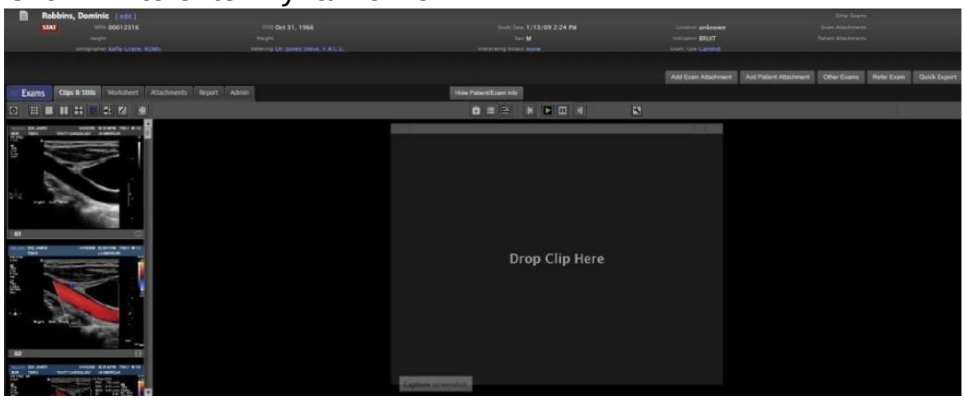
7.6.6 Saving an Arrangement of Images and Clips as a Set

Dynamic view allows you to save an arrangement of up to four images, clips, and series as a set. If multiple, related series are added, scout lines appear to help you navigate multidimensional data. This feature is currently available in the Flash Viewer.

Save an arrangement of images, clips, and series by following these steps.

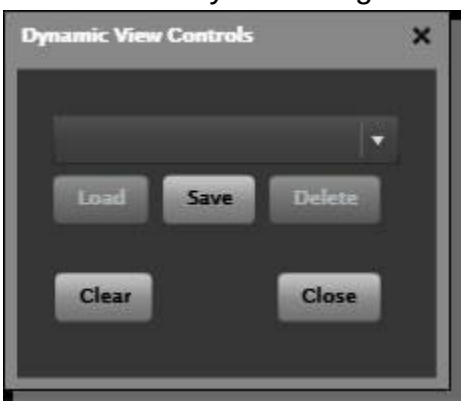
Navigate to the Clips & Stills tab on the Exam page.

Click to enter Dynamic view.



Drag and drop thumbnails from the left panel into the main panel. You can also double click thumbnails to add them to the main panel.

To clear or save your arrangement, click to access Dynamic view controls.



Click **Clear** to remove all images and clips from your arrangement. Click **Save** to save your arrangement as a set.

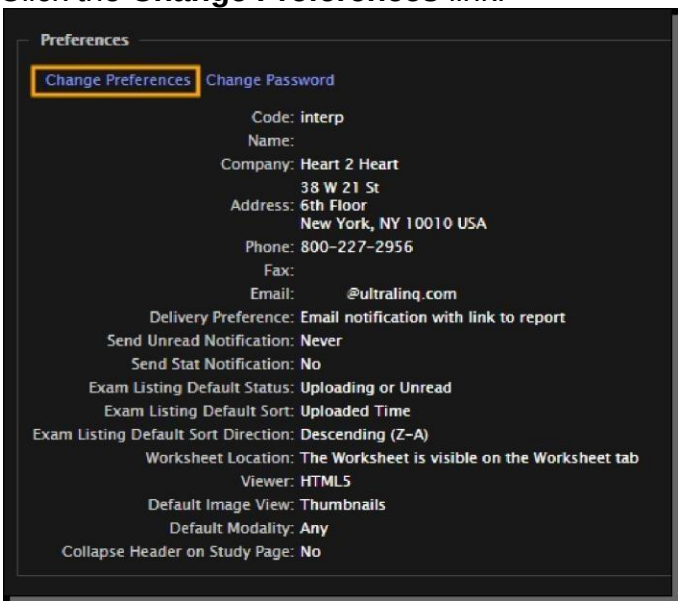
When saving a set, a pop-up window appears. Enter a Set Name. Click **Save**.

7.6.7 Setting Up New Exam Notifications

UltraLinQ can send you email notifications when new exams are available. Notification settings can be changed by both users and account administrators.

As a user, change how often you receive email notifications from UltraLinQ through the Preferences page by following these steps.

Click the **Change Preferences** link.



Select an option from the *Send Unread Notification drop-down list:

Never does not send notification emails.

Once Daily sends one email per day at 12:00 AM.

Twice Daily sends two emails per day: at 12:00 AM and 12:00 PM.

4 Times Daily sends four emails per day: at 12:00 AM, 6:00 AM, 12:00 PM, and 6:00 PM.

To receive immediate notification of new STAT exams, check the Send Stat Notification Email box under the drop-down list.

7.6 UltraLinQ Exam Tasks

WARNING!

Clinicians must carefully review exams to determine acceptable image quality prior to use.

WARNING!

Users must carefully review all information for proper data population and clinical accuracy.

WARNING!

It is the physician's responsibility to make diagnoses or interpretations based on all available information. UltraLinQ is not intended to perform diagnosis. UltraLinQ Healthcare Solutions, Inc. will not be responsible for diagnoses or interpretations made by physicians.

WARNING!

In certain circumstances, UltraLinQ utilizes lossy compression. This compression may result in a small loss of information on these images, and therefore, clinical judgment should be used to confirm that clinical quality has been retained.

UltraLinQ allows you to view and evaluate exams.

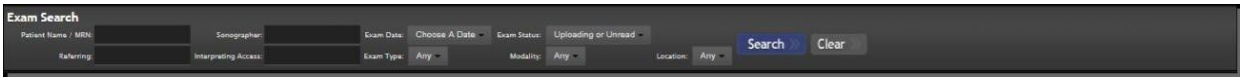
With UltraLinQ, you can:

- View an exam's items.
- Add and edit patient demographics.
- View an exam's items as a slideshow.
- View Series.
- Hide the thumbnail strip.
- Using Drawing Annotation view in the Flash viewer.
- Take measurements and add annotations in the Flash viewer.
- Take measurements and add annotations in the HTML5 viewer.
- Exclude incorrect images and clips from exports.
- Add attachments to exams.
- Assign exams.
- Assign locations to exams.
- Compare exams.
- Change the exam type.
- Mark exams as stat.
- Generate stress clips.
- Refer exams.
- Export exams.

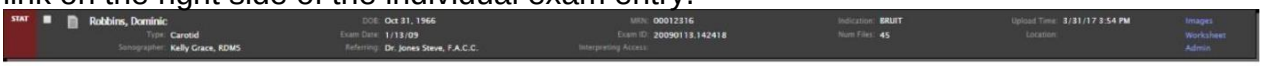
7.7.1 Viewing an Exam's Images, Clips, and Series

View an exam's images, clips, and series by following these steps.

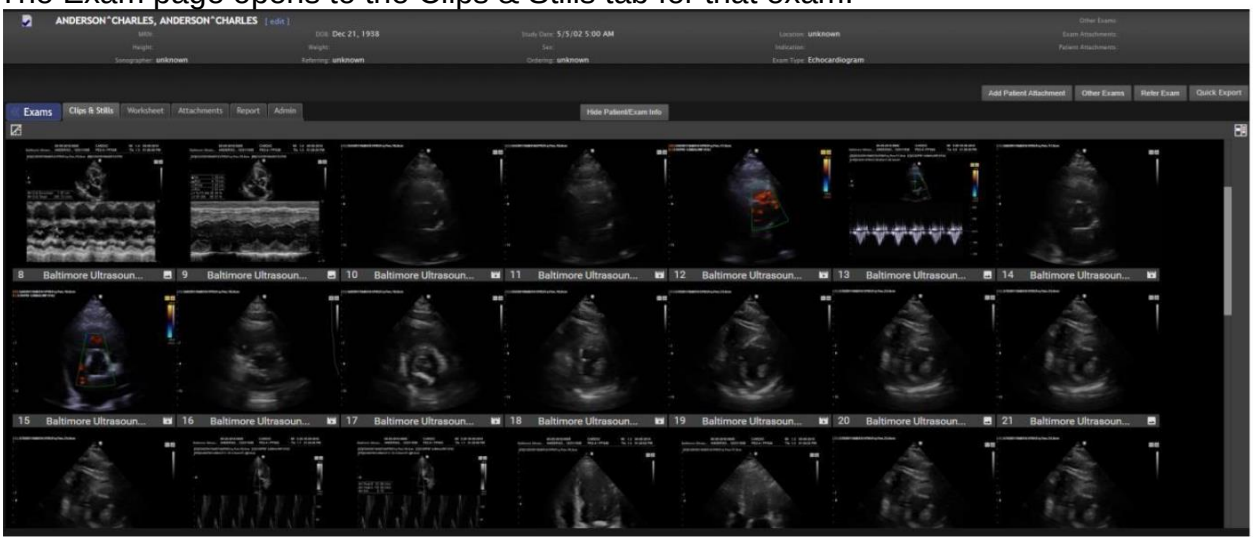
Make sure the exam is visible in the Exam List. Use the Exam Search bar to filter exams.



Click the patient's name on the individual exam entry. Or, you can click the **Images** link on the right side of the individual exam entry.



The Exam page opens to the Clips & Stills tab for that exam.



From Thumbnail view, double click an image, clip, or series to see it in Single view.

799268440. Navigate between images, clips, and series in Single view by clicking a thumbnail in the leftpanel. You can also navigate between images, clips, and series using the up and down arrow keys on your keyboard.

Note: You can view images within a series as a looping sequence or as individual images.

799268441. Additional views are available. Switch views by selecting , and then selecting one of these icons:

Note: The screenshots of icons are from the HTML5 viewer. Appearances may vary in the Flash viewer.

switches to Standard Dual View which displays two sequential images and/or clips simultaneously.

switches to Standard Quad View which displays four sequential images and/or clips simultaneously.

switches to Dynamic Dual View which displays two user-selected images and/or clips simultaneously

switches to Dynamic Quad View which displays four user-selected images and/or clips simultaneously

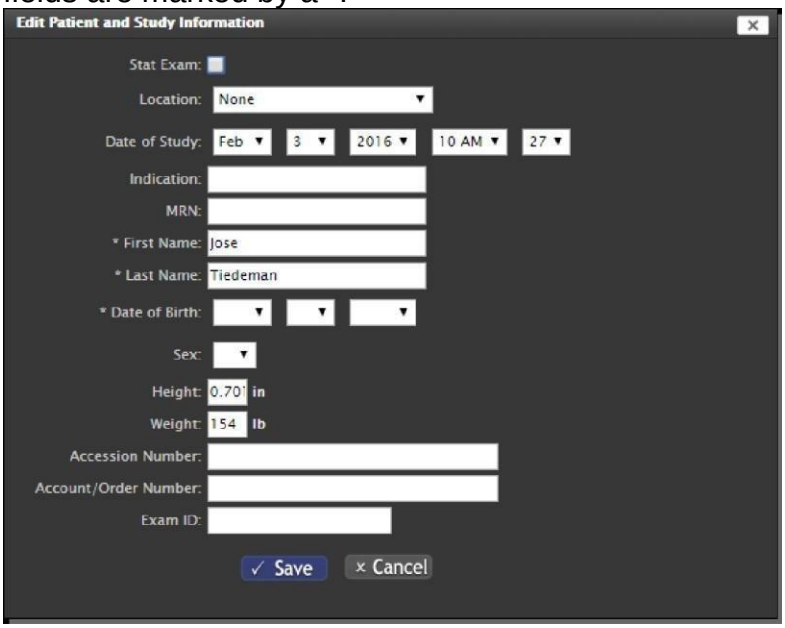
7.7.2 Adding and Editing Patient Demographics

Add and edit patient demographics by following these steps.

From the Exam page, make sure patient demographics, exam information, and additional options are visible. Click Show Patient/Exam Info to show these fields.

Click the **[edit]**link to the right of the patient's name.

A pop-up window appears. Add and edit patient and study information. Required fields are marked by a *.



Click **Save**.

7.7.3 Viewing an Exam's Images, Clips, and Series as a Slideshow

You can view an exam's images, clips, and series as a slideshow from Single view on the Exam page.

The slideshow starts at the current image, clip, or series and progresses through the following items automatically at a default rate of three seconds per item. The thumbnail of the current exam item in the slideshow is outlined in orange in the thumbnail strip.

Clips in a slideshow loop completely at least once. A series acts as a clip during the slideshow.

The slideshow automatically ends at the last exam item.

7.7.3.1 Viewing an Exam's Items as a Slideshow in the Flash Viewer

View an exam's items as a slideshow in the Flash viewer by following these steps.

1. Navigate to the Clips & Stills tab of the Exam page. Go to Single view by clicking or by double clicking a thumbnail.
2. Click to start the slideshow.

7.7.3.2 Viewing an Exam's Items as a Slideshow in the HTML5 Viewer

View an exam's items as a slideshow in the HTML5 viewer by following these steps.

1. Navigate to the Clips & Stills tab of the Exam page. Go to Single view by clicking under “Standard Views” or by double clicking a thumbnail.
2. Click to open the Image Tools panel.

Click **Adjustments** to show Adjustment tools.

Click the Slideshow toggle bar. The toggle bar switches to **On**.

Pause and end the slideshow at any time by clicking the toggle bar again by clicking ⏸.. The toggle bar switches to **Off**.

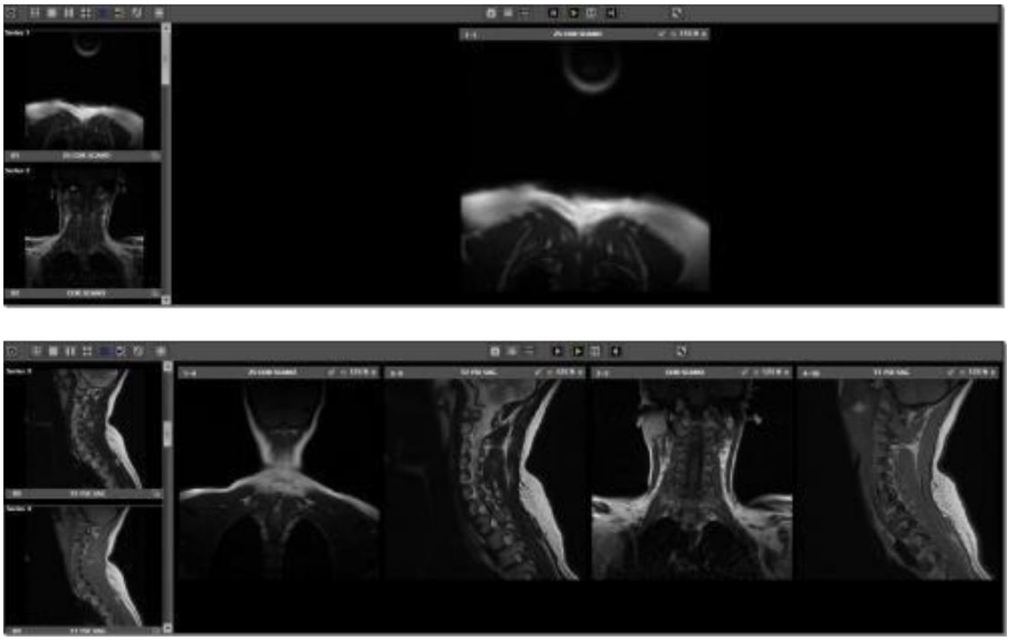
7.7.4 Viewing Series

Images identified as part of a stack in the input DICOM file are viewable as a series within UltraLinQ.

7.7.4.1 Viewing Series in the Flash Viewer

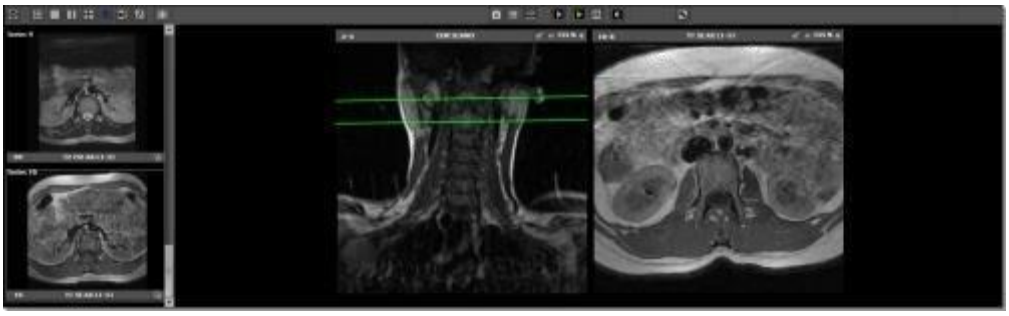
Series in the Flash viewer are best viewed in Dynamic view. Navigate to Dynamic view by clicking D.

Drag and drop a series thumbnail into the main panel. You can also view multiple series side by side by dragging and dropping their thumbnails into the main panel.



You can navigate quickly between images within a series by scrolling your mouse up or down in the main panel.

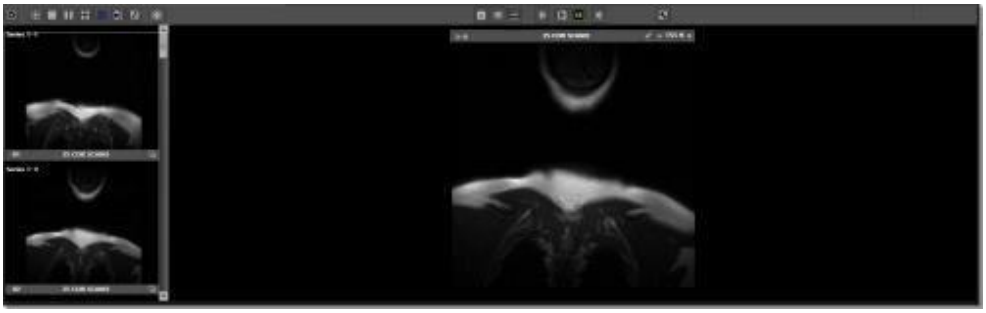
When viewing more than one series with different views of the same data as determined by the DICOM tags, scout lines appear to assist in the navigation of multidimensional data.



Enable series to play by clicking . Click **Play Series**. A checkmark appears.

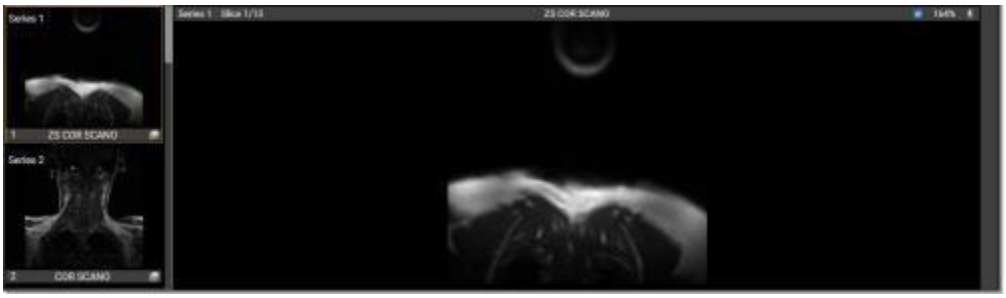
Play a series in Dynamic view by clicking. Pause a playing series by clicking. In a paused series, click to move forward one image, and click to move back one image.

View individual images within a series by expanding the series. Expand a series by clicking on the series thumbnail. The images within the series now have individual thumbnails. Click again to collapse the series.



7.7.4.2 Viewing Series in the HTML5 Viewer

In the HTML5 viewer, you can view series in Single, Dual, and Quad views. Dual and Quad Dynamic Views are also available.

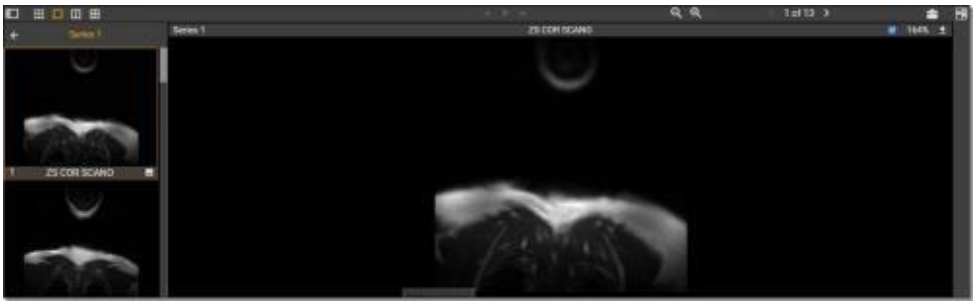


You can navigate quickly between images within series by scrolling your mouse up or down in the main panel.

When viewing more than one series in Dual or Quad view with different views of the same data as determined by the DICOM tags, scout lines appear to assist in the navigation of multidimensional data.

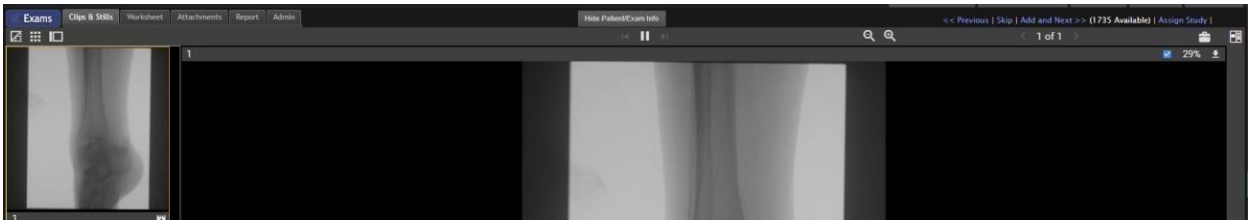
Play series by clicking . Pause a playing series by clicking . In a paused series, click to move forward one image, and click to move back one image.

View individual images within a series in the thumbnail strip by expanding the series. Expand a series by clicking on the series thumbnail. The images within the series now have individual thumbnails. Click above the thumbnail strip to collapse a series.



7.7.5 Hiding the Thumbnail Strip

In the HTML5 viewer, you can hide the thumbnail strip that appears in the left panel of all Single, Dual, and Quad views to increase the size of the main viewing area.



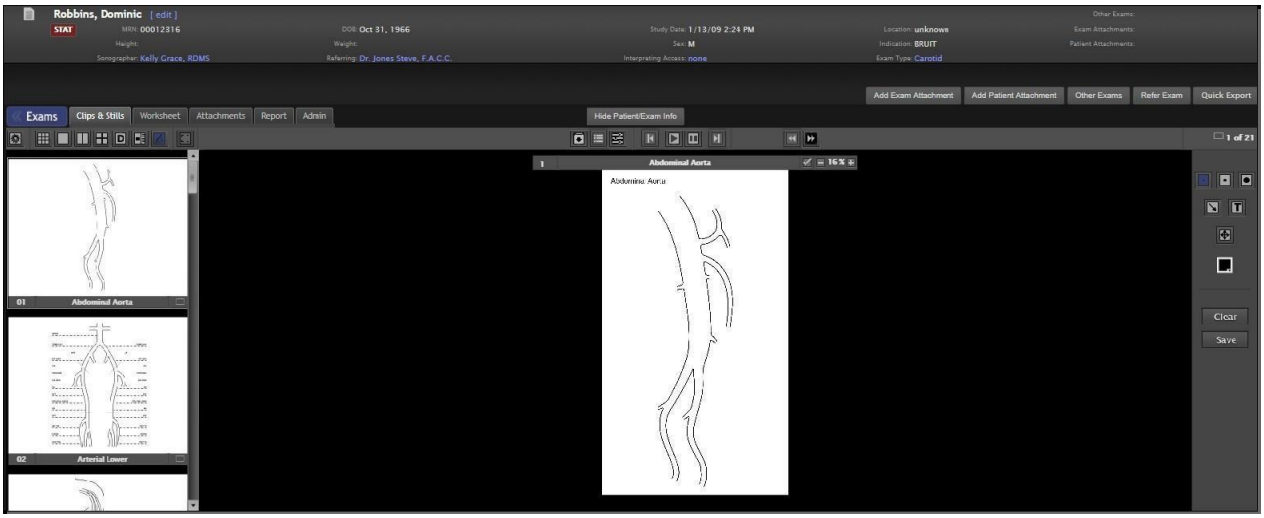
Hide the thumbnail strip by clicking .

Show the thumbnail strip again by clicking .

7.7.6 Using Drawing Annotation View in Flash Viewer

In UltraLinQ, you can add drawing and annotations to an exam through Drawing Annotation view. Drawing Annotation view is currently available in Flash viewer.

From the Single view of the Exam page, tap to access Drawing Annotation view. The thumbnails are replaced with templates. Drawing tools are available from the Drawing Annotation toolbar in the right panel.



Change the image's zoom by clicking and on the image's header. The image's zoom level is shown between and .

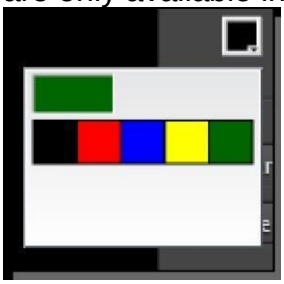
Select an image by clicking on the image's header.

The following options are available on the Drawing Annotation toolbar:

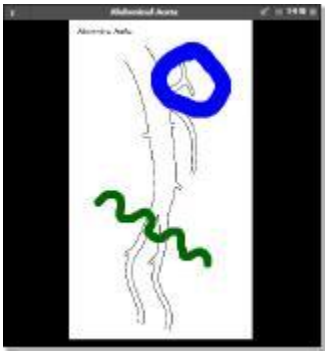
- allows you to draw on the template with a small brush.
- allows you to draw on the template with a medium brush.
- allows you to draw on the template with a large brush.
- allows you to place an arrow on the template.
- allows you to place a text box on the template.
- allows you to select an existing annotation.
- allows you to select different colors for drawings and annotations.

Add drawings and annotations to an image by following these steps. Drawings and annotations can be added in any order.

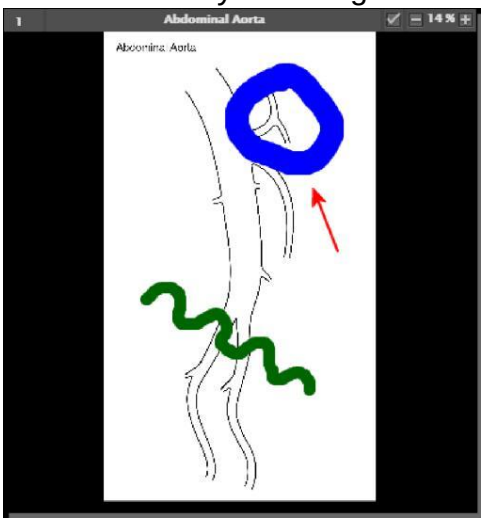
Select a color from the color palette for the drawing or annotation. Text annotations are only available in black.



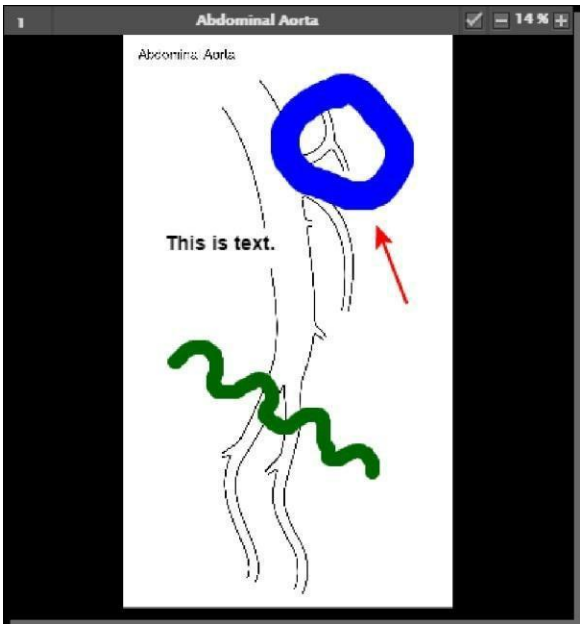
Add a drawing by selecting a paintbrush tool , , or . Click and drag on the image to draw.



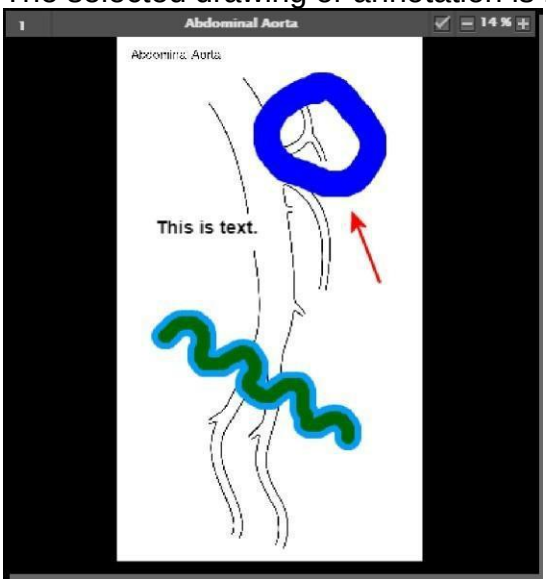
3. Add an arrow by selecting the arrow tool . Click and drag on the image.



Add text by selecting the text tool . Click on the image. A text box appears. Type into the text box.



To select a drawing or annotation, click , then click the drawing or annotation. The selected drawing or annotation is highlighted in light blue.



Selected drawings can be deleted by pressing the **Delete** key on your keyboard. Selected arrows can be angled by clicking and dragging one of its ends. Selected text can be moved by clicking and dragging.

Tap **Save** to save the image with drawings and annotations to the exam.

Tap **Clear** to delete all drawings and annotations from the image.

7.7.7 Verifying Measurements and Adding Annotations in theFlash Viewer

In the Flash viewer, UltraLinQ allows you to add up to a total of six measurement verifications and annotations to an image, paused clip, or image within a series. Access verfiication and annotation tools by clicking in the Single view of the Clips & Stills tab on the Exam page.

Note: Pause clips before verifying measurements and adding annotations.

7.7.7.1 Verifying Measurements

The following measurement tools are available:

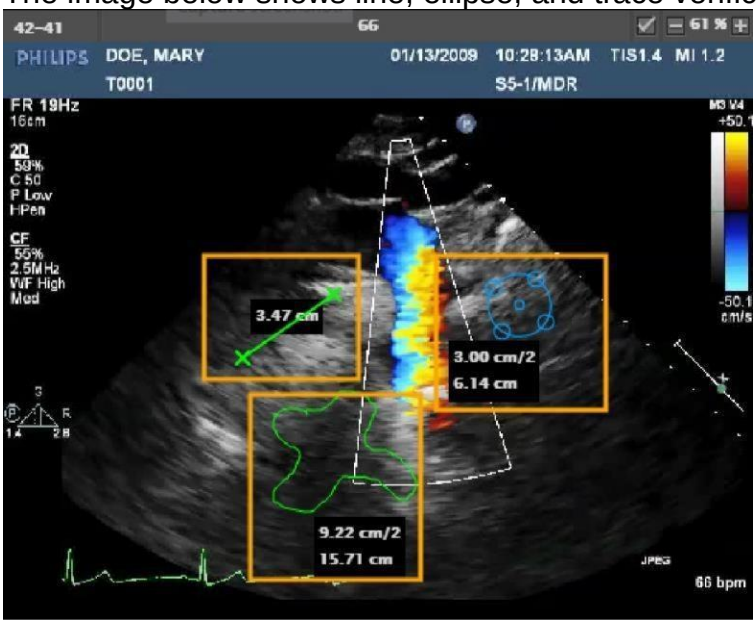
- allows verifying the distance between two points. Click and drag to draw a line.
- allows verifying the distance between an axis line (defined by DICOM) and the selected point on an M-mode image. This is used to place a point at the top or bottom of peaks.
- allows verifying the circumference and area of an ellipse. Click and drag to expand an ellipse.
- allows verifying the circumference and area of a closed free-form shape, allowing you to trace a region. Click and drag to draw the shape.

Click and then a measurement verification to select that verification. Selected measurement verifications can be adjusted by clicking and dragging or deleted by pressing the Delete key.

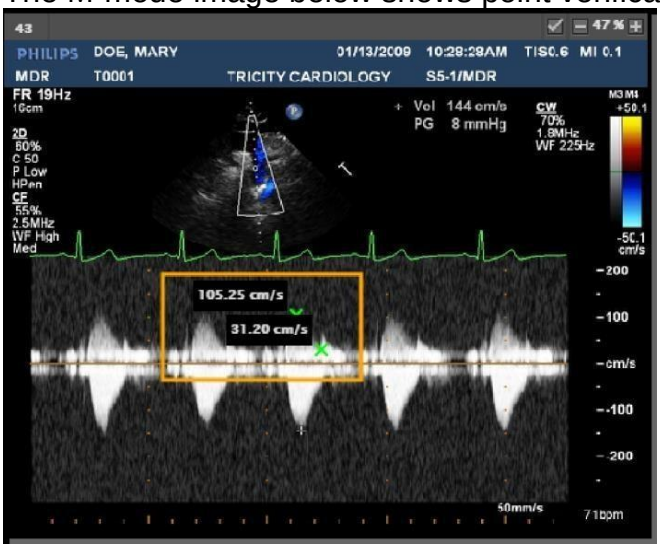
Click **Clear** to remove all measurements from the image or paused clip.
Saved measurement verifications cannot be cleared.

Click **Save** to save a copy of the image or paused clip with verifications to the exam. Once saved, all verifications are flattened onto the image or paused clip and cannot be removed. The saved copy can be found at the end of the exam's items.

The image below shows line, ellipse, and trace verifications:



The M-mode image below shows point verifications:



7.7.7.2 Adding Annotations

The following annotation tools are available:

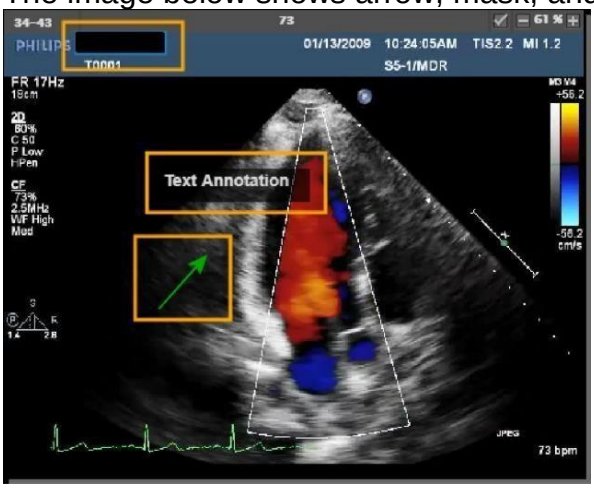
- draws an arrow on the image.
- masks part of the image with a black rectangle to anonymize patient information.
- adds a text label to the image.

Click and then an annotation to select that annotation. Selected annotations can be adjusted by clicking and dragging or deleted by pressing the Delete key.

Click **Clear** to remove all annotations from the image or paused clip. Saved annotations cannot be cleared.

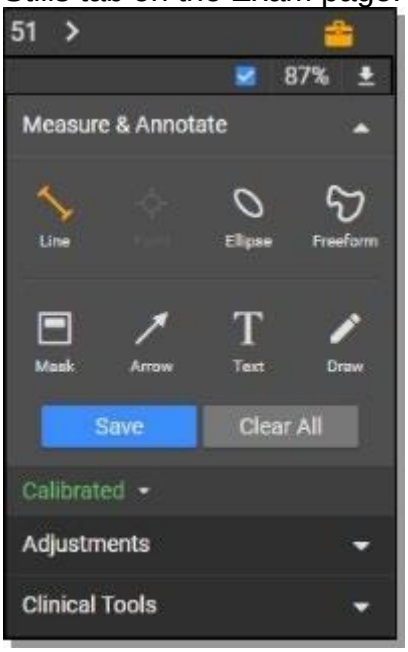
Click **Save** to save a copy of the image or paused clip with measurements to the exam. Once saved, all annotations are flattened onto the image or paused clip and cannot be removed. The saved copy can be found at the end of the exam's items.

The image below shows arrow, mask, and text annotations:



7.7.8 Verifying Measurements and Adding Annotations in theHTML5 Viewer

Access verification and annotation tools by clicking in the Single view of the Clips & Stills tab on the Exam page.



Note: Pause clips and series before verifying measurements and adding annotations.

7.7.8.1 Verifying Measurements

The following verification tools are available:

- Line allows verifying the distance between two points. Click on the image to define one endpoint, and then click again to define the other endpoint. You can adjust a line by clicking and dragging one of its handles.
- Point allows verifying the distance between an DICOM-defined axis line and the point on an M-mode image. Click once to place a point at the top or bottom of a peak. A DICOM region reference line must be present.
- Ellipse allows verifying the circumference and area of an ellipse. Click and drag to expand an ellipse. You can adjust or rotate an ellipse by clicking and dragging one of its handles.

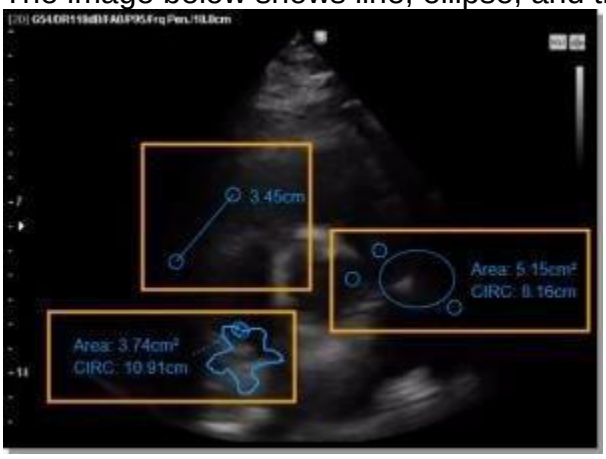
allows verifying the circumference and area of a closed free-form shape, allowing you to trace a region. Click and drag to draw the shape.

Click and hold a measurement verification to select it. You can drag the selected verification to move it or press the Delete or Backspace key to remove it.

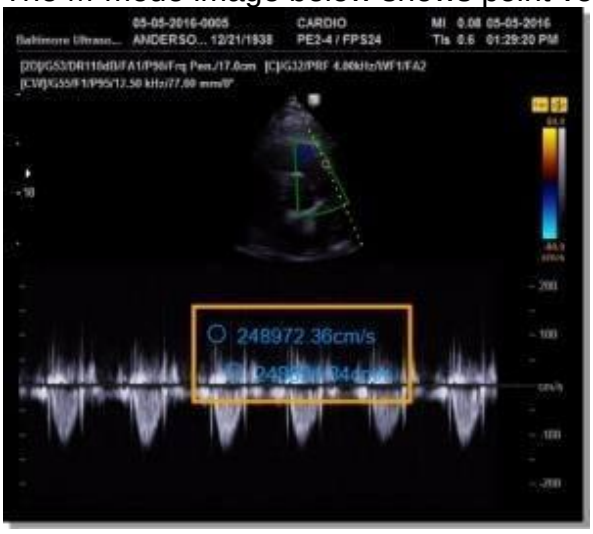
Click **Clear All** to remove all verifications from the image, paused clip, or image within a series. Saved verifications cannot be cleared.

Click **Save** to save a copy of the image, paused clip, or image within a series with verifications.

The image below shows line, ellipse, and trace verifications:



The M-mode image below shows point verifications:



7.7.8.2 Adding Annotations

The following annotation tools are available:

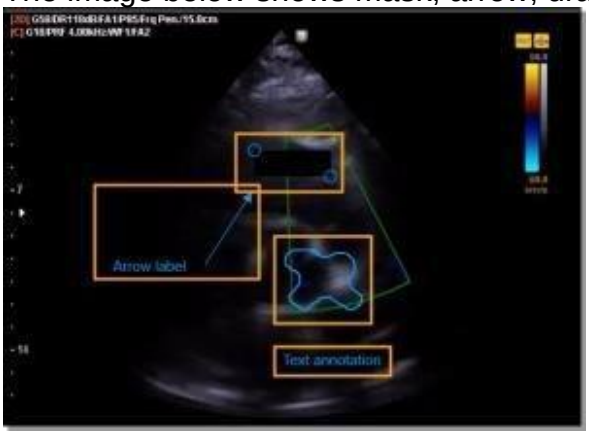
- Arrow draws an arrow. Click and drag to draw an arrow. Enter an optional label for the arrow in the pop-up window that appears. You can adjust an arrow by clicking and dragging one of its ends.
- Mask creates a black rectangle to anonymize patient information. Click and drag to place the mask. You can adjust a mask by clicking and dragging one of its handles.
- Text adds a text label. Enter the text in the pop-up window that appears. You can reposition the text by clicking and dragging it.
- Draw adds a drawing. Click and drag to draw.

Hover over an annotation with your mouse to select it. You can press the Delete or Backspace key to remove a selected annotation.

Click **Clear All** to remove all annotations from the image, paused clip, or image within a series. Saved annotations cannot be cleared.

Click **Save** to save a copy of the image, paused clip, or image within a series with annotations.

The image below shows mask, arrow, drawing, and text annotations:

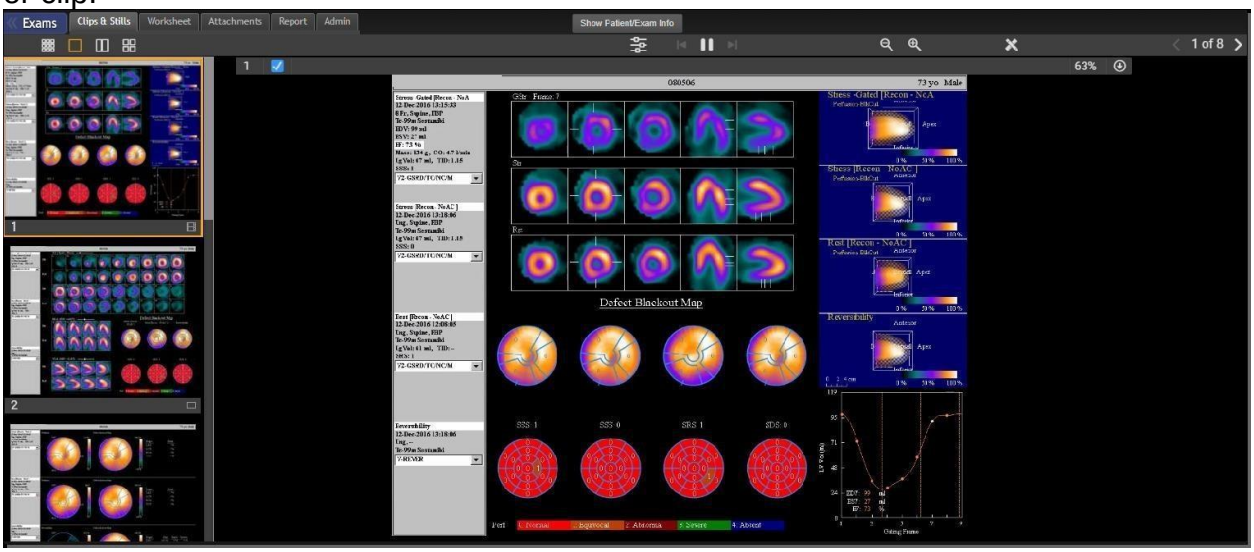


7.7.9 Excluding an Incorrect Image or Clip

Some images and clips in a study may be incorrect. While individual items cannot be deleted from a study through UltraLinQ, you can exclude items from exports and strike through their thumbnails with a red line.

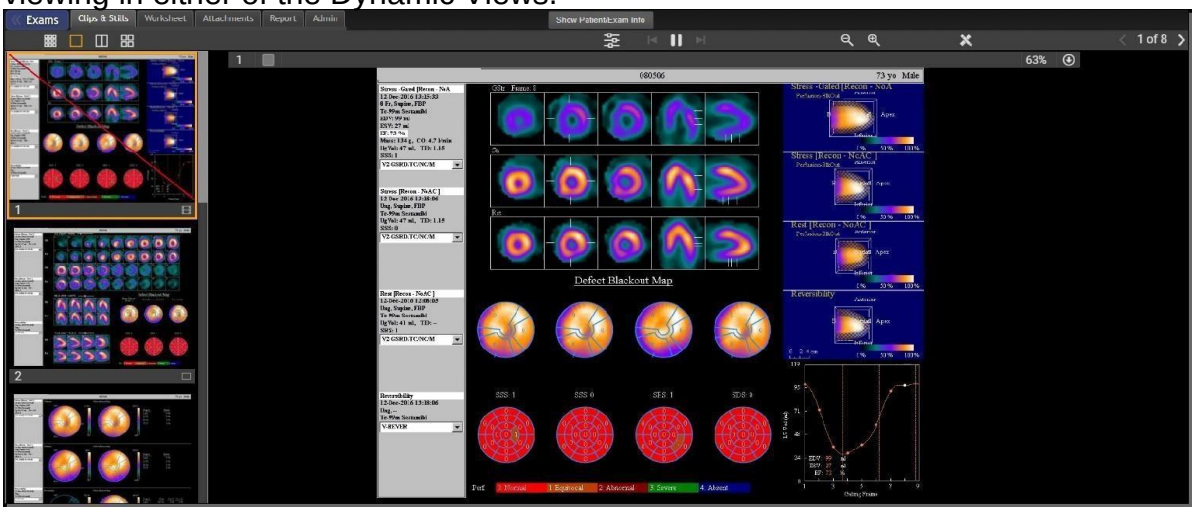
Exclude an item from exports by following these steps.

On the Clips & Stills tab of the Exam page, navigate to the Single view of an image or clip.



Uncheck the box by the item number.

Note the red strike through the excluded item's thumbnail in the left panel. You can remove the strike by rechecking the box by the item number. Removing a strike is only possible in a Standard View. Items previously striked cannot be selected for viewing in either of the Dynamic Views.



7.7.10 Adding File Attachments to Exams

UltraLinQ has two types of file attachments:

Patient attachments appear in all exams for a patient.

Exam attachments appear only in a specific exam. Exam attachments can only be added before finalizing the exam.

UltraLinQ supports the following file formats for exam attachments:

AVI

BMP

DOC

JPEG

MP4

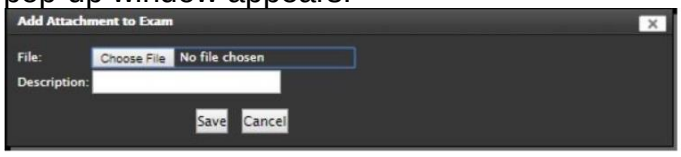
PDF

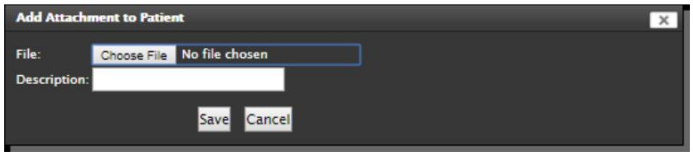
PNG

XLS

Add file attachments to a single exam or to every exam for a single patient by following these steps.

1. On the Exam page, make sure the patient and exam information fields are visible by clicking Show Patient/Exam Info .
2. To only add an attachment to this exam, click Add Exam Attachment . To add an attachment to every exam for this patient, click Add Patient Attachment .
3. A pop-up window appears.





4. Click **Choose File**, and browse for the file you want to attach.
   Optional: Add a file description.
   Click **Save**. The file is now attached. Download and delete attached files in the Attachments tab of the Exam page. PDF, JPEG, and PNG files can be previewed in the Attachments tab.

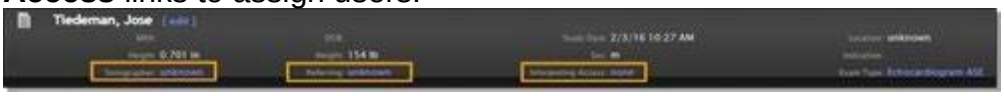
7.7.11 Assigning Exams

Note: You must have the Study Assign permission to assign exams. Contact your account administrator if you do not have this permission.

Assign exams to users by following these steps.

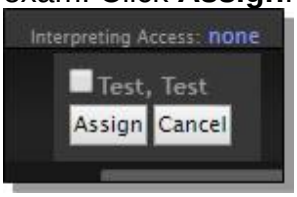
On the Exam page, make sure patient demographics, exam information, and additional options are visible. Click Show Patient/Exam Info to show these fields.

You can assign a sonographer, a referring clinician, and one or more clinicians with interpreting access. Click the **Sonographer**, **Referring**, or **Interpreting Access** links to assign users.



When assigning a sonographer or referring clinician, a drop-down list appears under the link. Select the user from the list. Click Change sonographer or Change referring.

When assigning one or more clinicians with interpreting access, one or more users appear under the link. Check the boxes next to the users you want to assign to the exam. Click **Assign**.



7.7.12 Assigning Locations to Exams

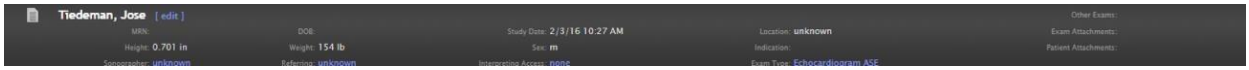
UltraLinQ can assign locations to exams. This enables:

- Reporting exam volume by location.
- Delivering reports by location.
- Customizing headers.
- Triggering workflow rules and automation.

Locations must be set by an account administrator. Locations can be assigned to exams automatically through data received from the modality or manually through UltraLinQ.

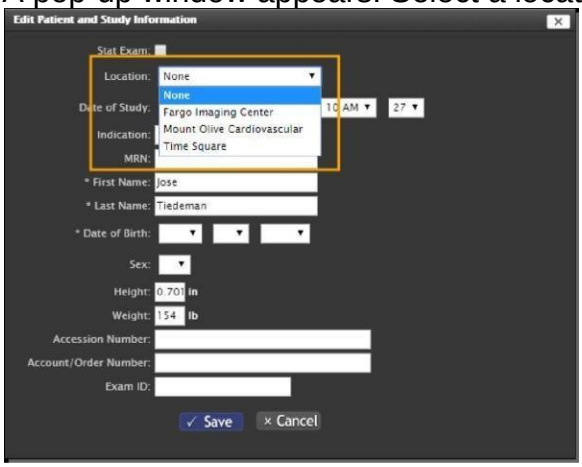
Assign locations to exams manually by following these steps.

1. On the Exam page, make sure patient demographics, exam information, and additional options are visible by clicking Show Patient/Exam Info .



2. Click **[edit]** to the right of the patient's name.

   A pop-up window appears. Select a location from the drop-down list.



3. Click **Save**.

7.7.13 Comparing Exams

If a patient has other exams in UltraLinQ, you can compare two of their exams side by side.

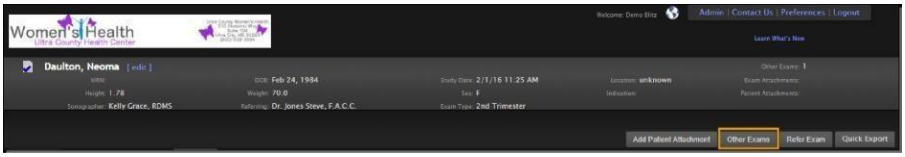
Because comparing exams opens two sets of items at the same time, a monitor resolution of 1920 x 1080 px or greater is recommended.

Compare two exams for a patient by following these steps.

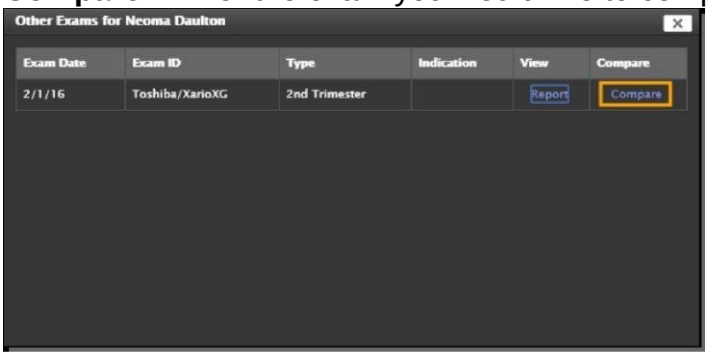
Navigate to the Clips & Stills tab of the Exam page for the patient's current exam.

Save any changes to the exam before continuing. Comparing exams refreshes the page, and any new data may be lost.

Click **Other Exams**.



A pop-up window appears, showing earlier exams for the patient. Click the **Compare** link for the exam you would like to compare with the current exam.



The Exam page refreshes to a new Compare tab. The earlier exam appears on the left, and the current exam appears on the right.

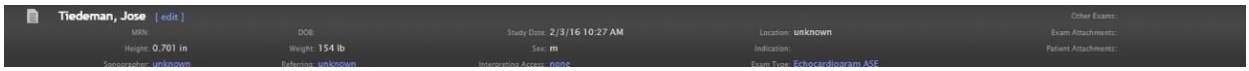
7.7.14 Changing Exam Type

The imaging modality used to capture an exam determines the exam type in UltraLinQ. The exam type is usually added automatically, but when UltraLinQ does not receive specific information from the modality, a company-specific default exam type is assigned.

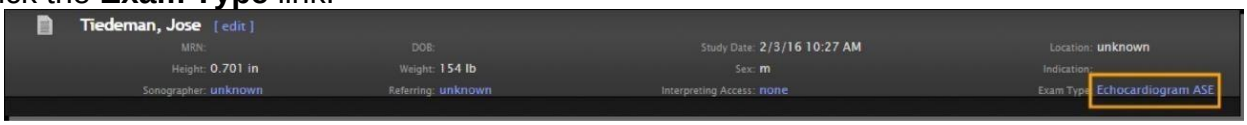
The exam type can be changed in UpLinq or UltraLinQ.

Note: You must have the Study Assign permission to change exam types. Contact your account administrator if you do not have this permission.

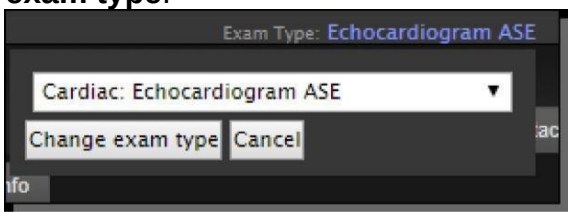
On the Exam page, make sure patient demographics, exam information, and additional options are visible. Click Show Patient/Exam Info to show these fields.



Click the **Exam Type** link.



A drop-down list appears. Select the new exam type from the list. Click **Change exam type**.

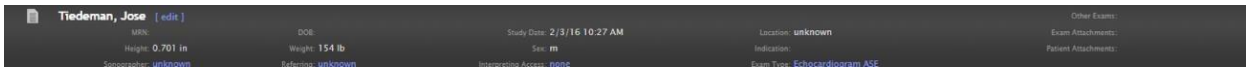


7.7.15 Marking Exams as Stat

Stat exams always appear at the top of the Exam List.

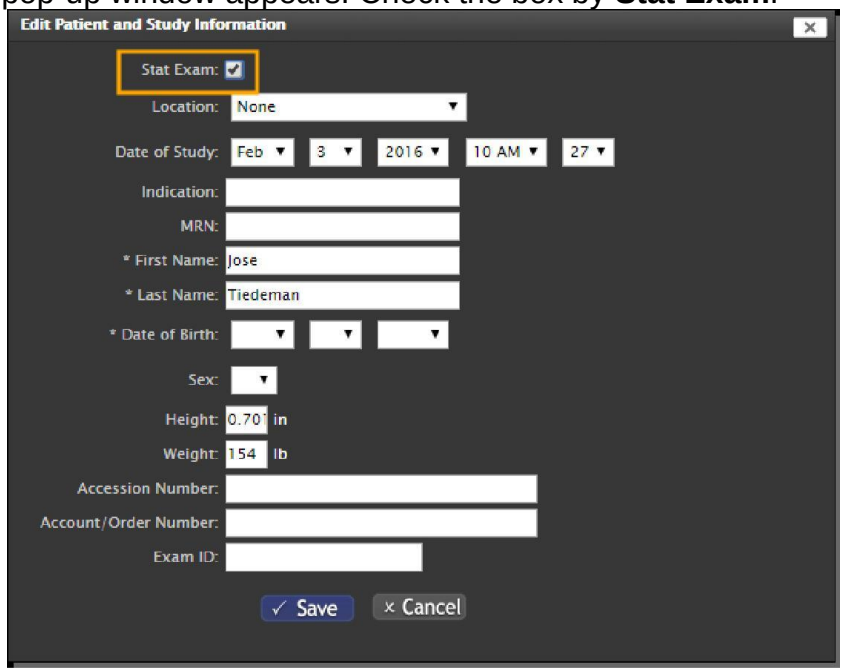
Mark an exam as stat by following these steps.

On the Exam page, make sure patient demographics, exam information, and additional options are visible by clicking Show Patient/Exam Info.



Click **[edit]** to the right of the patient's name.

A pop-up window appears. Check the box by **Stat Exam**.



Click **Save**.

7.7.16 Generating Stress Clips

UltraLinQ can generate stress clips to synchronize pre- and post-exercise clips, organizing them into the appropriate sequence.

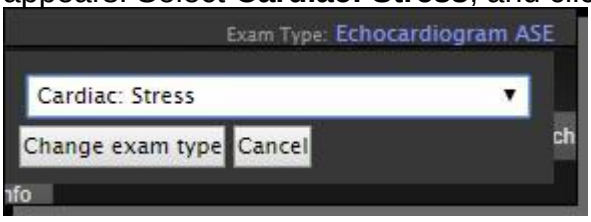
To generate stress clips, you need:

- The Study Assign permission to change exam types. Contact youraccount administrator if you do not have this permission.
- An ultrasound device that exports exams in DICOM format.
- An ultrasound device with a supported stress package. Contact Technical Services to see if your device qualifies.
- The UltraLinQ Stress Clip Generator. Contact Technical Services to enable the Stress Clip Generator.

Generate stress clips by following these steps.

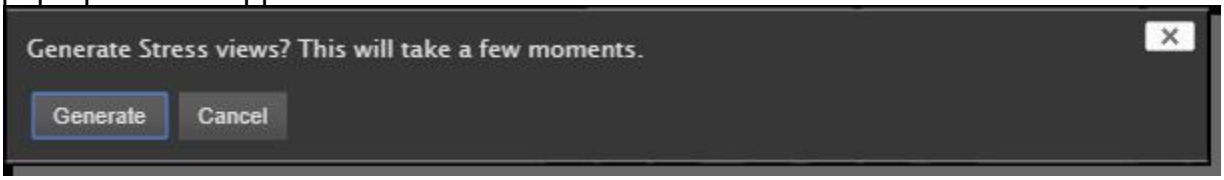
Note: The following screenshots are from the Flash viewer.

1. Navigate to the Clips & Stills tab of the Exam page.
2. Make sure patient demographics, exam information, and additional options are visible. Click Show Patient/Exam Info to show these fields.
3. In the patient demographics area, click the Exam Type link. A drop-down list appears. Select **Cardiac: Stress**, and click **Change exam type**.



4. Click the **Generate Stress Clips** button.

5. A pop-up window appears. Click **Generate**.

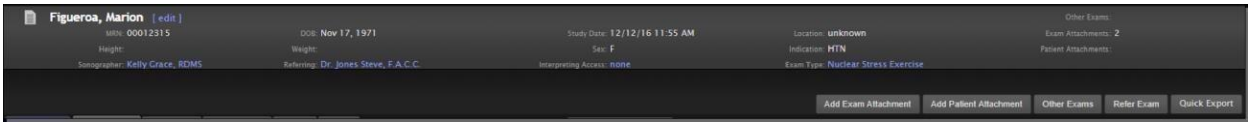


Wait for the stress clips to generate. UltraLinQ combines the eight clips into sets of two. New clips appear first in the thumbnail list. When the new clips are selected, they play in sync and display a timestamp.

7.7.17 Referring Exams

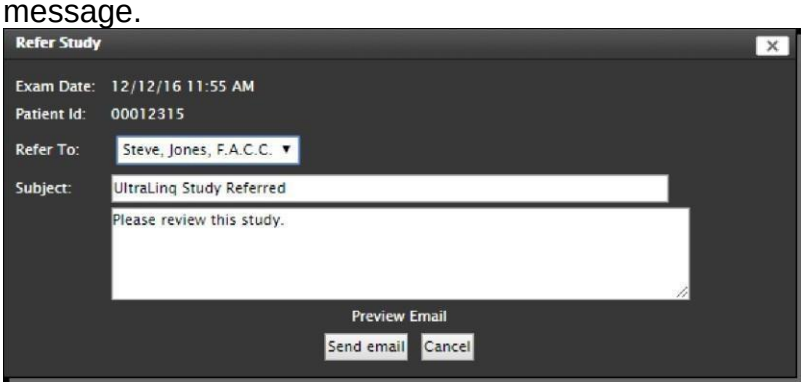
Refer an exam with a message to another UltraLinQ user by following these steps.

From the Exam page, make sure patient demographics, exam information, and additional options are visible. Click Show Patient/Exam Info to show these fields.

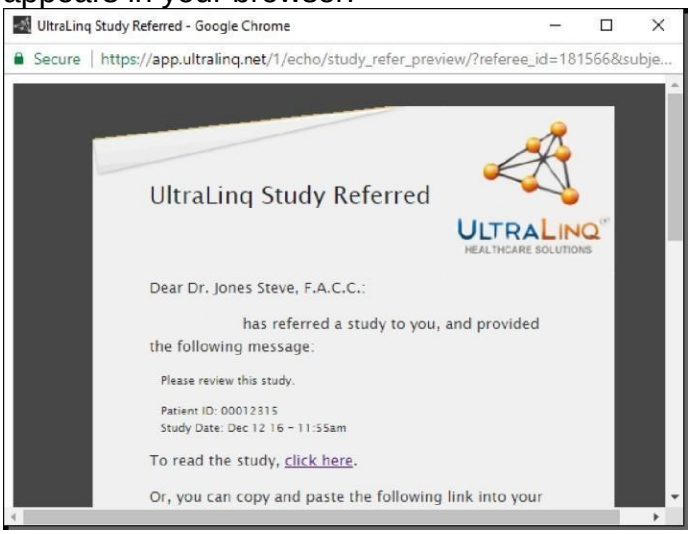


From the additional options, click Refer Exam.

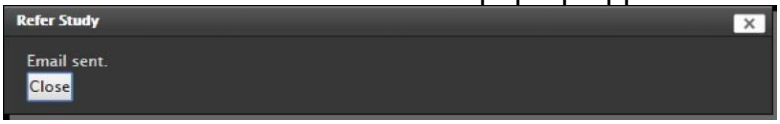
A pop-up window appears. Select the recipient from the drop-down list, and enter a message.



To check your email, click **Preview Email**. A pop-up window showing the email appears in your browser.



5. Click **Send email**. A confirmation pop-up appears.



7.7.18 Exporting Exams

NOTICE: Exports are automatically removed from UltraLinQ after 15 days. However, once you download an export, it is available locally on your computer.

Export exams for local archiving. Exported exams can be viewed with UltraLinQ's Offline Viewer. The Offline Viewer is included as an application in export packages.

All users can export exams one at a time by Patient Exam Export. Study administrators can export multiple exams by using Administrator Export.

Exports can be generated in ISO and ZIP formats. DICOM files can also be exported in addition to an ISO or ZIP export. By default, exams are exported as ISO files. ISO files are container files used to burn CDs and DVDs.

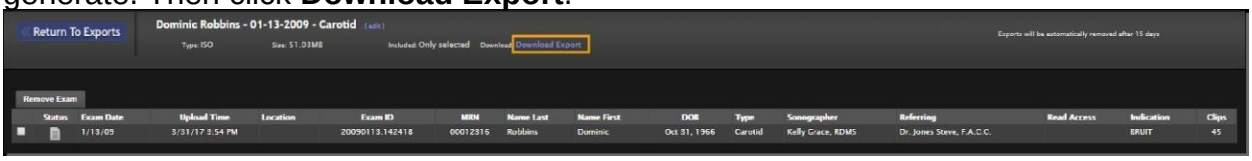
Note: You must have access to the exam you want to export.

7.7.18.1 Using Patient Exam Export

NOTICE: Patient Exam Export generates an export in ISO format.

On the Exam page, make sure the patient and exam information fields are visible by clicking Show Patient/Exam Info.

Click Export. UltraLinQ redirects to the Export page. Wait for the exportto generate. Then click **Download Export**.



7.7.18.2 Using Administrator Export

Administrator Export exports multiple exams at once. Only Study administrators can use administrator export.

7.7.18.3 Exporting DICOM Files

You can add DICOM files to an ISO or ZIP export.

Note: When DICOM files are included, the size of the export package increases. This can affect how many exams can be burned onto a CD or DVD. Find the estimated file size for an export on the Export page.

In Patient Exam Export and Administrator Export, you must manually check the option Include DICOM files.

DICOM files must be imported into a third-party DICOM viewer. UltraLinQ does not include a DICOM viewer in the export package.

The recommended DICOM viewer is the browser-based DICOM Viewer Online at **http://www.ofoct.com/viewer/dicom-viewer-online.html**. **Drag** and drop the DICOM files from your export package into the online viewer.

7.7.18.4 Burning Exams onto CDs and DVDs

NOTICE: Do not copy the ISO file to the CD—this does not burn the file to the CD. Burning the ISO file to the CD allows the exam to be viewed within a designated viewer.

When burning exams onto CDs or DVDs, export exams in ISO format. ISO format is supported by Windows 7, Windows 10, and Mac OS .

Burning CDs and DVDs in Windows 7 and 10

Insert a blank disc into your CD/DVD drive.

Open Windows Explorer, and locate the ISO file. Right click the ISO file. Click **Burn disc image**.

From the **Disc burner** drop-down list, select the CD/DVD drive with the blank disc.

Optional: Check the **Verify disc after burning** option to make sure the disc burned without errors.

Click **Burn**.

Click **Close** after your disc is finished burning.

Burning CDs and DVDs in Mac OS

Insert a blank disc into your CD/DVD drive.

Open a Finder window, and locate the ISO file. Right click the ISO file. Click **Burn Disk Image**.

Click **Burn**.

Click **Close** after your disc is finished burning.

7.7.18.5 Downloading a Single Image or Clip

Note: Screenshots of icons in this section are from the HTML5 viewer. Appearances may vary in the Flash viewer.

To download a single image or clip from an exam, select the image or clip in the Clips & Stills tab of the Exam page.

Click the Download icon to download the image or clip.

In the HTML5 viewer, right click an image or clip to save it to your device.

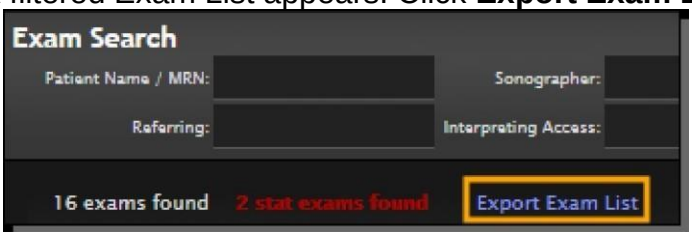
7.7.18.6 Exporting the Exam List

Create a report containing data from the Exam List by following these steps.

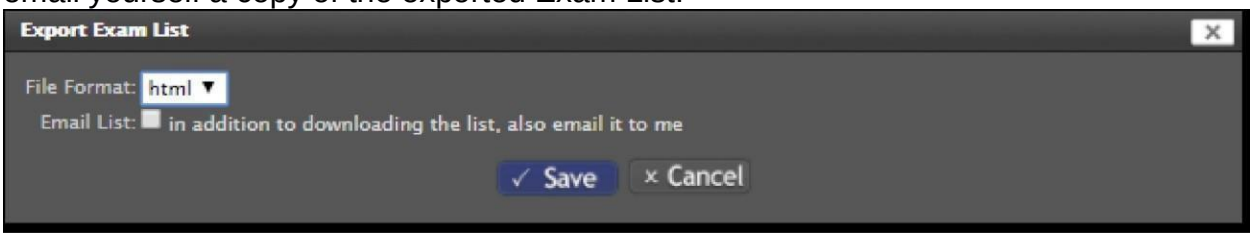
Note: Exam List data is limited by search filters and your account permissions.

Filter the Exam List to display the exams you want to export. Set desired criteria in the Exam Search bar, and click **Search**.

A filtered Exam List appears. Click **Export Exam List**.



A pop-up window appears. Select the file format for the exported Exam List from the drop-down list: HTML, CSV, or PDF. You can also check the Email List box to email yourself a copy of the exported Exam List.

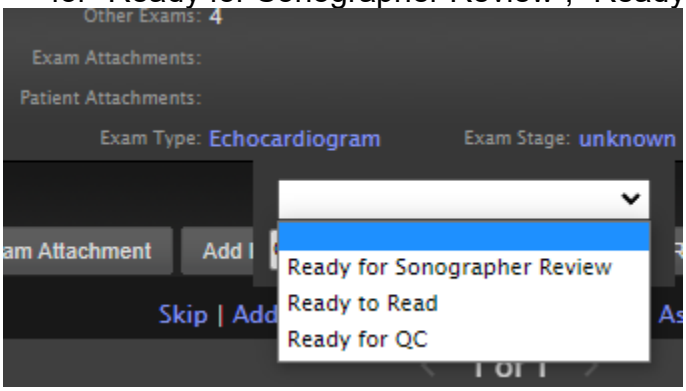


Click **Save**.

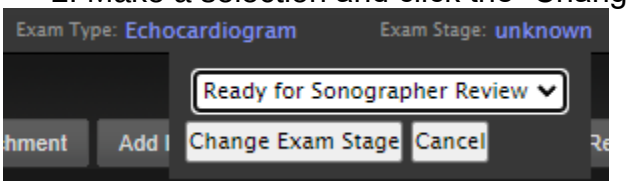
7.7.19 Changing Exam Stage

The Exam Stage can be changed at any point, regardless of an exam's status.

1. Click the link next to the Exam Stage field. A drop down will display with options for "Ready for Sonographer Review", "Ready to Read", "Ready for QC".



2. Make a selection and click the "Change Exam Stage" button.



7.8 UltraLinQ Worksheet Tasks

WARNING!

Users must carefully review all information for proper data population and clinical accuracy.

WARNING!

It is the physician's responsibility to make diagnoses or interpretations based on all available information. UltraLinQ is not intended to perform diagnosis. UltraLinQ Healthcare Solutions, Inc. will not be responsible for diagnoses or interpretations made by physicians.

NOTICE: Any changes in the worksheet must be saved to appear in the Exam report.

Access an exam's worksheet through the Worksheet tab on the Exam page.

Review measurements and report findings and conclusions in the worksheet.

From the Worksheet tab, you can:

- Complete an exam's worksheet.
- Add comments and presets to an exam.
- Select images for the exam's report.
- Pull prior reports.
- Print an exam's worksheet.
- Dictate findings with third-party software.

7.8.1 Completing Worksheets

WARNING!

Users must carefully review all information for proper data population and clinical accuracy.

WARNING!

It is the physician's responsibility to make diagnoses or interpretations based on all available information. UltraLinQ is not intended to perform diagnosis. UltraLinQ Healthcare Solutions, Inc. will not be responsible for diagnoses or interpretations made by physicians.

NOTICE: Any changes in the worksheet must be saved to appear in the exam report. However, not all worksheet fields appear in the report.

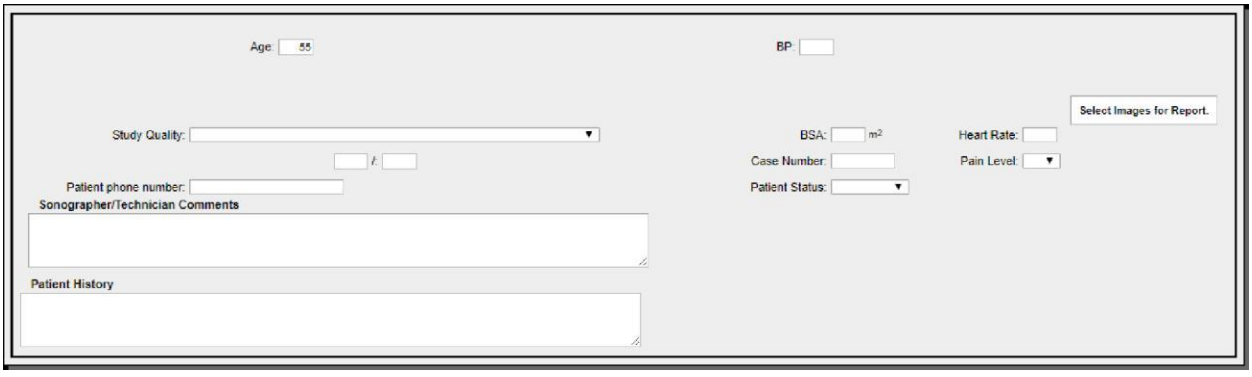
NOTICE: All measurements must be numeric characters only.

Worksheet fields vary by exam type.

Complete an exam's worksheet by following these steps.

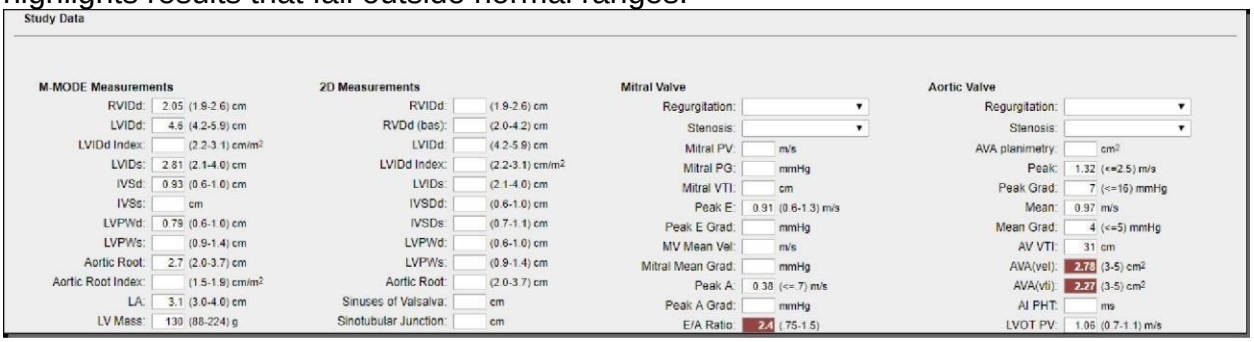
Navigate to the Worksheet tab on the Exam page.

Enter information in the worksheet's header section.

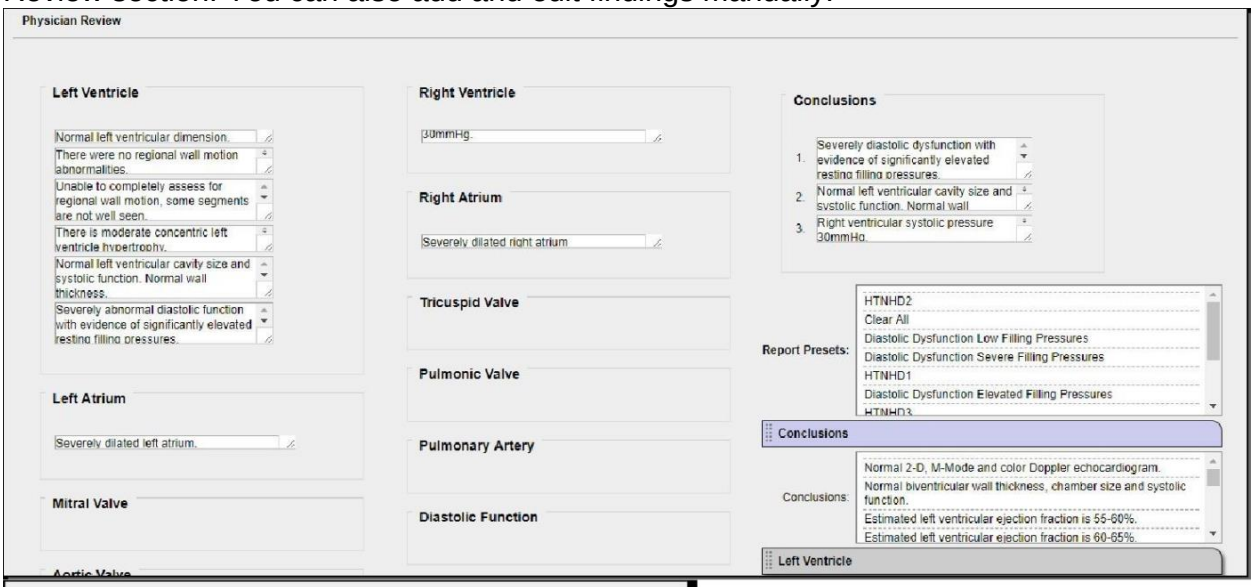


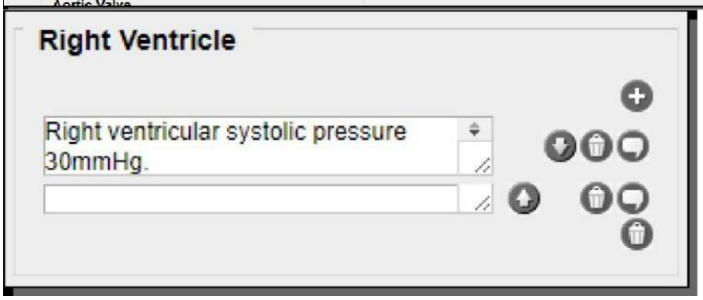
Click Select Images for Report. to include images with the exam's report.

In the Study Data section, measurements may be prepopulated by the imaging modality. Check existing measurements and add any missing measurements manually. When normal ranges are included on the worksheet, UltraLinQ highlights results that fall outside normal ranges.



In the Physician Review section, findings are organized by anatomical categories. Add findings by clicking on existing presets and comments. Expand existing presets and comments by clicking on the name of the category on the right side of the Physician Review section. You can also add and edit findings manually.





Hovering over an anatomical category with your cursor shows additional options.

Click ⊕ to add a new comment box to an anatomical category.

Click 🗨 to copy a comment to the Conclusions category.

Click to move a comment up, and click to move a comment down.

Click next to a comment to delete that comment. Click below the comments to delete all comments in the anatomical category.

In the CPT and ICD Codes section, add billing codes. Click on a CPT code in the CPT window on the right side of the section to add it to the CPT category automatically. Type a keyword or ICD code in the ICD search bar on the right side of the section, and click on the result to add it to the ICD-10 category automatically.

Note: An account administrator can customize a quick list of up to five ICD-10 codes for an exam type.

799268664. Click **Save Worksheet** at the top or bottom of the page. UltraLinQ directs you to the Report tab automatically.

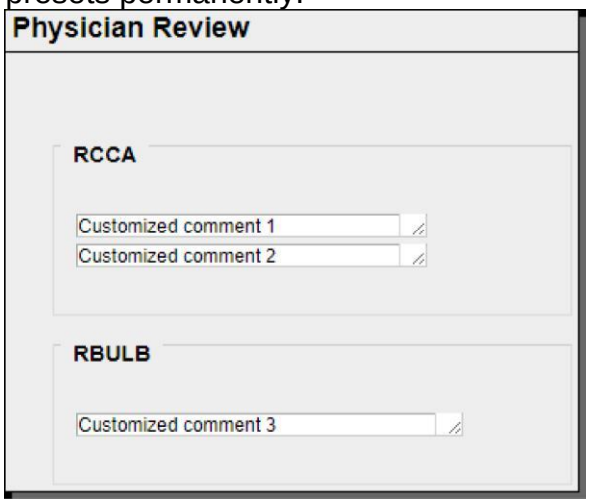
7.8.2 Adding Comments and Presets

When completing a worksheet, you can populate findings and conclusions with reusable comments and presets. These comments and presets can be customized.

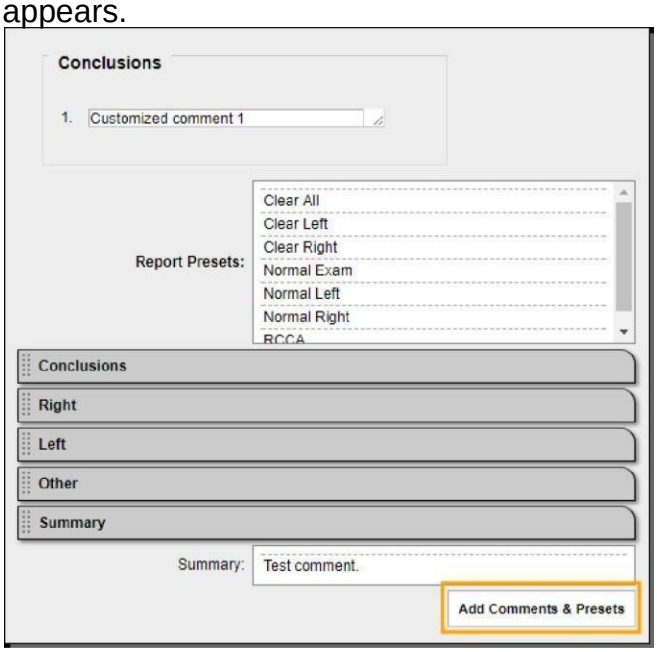
Add your custom comments and presets to the worksheet by following these steps.

Navigate to the Worksheet tab on the Exam page.

When completing the Physician Review section of the worksheet, type in comments you would like to add to the reusable comments and presets permanently.

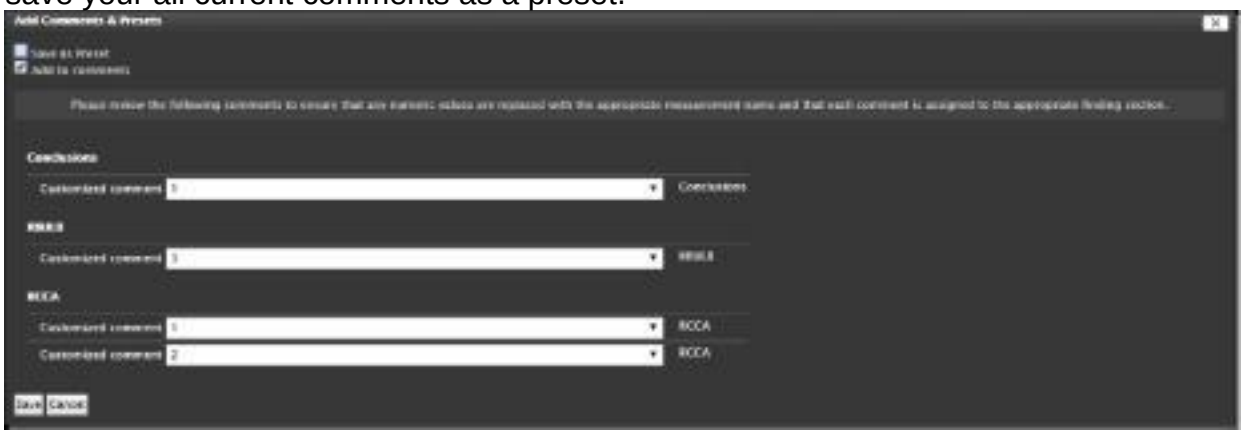


799268720. Before saving the worksheet, Click **Add Comments & Presets** underneath the existing comments and presets on the right side of the screen. A pop-up window appears.



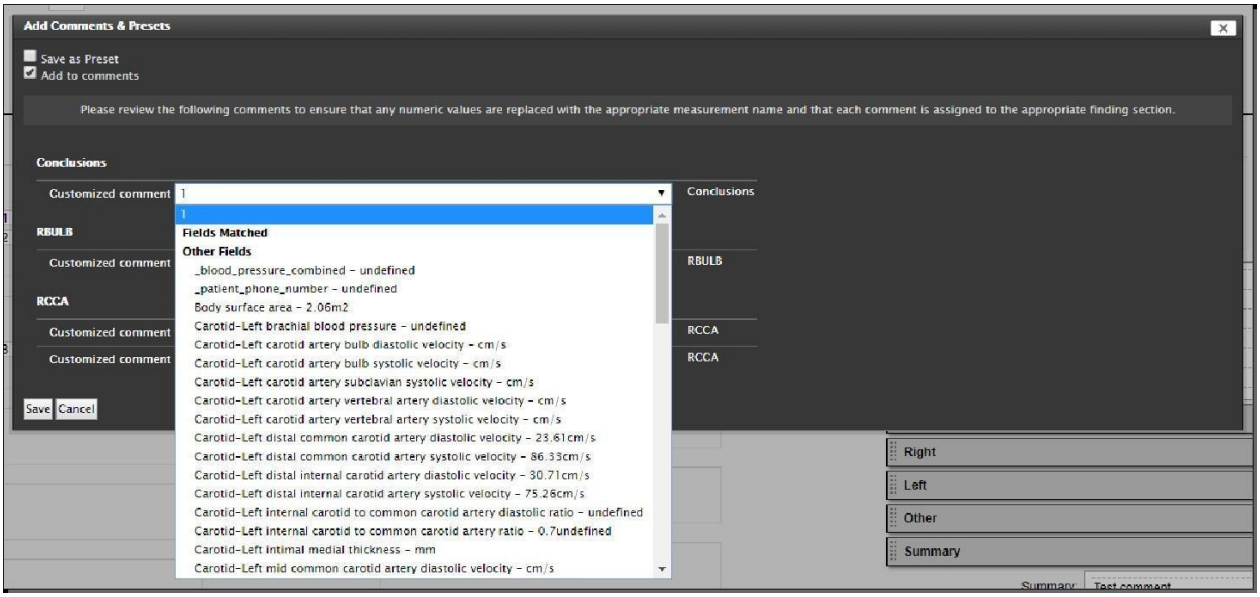
799268721. The box by **Add to comments** is checked by default. This saves your custom comments to the appropriate categories. Check the box by **Save as Preset** to

save your all current comments as a preset.



799268722. Review your comments to make sure any numbers are replaced with the appropriate measurement name. Make sure each number is assigned to the appropriate findings category by clicking the drop-down list.

Note: UltraLinQ displays any fields that match the measurement exactly under the **Fields Matched** heading. You can select any other field from the worksheet under the **Other Fields** heading. You can also select the number itself (the first option in the list) to make it your default.



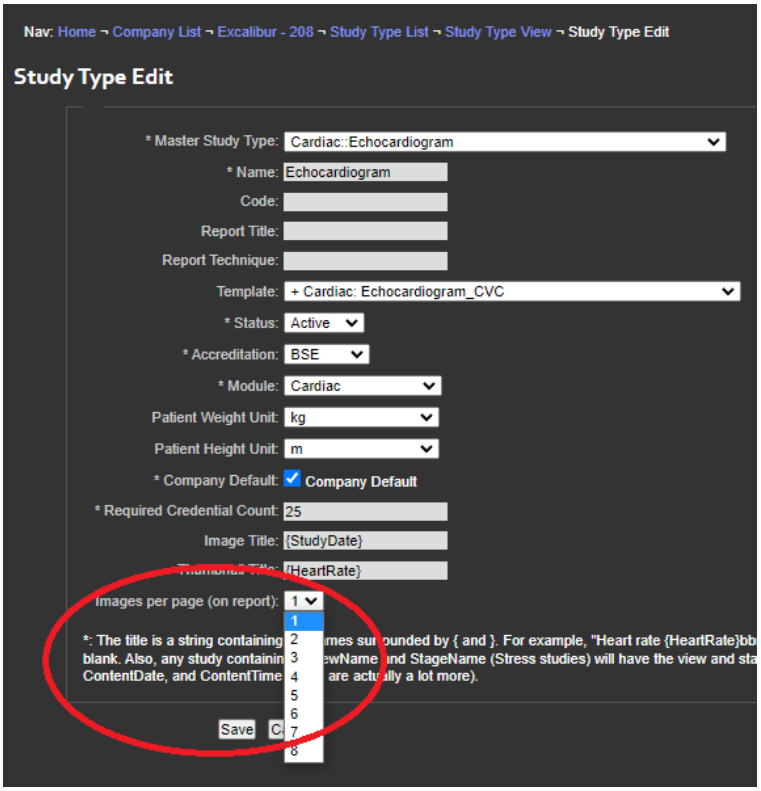
799268723. Click **Save**.

7.8.3 Selecting Images for the Exam Report

WARNING!

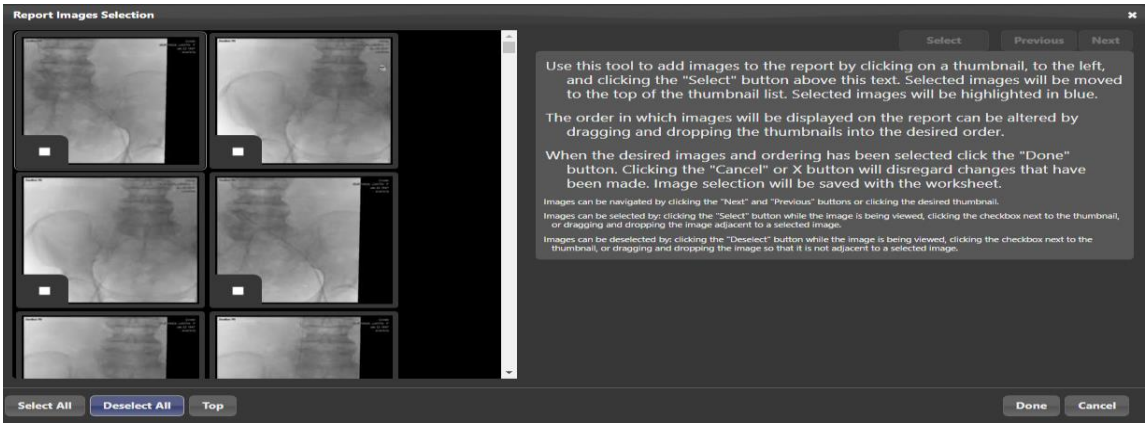
Clinicians must carefully review exams to determine acceptable image quality prior to use.

Note: When attempting to view a specific number of images per page on the PDF Report and Print Preview, a Support/Super User must set this up by Exam Type.
Navigate to Admin > Exam Types. Select an Exam Type, then click “Edit Study Type”.
The option to display a specific number of images per page will be located at the bottom (Images Per Page (On Report)).



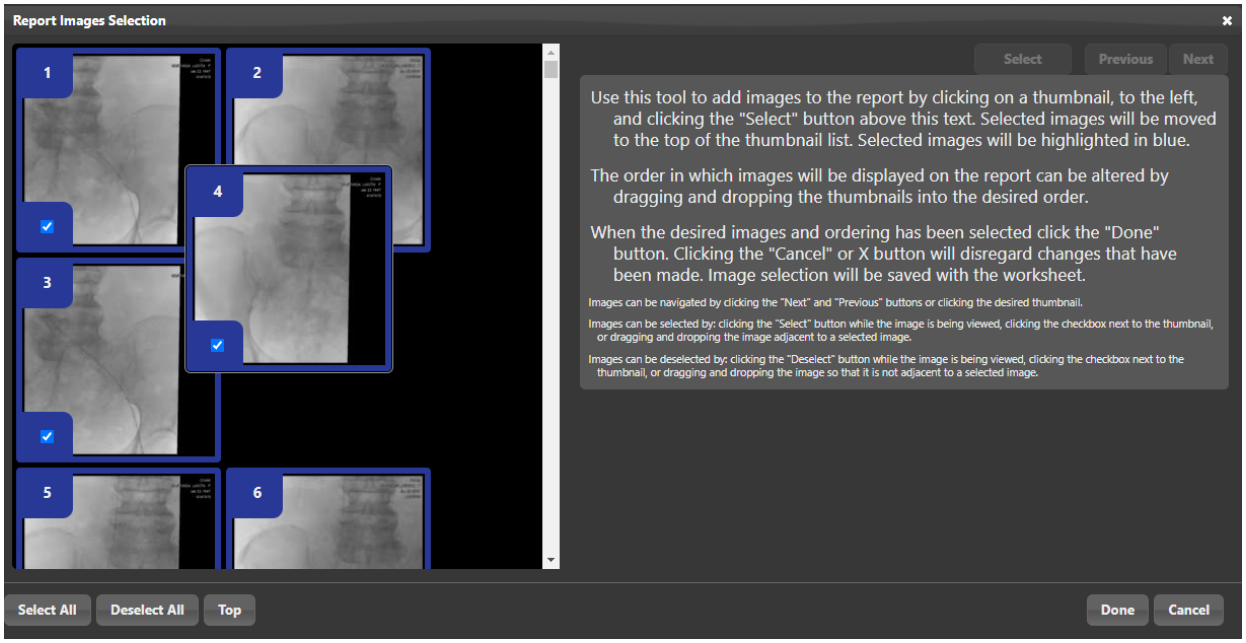
Select images to include with an exam's report by following these steps.

1. From the Worksheet tab on the Exam page, click **Select Images for Report** on the right side of the worksheet's header section.
2. A pop-up window appears, showing images from the exam.



3. Click an image's thumbnail to view it in the right panel. You can navigate between images by clicking thumbnails or by clicking **Previous** or **Next**.

4. To select an image, check the box to the left of its thumbnail, or click Select above the right panel. Selected images are highlighted in blue.
5. When selecting multiple images, rearrange their order by dragging and dropping the thumbnails in the left panel. Select all images by clicking the “Select All” button.



6. Deselect an image by unchecking the box to the left of its thumbnail or clicking Deselect. Deselect all images by clicking Deselect All on the bottom of the left panel.
7. When you are finished selecting images to include with the exam's report, click Done on the bottom of the right panel.

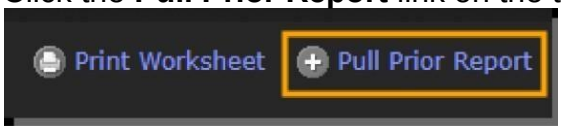
7.8.4 Pulling Prior Reports

UltraLinQ can import conclusions, findings, and ICD-10 codes from the Physician Review section of an earlier exam's worksheet into another exam's worksheet. Reports can only be pulled for finalized exams of the same type and of the same patient.

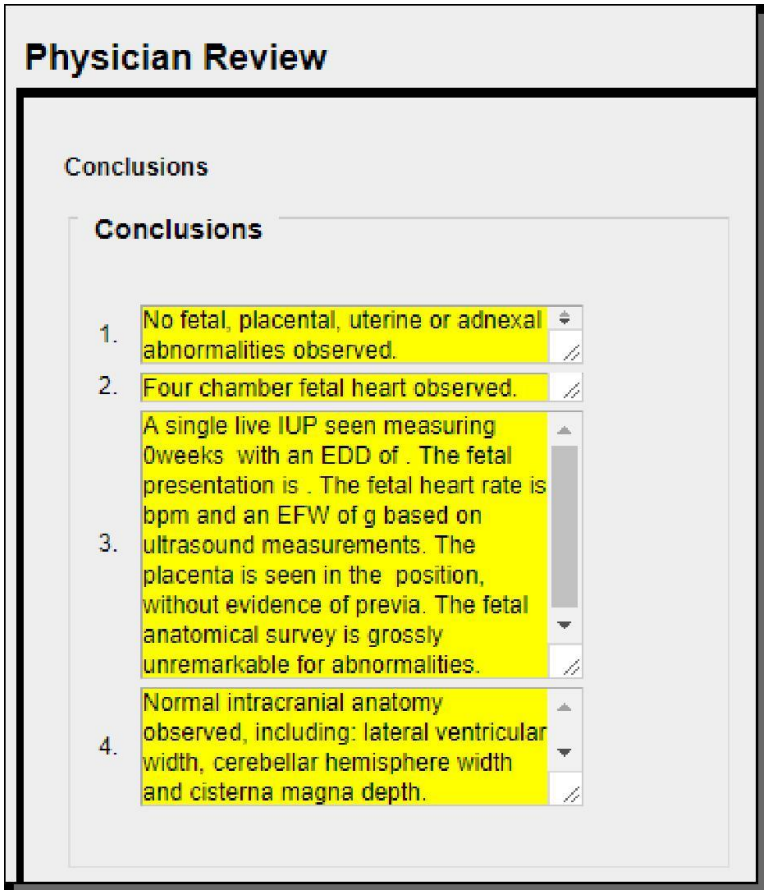
Import the physician review of an earlier exam into a current worksheet by following these steps.

Navigate to the Worksheet tab on the Exam page.

Click the **Pull Prior Report** link on the top right, above the worksheet.



The comments from the most recent exam of this type for this patient import into the Physician Review section of the worksheet. Note that imported comments, including conclusions, findings, and ICD-10 codes, have a yellow background until the worksheet is saved.



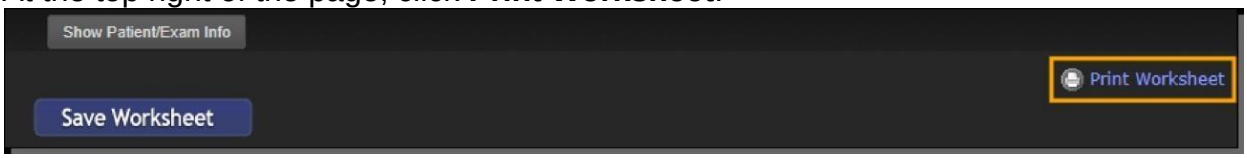
If needed, edit imported comments, and add new comments. Edited and added comments have the default white background.

7.8.5 Printing Worksheets

Print an exam's worksheet by following these steps.

Navigate to the Worksheet tab on the Exam page.

At the top right of the page, click **Print Worksheet**.



7.8.6 Dictating with Third-Party Software

You can dictate directly into exam worksheets using dictation software.

Dictation into text fields using Dragon requires Rich Internet Application support from your web browser.

7.9 UltraLinQ Report Tasks

WARNING!

Users must carefully review all information for proper data population and clinical accuracy.

WARNING!

It is the physician's responsibility to make diagnoses or interpretations based on all available information. UltraLinQ is not intended to perform diagnosis. UltraLinQ Healthcare Solutions, Inc. will not be responsible for diagnoses or interpretations made by physicians.

Access the exam's report through the Report tab on the Exam page. Saving an exam's worksheet automatically directs you to the Report tab.

From the Report tab, you can:

- Finalize exams.
- Print exam reports.
- Download a finalized exam report.
- Amend exams.
- Use Batch mode.

7.9.1 Finalizing Exams

WARNING!

Users must carefully review all information for proper data population and clinical accuracy.

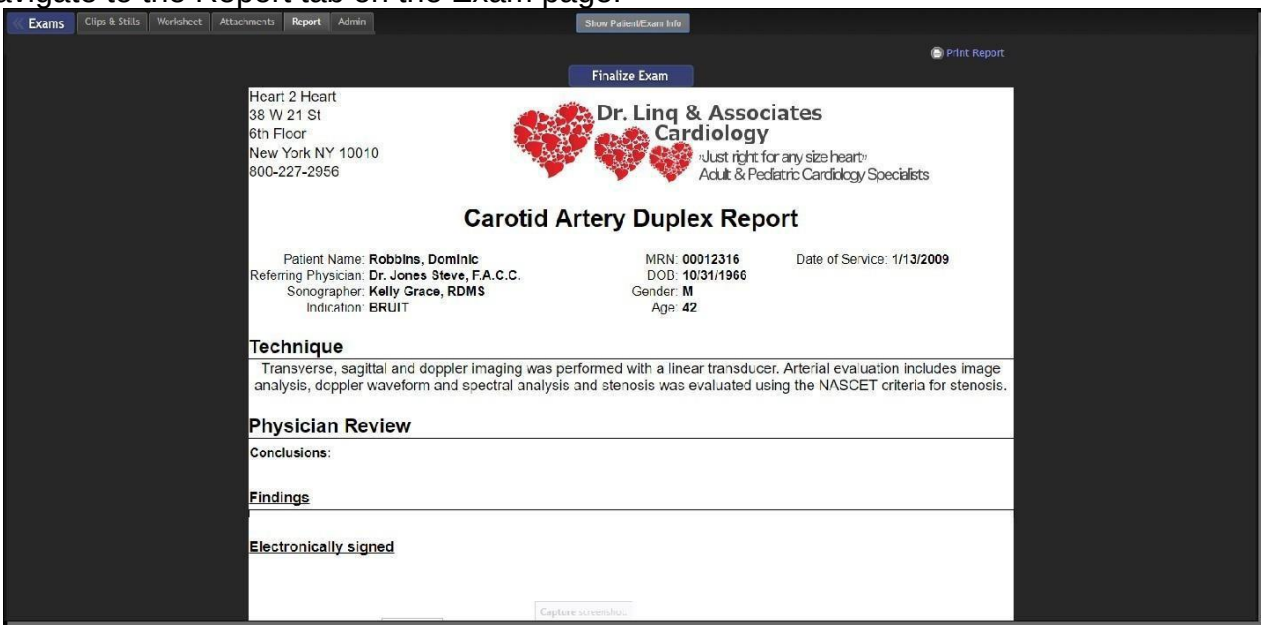
WARNING!

It is the physician's responsibility to make diagnoses or interpretations based on all available information. UltraLinQ is not intended to perform diagnosis. UltraLinQ Healthcare Solutions, Inc. will not be responsible for diagnoses or interpretations made by physicians.

Interpreting physicians assigned to an exam can finalize that exam.

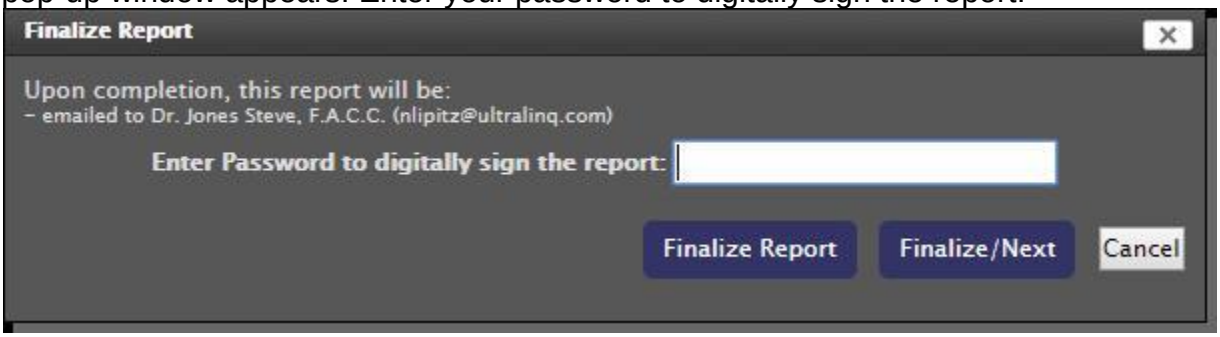
Finalize an exam by following these steps.

Navigate to the Report tab on the Exam page.



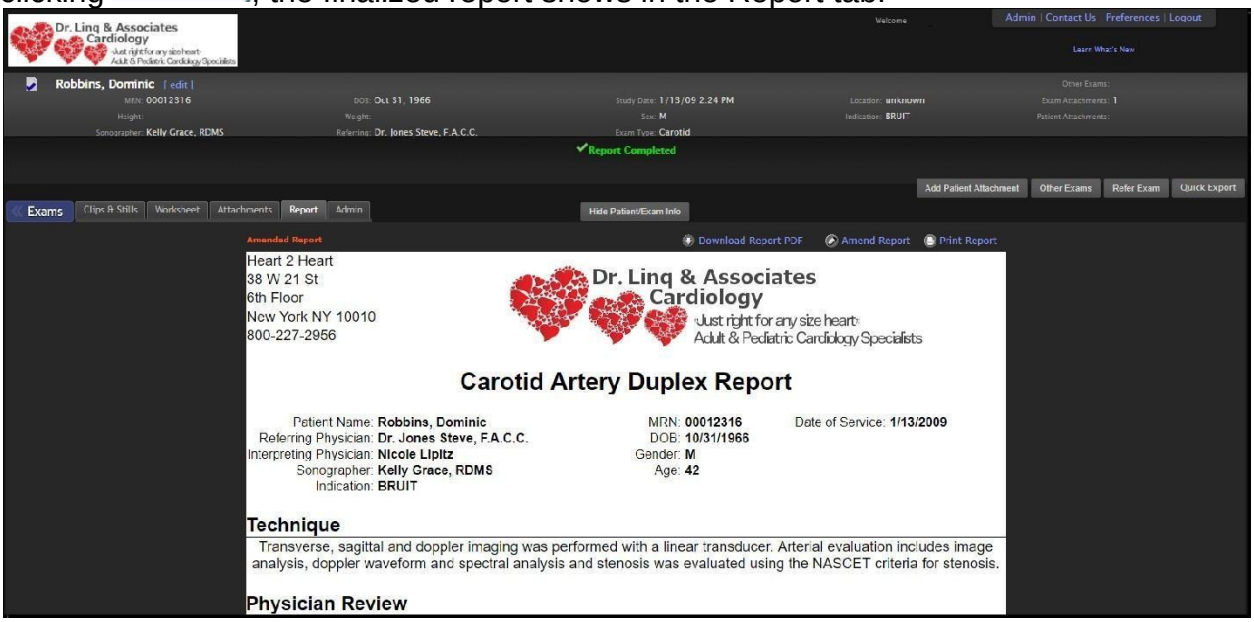
Click at the top or bottom of the report.

A pop-up window appears. Enter your password to digitally sign the report.



Click Finalize Report to finalize this report. Click Finalize/Next to finalize this report and have UltraLinQ redirect to the next exam that needs to be finalized.

After clicking Finalize Report, the finalized report shows in the Report tab.



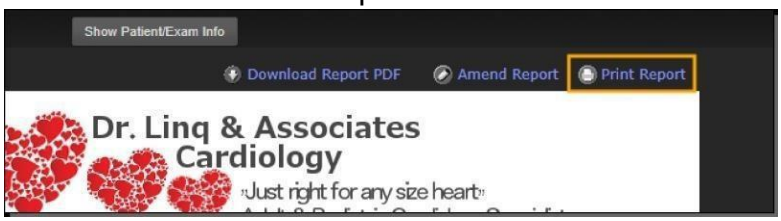
7.9.2 Printing Exam Reports

Print an exam's report by following these steps.

Navigate to the Report tab on the Exam page.

Click

. You can print both finalized and unfinalized reports.



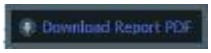
7.9.3 Downloading Finalized Exam Reports

Download a finalized exam report by following these steps.

From the Exam List, set the Exam Status to Finalized or Any in the Exam Search bar. Click **Search**.

A filtered list of finalized exams appears. Click the patient's name for the exam report you want to view.

Navigate to the Report tab on the Exam page.

Click 

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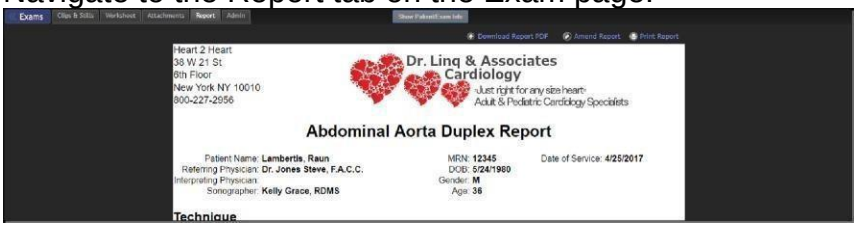
7.9.4 Amending Exams

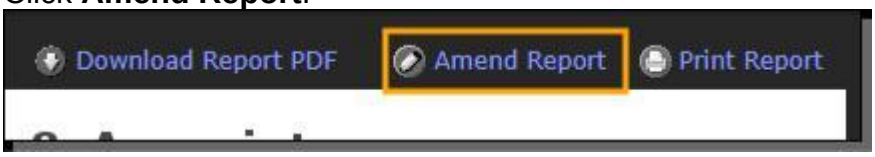
Finalized exams can be amended. Only the physician who has read the exam can amend it. An amended report must be signed by the physician to generate a new report. The new report contains copies of all previous versions of the report.

Amend an exam by following these steps.

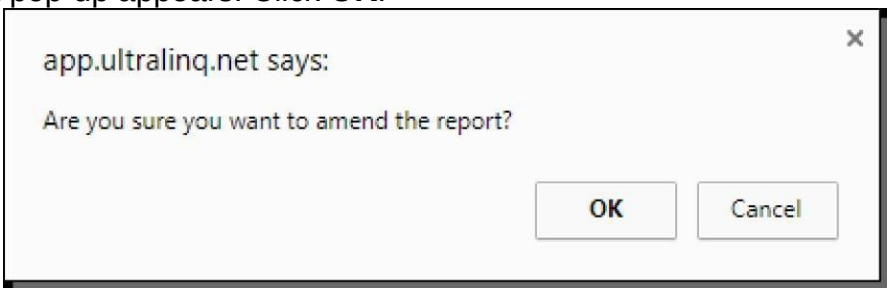
Navigate to the Report tab on the Exam page.



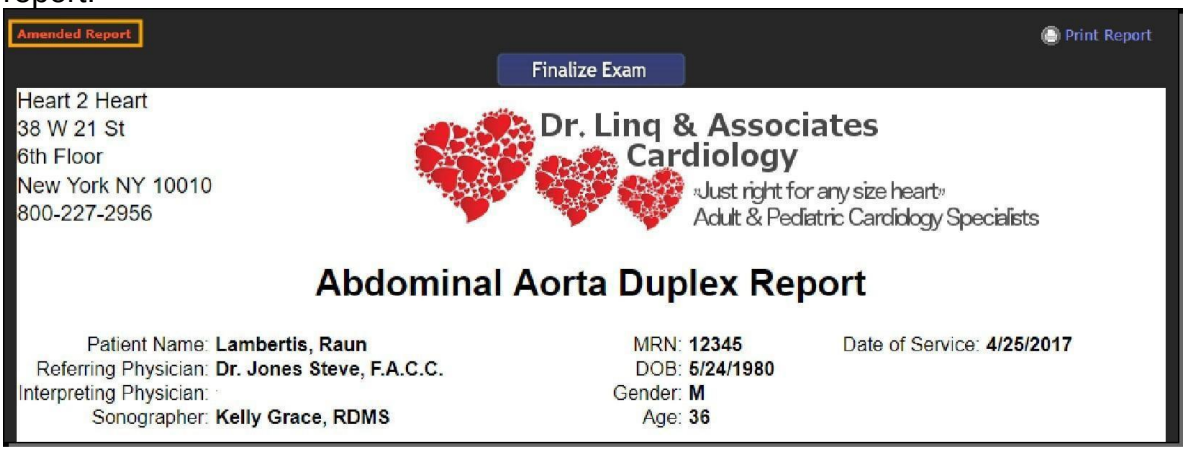
Click **Amend Report**.



A pop-up appears. Click **OK**.



The study is marked unread. An "Amended Report" label appears above the report.



7.9.5 Using Batch Mode

Batch mode allows physicians to sign multiple exams while only entering their password once. Batch mode must be enabled by Technical Services.

When reading an exam on the Report tab of the Exam page, Batch mode is an alternative to the **Finalize Exam** button. Users with Batch mode enabled see links at the top of the Worksheet and Report tabs that can add or remove exams to a batch.

Use Batch mode by following these steps.

Add exams to the batch. From the Worksheet or Report tab of the Exam page, notice the **Skip** and **Add and Next** links at the top of the page.

Skip directs you to the next assigned exam without adding the current exam to the batch.

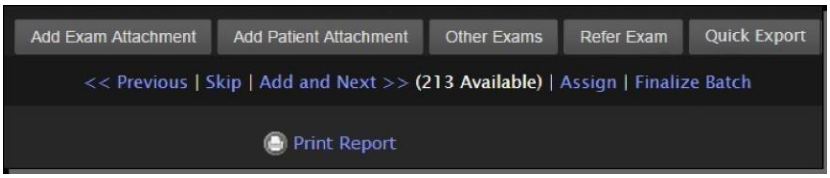
Add and Next adds the current exam to the batch, saves its worksheet, and then directs you to the next assigned exam.

After one exam is added to a batch, a **Previous** link appears. **Previous** allows you to go back to earlier exams.

After two or more exams are added to a batch, **Assign** and **Finalize Batch** links appear.

Assign allows you to transfer a batch to a reviewer for over-reading. o

Finalize Batch allows you to assign a digital signature to a batch.



If work on a batch is stopped before finalization, return to the batch to remove exams or finalize the batch. Exams added to a batch appear in the Exam List with the B status. Click on an exam with the B status to navigate the exams in that batch and finalize the batch.

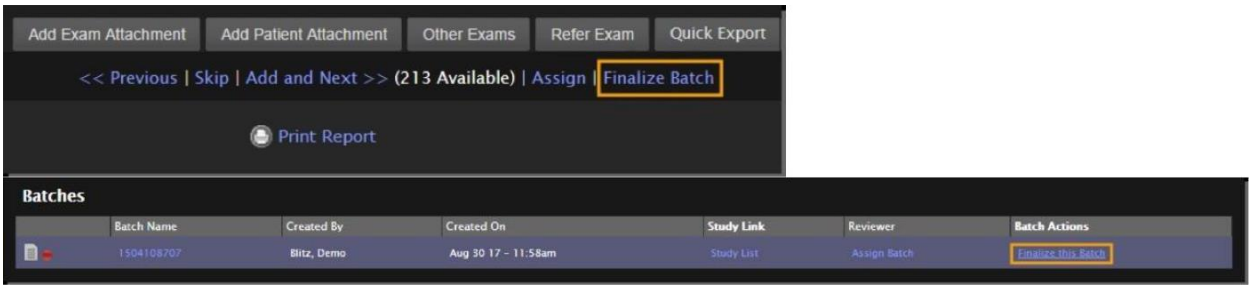
799269112. Click Batches ( ) to view all existing batches on the Batches page. On the Batches page, you can:

View a batch starting from the first exam.

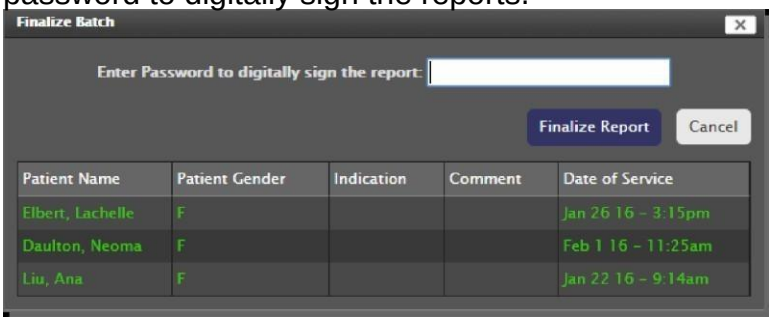
Assign a batch to a reviewer for over-reading.

Finalize a batch.

Finalize the batch. Click the **Finalize Batch** link on the Worksheet tab or Report tab, or click the **Finalize This Batch** link on the Batches page.



A pop-up appears, showing a list of all exams in the current batch. Enter your password to digitally sign the reports.



Click **Finalize Report**. All exams in the batch are now finalized.

7.10 Study Administrator Tasks

Study administrators can access the Admin menu on the Exam List.

As a study administrator, you can:

- Create exams.
- Delete exams.
- Activate deleted exams.
- Merge exams.
- Export multiple exams.
- Duplicate exams.

7.10.1 Creating Exams

Create new exams in UltraLinQ by following these steps.

From the Admin menu on the Exam List page, click Create Exam. A pop-up window appears.

Enter patient and exam information. The required patient information and exam information fields are:

- Last Name
- First Name
- Date of Birth
- Exam Type

Optional: Attach up to two files.

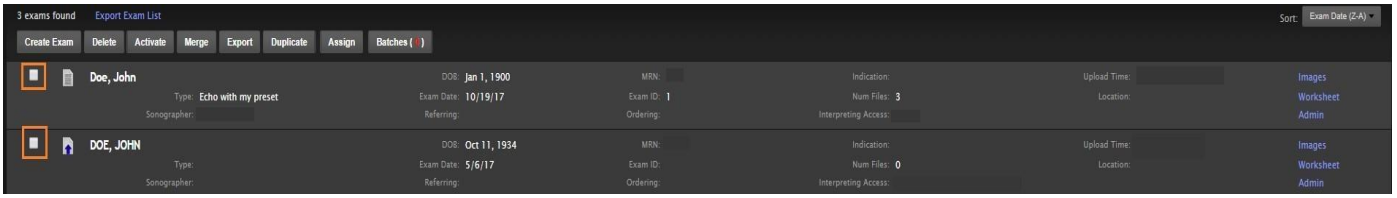
Click **Save**. UltraLinQ opens the Exam page for the new exam.

7.10.2 Deleting Exams

Exams are not immediately deleted in UltraLinQ. Deleting an exam hides it from the default Exam List for 30 days and then it is permanently purged.

Delete exams by following these steps:

From the Exam List, check the boxes on the left-hand side of the individual exams to be deleted.



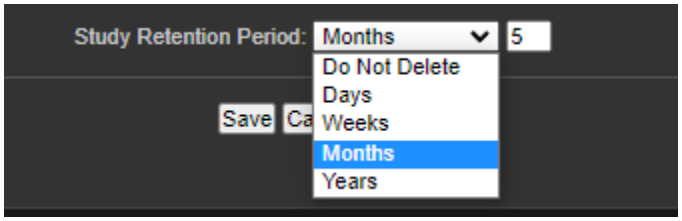
Click in the Admin menu. A pop-up window appears.

Click **Save**. The deleted exams are now hidden from the Exam List for 30 days. View deleted exams that have not yet been purged by filtering for the "**Deleted**" Exam Status in the Exam Search bar. You can restore deleted exams by activating them.

Note: Additionally, Support/Super Users will be able to set a **Study Retention Period** within the Allocations section.

There users will be able to set a length of time from a study's creation/upload date, that it will remain on the exam list.

When a study surpasses the set Study Retention length, it will be moved to the purge queue where it will remain for 30 days until it is permanently purged. The user will have the option to set a number of days, weeks, months, or years. There is also a "Do Not Delete" option which will be turned on by default.



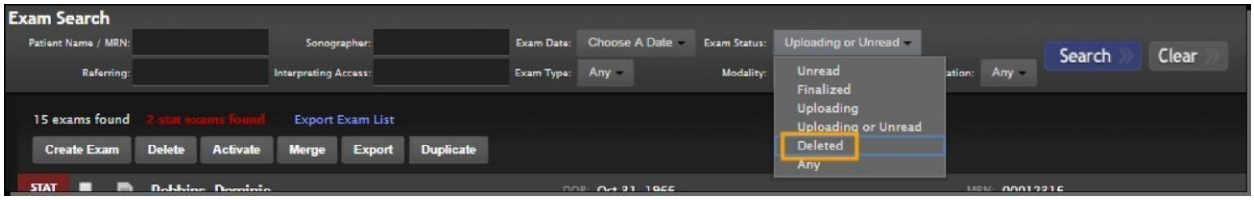
7.10.3 Activating Deleted Exams

The option to activate an exam is only available within the 30-day window following its deletion.

Activate deleted exams by following these steps:

Note: A user must have the "Study Admin" permission to delete or activate Exams.

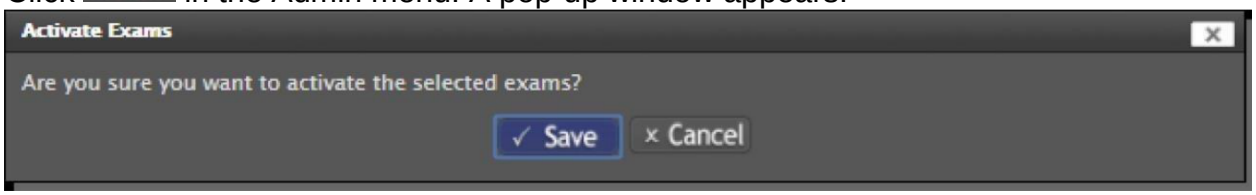
From the Exam List page, find the Exam Status drop-down list in the Exam Search bar. Select **Deleted**.



Click **Search**.

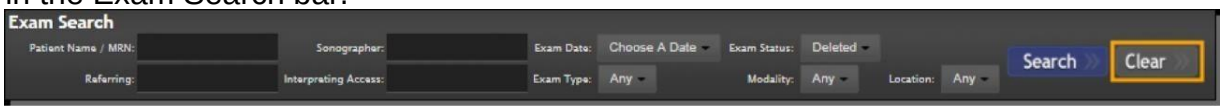
Deleted exams have the status icon. Check the boxes next to the deleted exams you want to activate.

Click Activate in the Admin menu. A pop-up window appears.



Click **Save**.

To view the newly activated exams as part of the default Exam List, click **Clear** in the Exam Search bar.



7.10.4 Merging Exams

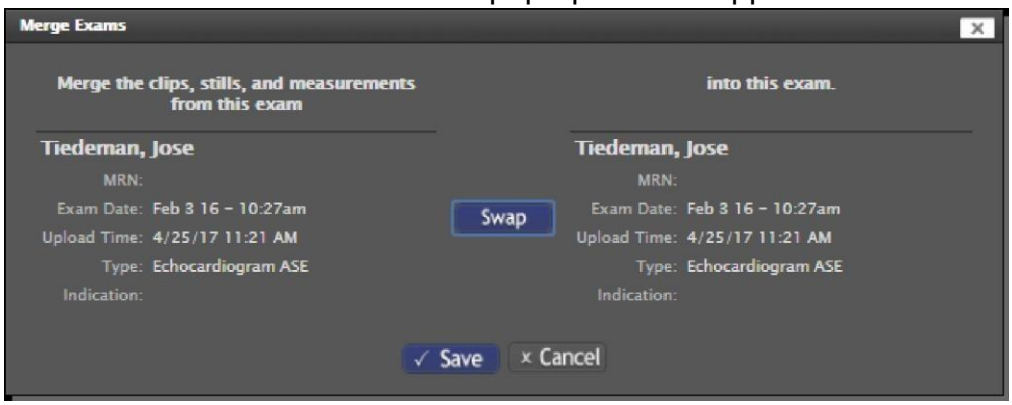
NOTICE: Do not merge exams from two different patients in UltraLinQ. Merging removes patient demographic data from the exam in the left column. Merging exams is irreversible. There is no way to undo a merge.

Merge Unread exams by following these steps.

Note: Only two exams can be merged at one time. If merging more than two exams, make multiple merges.

From the Exam List, check the boxes next to the exams to be merged.

Click Merge in the Admin menu. A pop-up window appears.



The information (including images and clips) from the exam in the left column will push into the exam in the right column. After merging, the images and clips from the exam in the right column will appear first. To switch the exams in the left and right columns, click **Swap**.

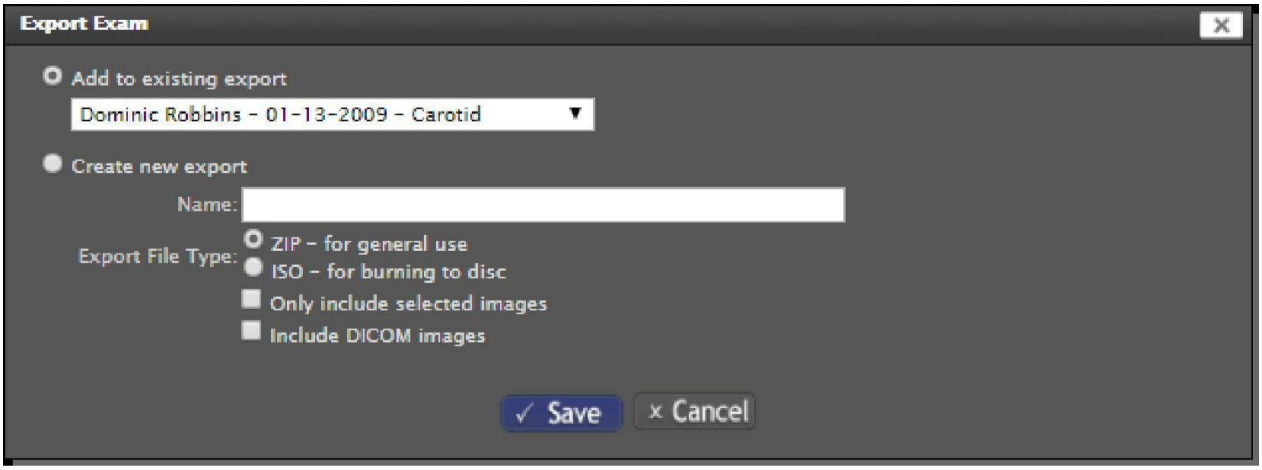
Click **Save**. The merged exam appears in the Exam List.

7.10.5 Exporting Multiple Exams (Administrator Export)

Export multiple exams at once with Administrator Export. Only study administrators can use Administrator Export.

From the Exam List, check the boxes next to the exams you want to export.

Click Export in the Admin menu. A pop-up window appears.



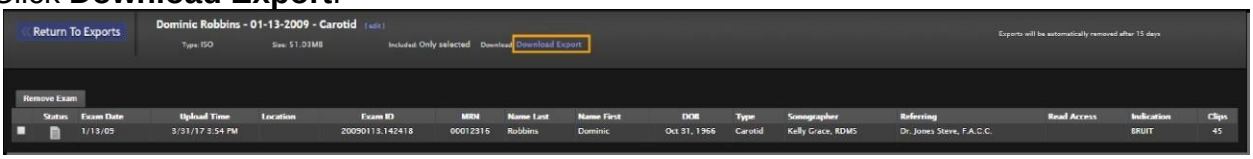
You can add the selected exam or exams to an existing export or create a new export. If adding to an existing export, select the existing export from the drop-down list. If creating a new export, enter a name for the file in the **Name**field.

Select whether to generate the export in ZIP or ISO format. You can also check options for only including selected images and including DICOM files.

Click **Save**.

UltraLinQ redirects to the Export page. Wait for the export to generate.

Click **Download Export**.



7.10.6 Duplicating Exams

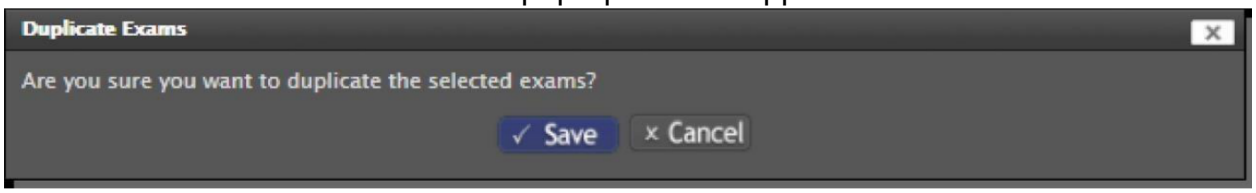
NOTICE: Duplicated exams **do not** have roles (ex. Sonographer, Referring Physician) assigned to them.

Create copies of exams by following these steps.

From the Exam List, check the boxes by the exam or exams to be duplicated.

Click

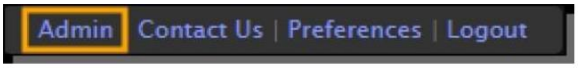
in the Admin menu. A pop-up window appears.



Click **Save**. The duplicated exam or exams appear in the Exam List.

7.11 Account Administrator Tasks

Account administrators can access the Admin page by clicking the header link on the top of any page in UltraLinQ.



As an account administrator, you can:

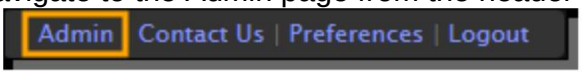
- Edit company information, including Session Timeout length
- Manage users and logins.
- Manage user groups.
- View the audit trail.
- Edit Assisted Reporting messages.
- Customize the ICD-10 quick list.
- Generate reports.
- Manage assets.
- Manage email and fax deliveries.
- Manage locations.
- Set workflow rules.
- Select the patient identification scheme.
- Configure the worksheet view.
- Integrate UltraLinQ with other applications.
- Assign exams.
- Mark reports as amendable.

7.11.1 Editing Company Information

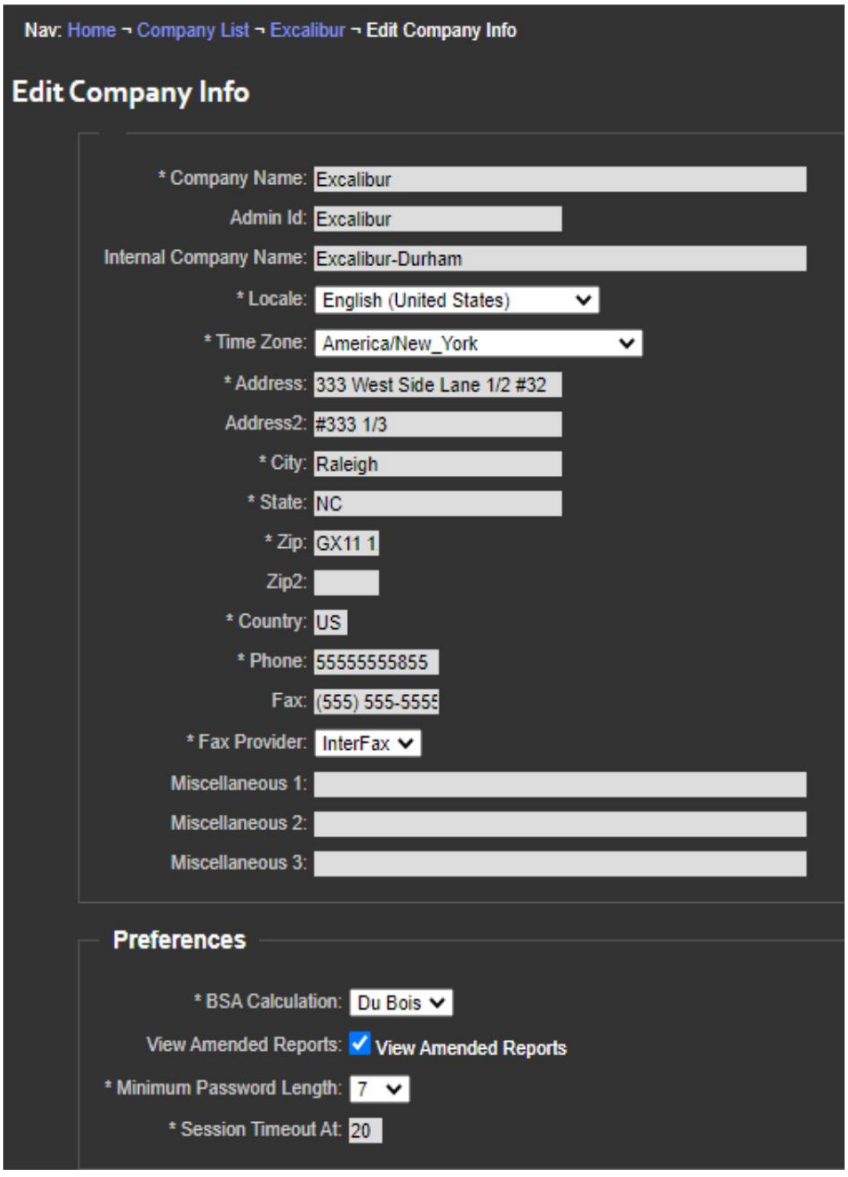
Account administrators can edit their organization's information.

Edit company information by following these steps.

Navigate to the Admin page from the header link at the top of the page.



Click the **Company Info** link.



Edit the fields as needed. Fields marked by a * are required.

Click **Save**.

7.11.2 Managing Users and Login Credentials

Account administrators can assign users different types, permissions, and roles. A user can be assigned to one or more of the following types, roles, and permissions.

User Types

Users are general UltraLinQ users who can be assigned roles and permissions.

Study administrators (Study Admin) can access the Admin menu on the Exam List page and the Admin tab on the Exam page.

Account administrators (Admin Login) can access the Admin page.

Study assigners (Study Assign) can assign exams regardless of their role. This user type is usually given to sonographers.

HIPAA officers can activate other users once they are added to UltraLinQ. Only UltraLinQ Technical Services can designate users as HIPAA officers.

User Roles

Sonographer: The user is identified as a sonographer and listed in the sonographer assignment list.

Interpreting Physician: The user is identified as an interpreting physician. Only interpreting physicians can finalize exams.

Offline Reporting: The user can mark a report as "completed offline."

Specify a Signature: An image of the physician's signature can appear next to their digital signature.

Referring/Ordering: the user is identified as the referring or ordering physician based on workflow rules or manual assignments.

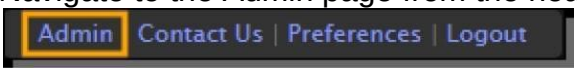
User Permissions

Access all exams: All exams are visible regardless the user's assignment. Only administrators should have this permission.

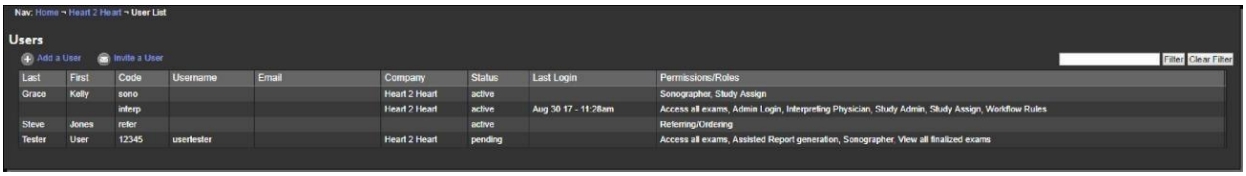
View all finalized exams: All exams with the Finalized status are visible regardless of the user's assignment.

Manage users and login credentials by following these steps.

Navigate to the Admin page from the header link at the top of the page.



Click the **Users** link.



To add a user directly, click **Add a User.**

Enter user information in the Info section. Fields marked by a * are required.

*Note:*When selecting an option in the Report Delivery Field, know that a corresponding workflow rule must be set to trigger report delivery. If a workflow rule is not set, the user does not receive reports.

Note: Check the **User may log in** box to allow the user to log into UltraLinQ. Not all users may log in—for example, referrring physicians may be added as a user so exams can be delivered to them, but they may not be able to log into UltraLinQ.

*Note:*When entering a password for a new user, note that UltraLinQ prompts the user to change their password when they log in for the first time.

Enter report header information in the Report Header Information section.

Assign general permissions to the user in the General Permissions section.

- Access all exams
- View all finalized exams
- Study Admin
- Admin Login
- Study Assign

Assign a role to the user in the Roles section.

Sonographer

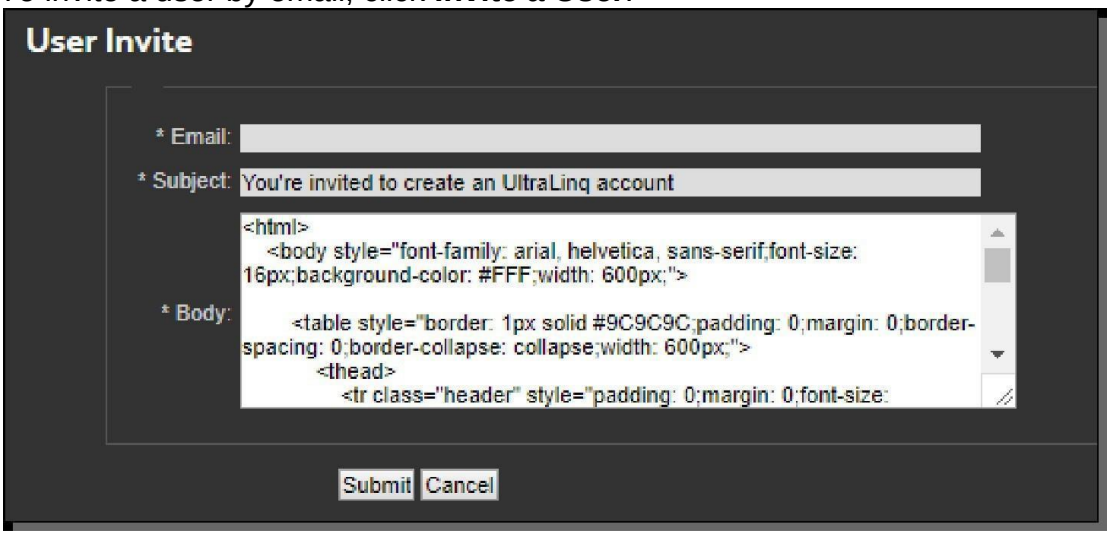
Reviewer

Interpreting Physician

Referring/Ordering

e. Click **Save**.

To invite a user by email, click **Invite a User**.

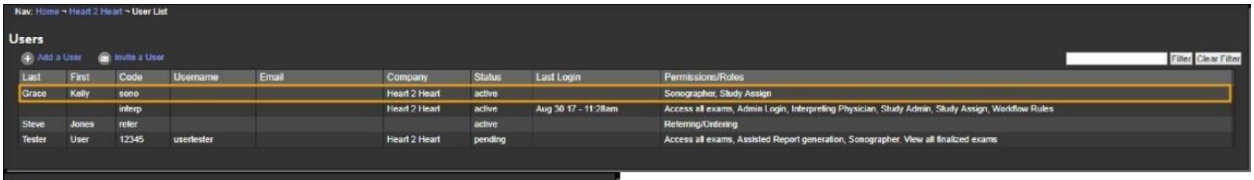


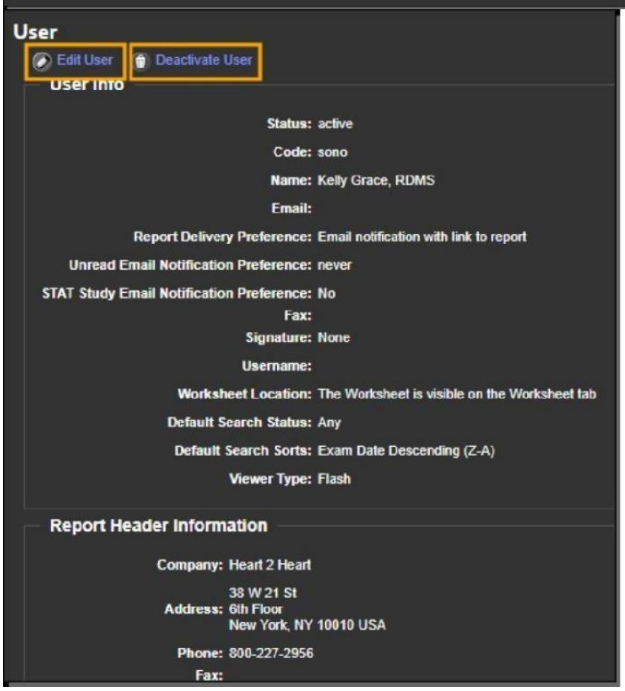
Enter the user's email address.

Optional: Edit the subject line.

Optional: Edit the message. UltraLinQ provides a default invitation message.

To edit or deactivate a user, click that user's row on the Users page. This takes you to that user's User page. Click **Edit User** to go the User Edit page and edit a user's information. Click **Deactivate User** to go to the User Deactivate page and deactivate the user.



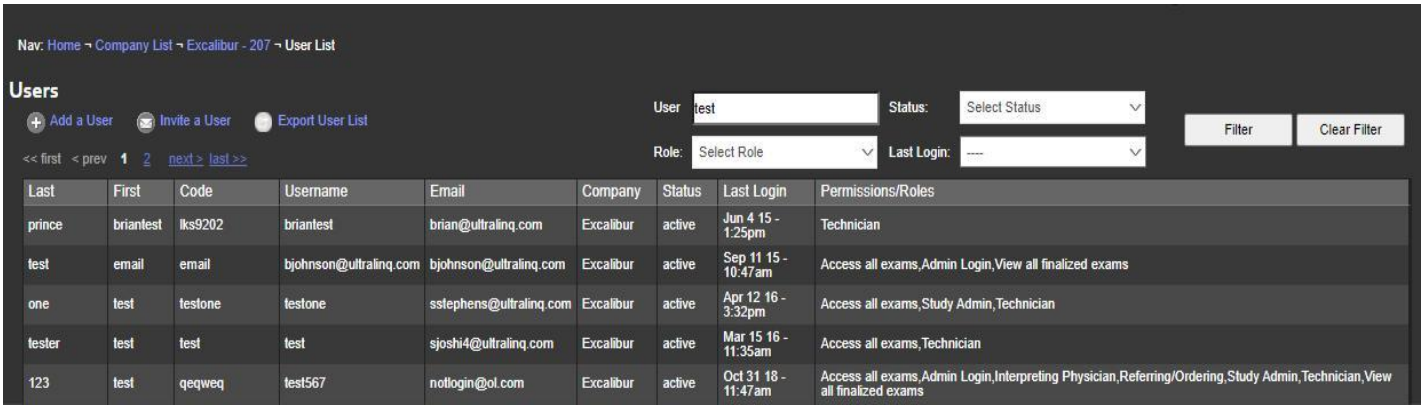


When editing a user, make changes on the User Edit page. Fields marked by a * are required. Click **Save**.

b. When deactivating a user, click **Deactivate** on the User Deactivate page.

To search for a user(s), select from specific criteria to filter search results.

Options to search by **User**, **Status**, **Role** and **Last Login** are available as filters for the User List.



To export the user search results, click the **Export User List** link. The user can enter a Name and select either a PDF or CSV format to download. The user also has the option to enter in email addresses into the email field to send the report. Click the **Generate** button to start the user list export download.

7.11.2.1 Linking Accounts

If a user needs access to multiple accounts, they do not need multiple usernames and passwords. A user can sign into multiple linked accounts with the same login credentials.

When a user with linked accounts logs into UltraLinQ, they can see exams from all their accounts.

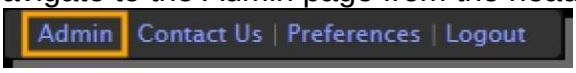
To add a linked user to an account, create a new user account. **Do not** check the User may log in box. Activate the new user, and contact Technical Services with a request for the accounts to be linked.

7.11.3 Managing User Groups

Account administrators can create user groups for their organization.

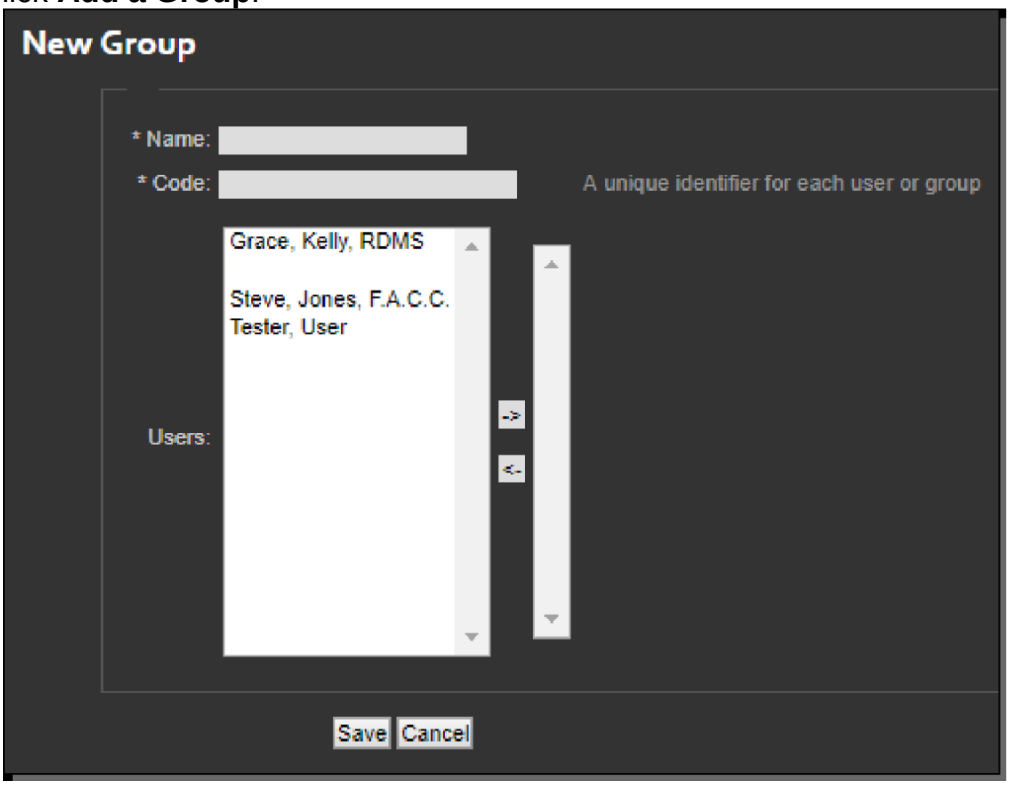
Manage user groups by following these steps.

Navigate to the Admin page from the header link at the top of the page.



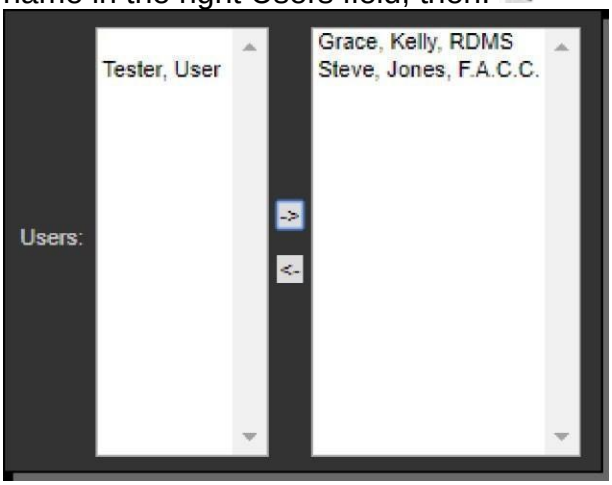
Click the **Groups** link.

Click **Add a Group**.



Fields marked by a * are required. Enter a Name and Code for the group.

799270120. Select users to add to the group. Add a user to the group by clicking the user's name in the left Users field, then . Remove a user from the group by clicking the user's name in the right Users field, then.



799270121. Click **Save**.

7.11.4 Viewing the Audit Trail

Account administrators can view the audit trail for their organization.

View the audit trail by following these steps.

Navigate to the Admin page from the header link at the top of the page.

Click the **Audit Trail** link.

Filter the audit trail by user, action, and date by selecting parameters from the drop-down lists. Click **Filter**.

To clear a filter and view the entire audit trail, click **Clear Filter**.

Navigate between pages of results by clicking the page number link on the right side of the screen.

7.11.5 Customizing the ICD-10 Quick List

An account administrator can create a list of up to five ICD-10 codes per exam type. This list appears as a search suggestion in the worksheet. Customized quick lists apply to the entire organization.

Customize your organization's ICD-10 quick list by following these steps.

Navigate to the Admin page from the header link at the top of the page.

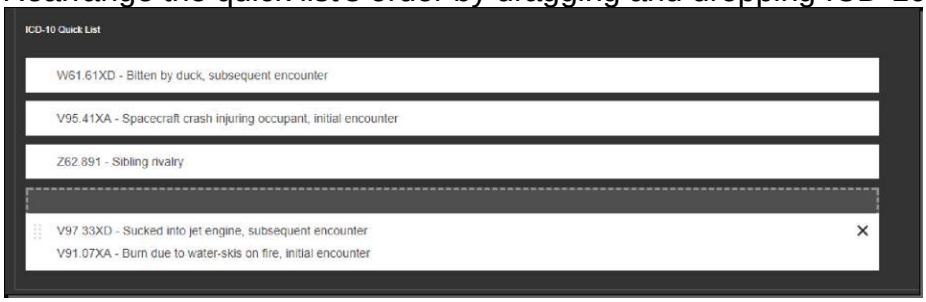
Click the **Customization** link.

Select an exam type from the drop-down list. Each exam type can have an ICD-10 quick list.

Search for ICD-10 codes to include in the quick list. You can search by ICD-10 code or keyword.

Click the ICD-10 code to add it to the quick list. You can add up to five ICD-10 codes per exam type.

Rearrange the quick list's order by dragging and dropping ICD-10 codes.



7. To remove an ICD-10 code from the quick list, hover over it, and click **X**.

7.11.6 Generating Reports

Account administrators can generate fax, study, and study data reports:

A **fax report** shows fax activity for a certain time period.

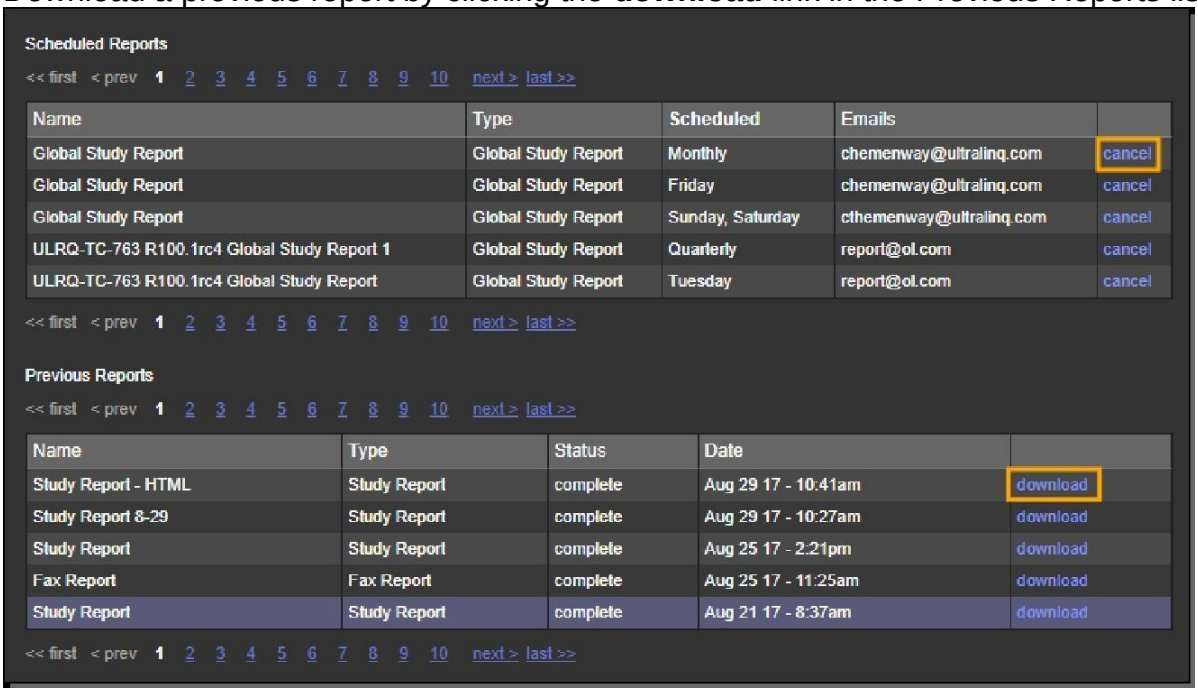
A **study report** shows a list of exams that match a certain parameter.

A **study data report** shows of list of exams that match a certain parameter as well as all worksheet data for those exams.

On the Reports page, you can also view a list of scheduled reports and previous reports.

Cancel a scheduled report by clicking the **cancel** link in the Scheduled Reports list.

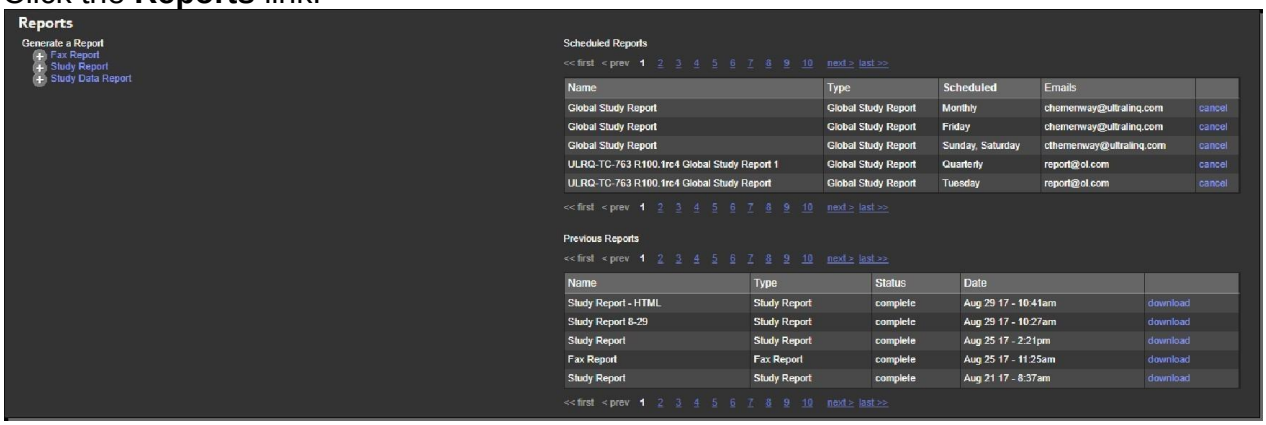
Download a previous report by clicking the **download** link in the Previous Reports list.



Generate a fax, study, or study data report by following these steps.

Navigate to the Admin page from the header link at the top of the page.

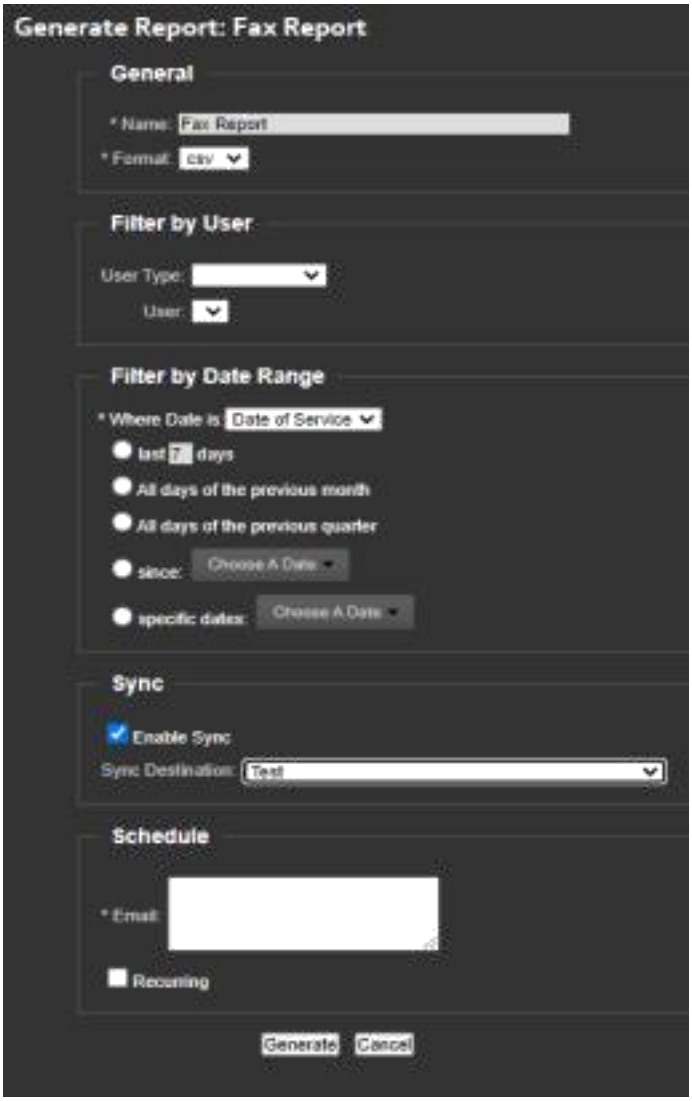
Click the **Reports** link.



Under the Generate a Report section, click **Fax Report**, **Study Report**, or **Study Data Report**.

Use the form to enter parameters for the report. Required fields are marked by a *.

Note: The screenshot below is for a fax report.



Enter a file name for a report. This is a required field.

Filter by Exam Type: Study Data reports have the option to be filtered by the Exam Type. The drop down will include a list of exam types for the company.

For fax reports and study reports, select the report's file format from the drop-down list (CSV, PDF, or HTML). Study data reports are only available in CSV format.

For fax reports and study reports, filter the report by user type by selecting an option from the drop-down list (Referring, Ordering, Sonographer, Interpreting). You can also filter the report for an individual user.

Filter the report by date.

a. You can filter by the date of service, uploaded date, or finalized date:

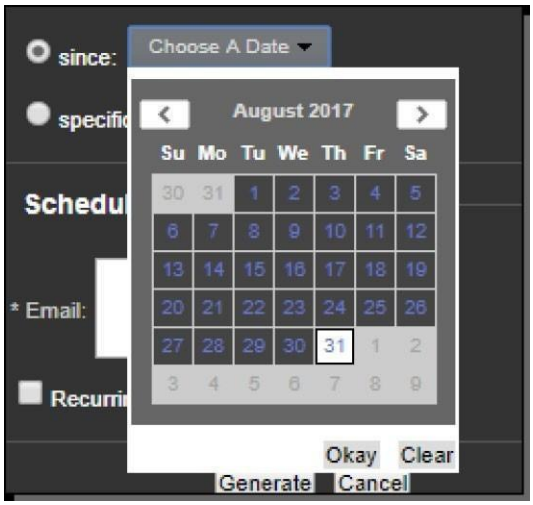
   Filtering by date of service is recommended for tracking referring physician activity.

   Filtering by uploaded date is recommended for reconciling your UltraLinQ invoice.

Filtering by finalized date is recommended for tracking reading physician activity.

Set a time period for the report, or select a specific date range.

Note: Selecting the **since** or **specific** field enables a calendar. Click the date **dates** dates on the calendar, then click or **Okay**.



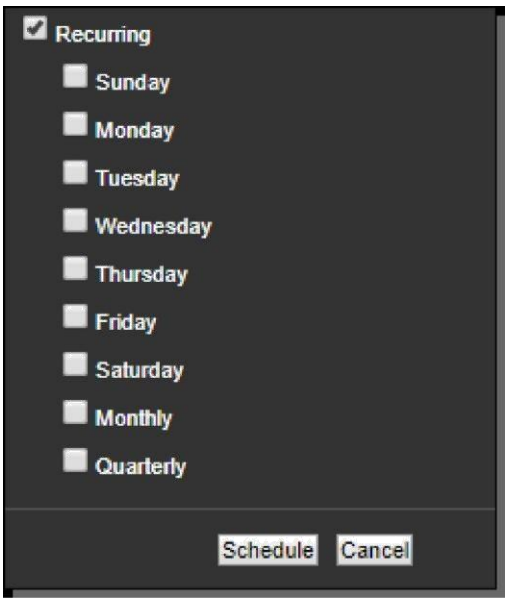
In order to send a report via SFTP, FTPS, or FTP, click the Enable Sync check box and then select a sync destination in the drop down below.

Enter an email address that for receiving the report as an attachment. You can enter multiple email addresses, separated by commas.

Reports can be generated immediately or scheduled to be generated at a future date. To schedule report generation for a future date, check the Recurring box. Additional options appear. Check the boxes to set when reports should generate. Reports can be generated on a specific day or days on a weekly, monthly, or quarterly basis.

Note: Report recurrence happens overnight. Reports generate on the day selected, and then date range settings are applied. For example, if your date range is set to the last 1 day, and you schedule the report to generate on Friday, you receive Thursday's report on Friday.

Note: If the Monthly or Quarterly boxes are not checked, the report generates weekly.



799269057. Click **Generate** or click **Schedule** if the Recurring box is checked.

7.11.7 Managing Assets

Account administrators can upload logos and other graphics for report headers and the UltraLinQ interface.

Files uploaded as assets must be within the following dimensions.

Full banner: 715 x 100 px

Logo only: 300 x 100 px

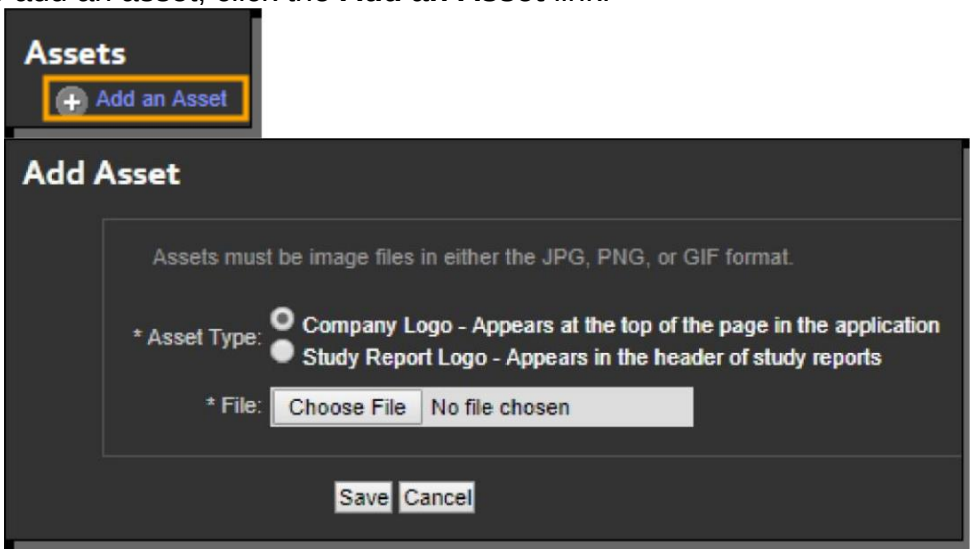
Signature: 150 x 80 px

Manage assets by following these steps.

Navigate to the Admin page from the header link at the top of the page.

Click the **Assets** link.

To add an asset, click the **Add an Asset** link.

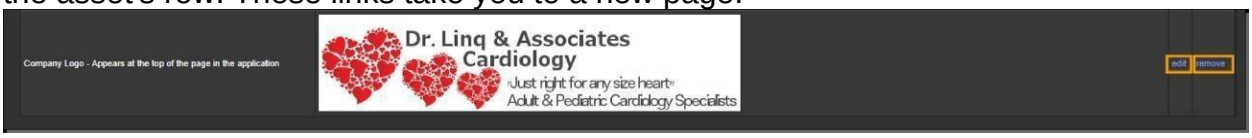


Select the asset type. A company logo appears at the top of the UltraLinQ interface. A study report logo appears in the header of reports.

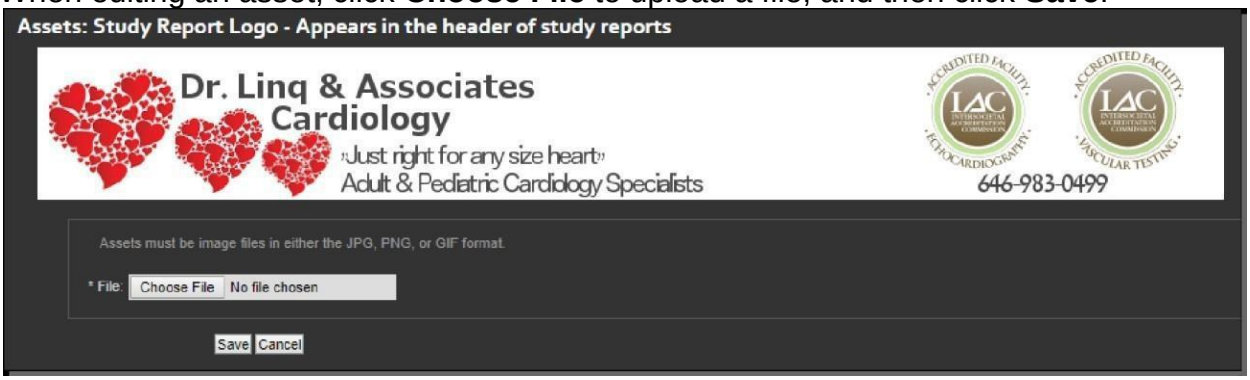
Click **Choose File** to upload a file.

Click **Save**.

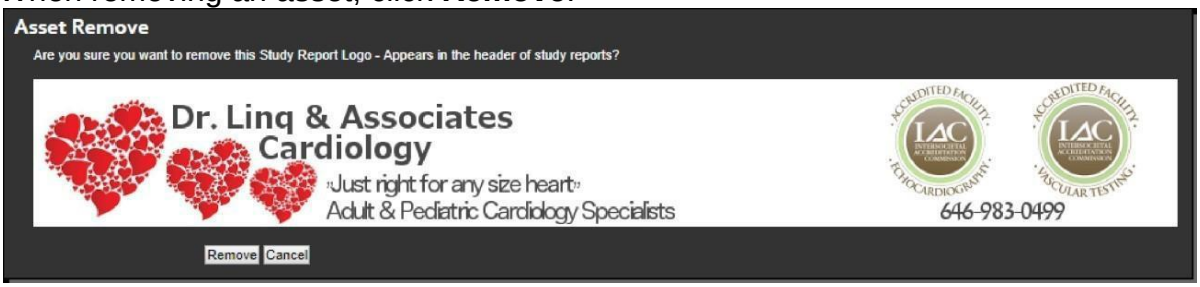
To edit (replace) or remove an asset, click the **edit** or **remove** link on the right side of the asset's row. These links take you to a new page.



When editing an asset, click **Choose File** to upload a file, and then click **Save**.



When removing an asset, click **Remove**.



7.11.8 Managing Email and Fax Deliveries

Account administrators can view a list of past deliveries and resend email deliveries.

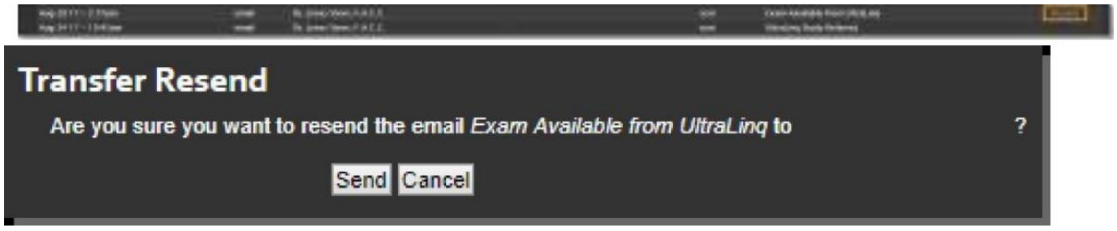
Manage email and fax deliveries by following these steps.

Navigate to the Admin page from the header link at the top of the page.

Click the **Transfers** link.

A list of past email and fax deliveries appears.

To resend an email, click the **Resend** link on the right side of the its row. This takes you to a new page. Click **Send**.



7.11.9 Managing Locations

Account administrators can add and edit locations for their organization.

To manage locations, go to the Locations page by following these steps.

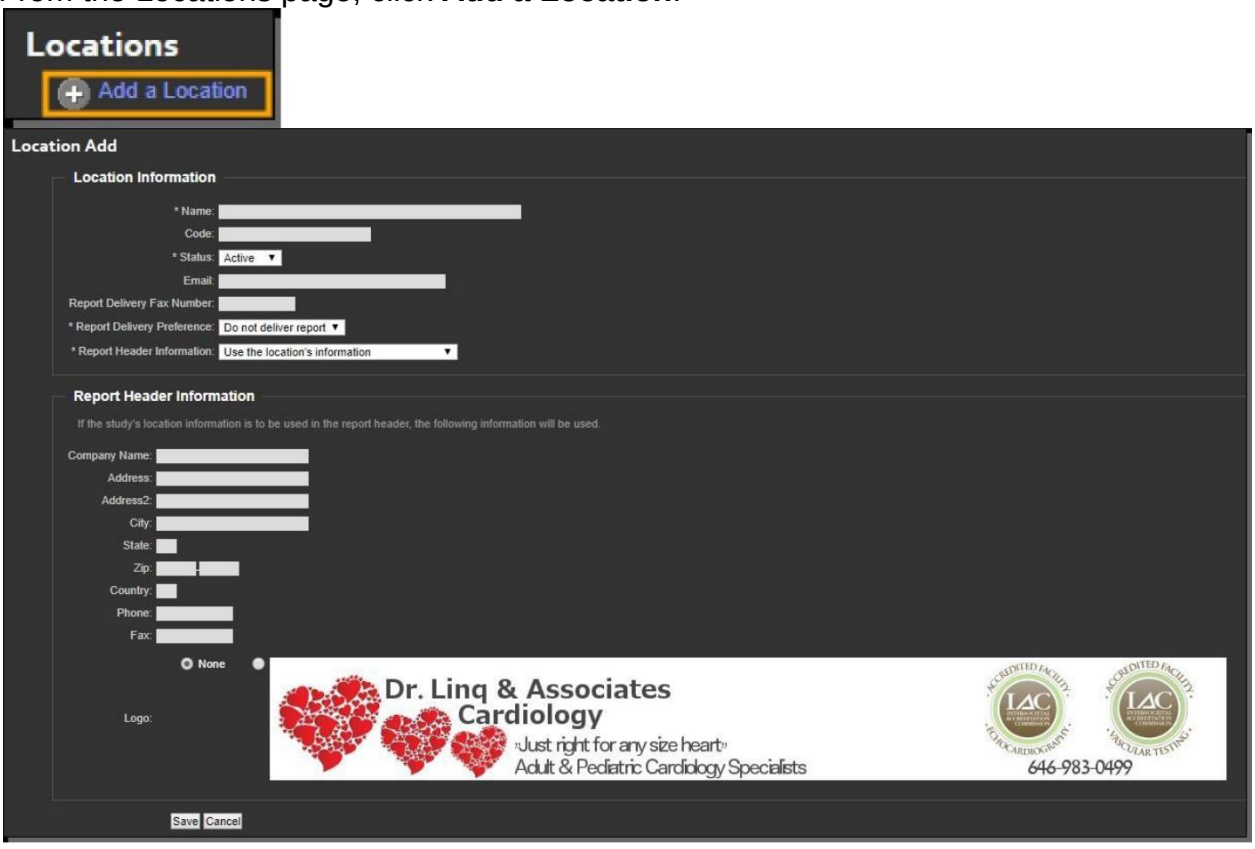
Navigate to the Admin page from the header link at the top of the page.

Click the **Locations** link.

7.11.9.1 Adding Locations

Add a location by following these steps.

From the Locations page, click **Add a Location**.



799268888. Fill out the fields in the Location Information section. Required fields are marked by a *.

Note: To automatically assign an exam to a location, enter a code in the **Code** field. The same code must be entered on the imaging modality before the exam is

transferred to UltraLinQ. If the imaging modality does not have a location field, contact Technical Services for help.

799268889. If the study's location information is used in report headers, fill out the fields in the Report Header Information section.

799268890. Click **Save**.

7.11.9.2 Editing Locations

Edit a location by following these steps.

From the Locations page, click a location's row. This takes you to the Location Edit page.

Change the information fields as needed.

To make a location inactive, select **Inactive** from the Status drop-down list.

Click **Save**.

7.11.10 Setting Workflow Rules

Account administrators can automate study assignment and report delivery by setting workflow rules for their organization.

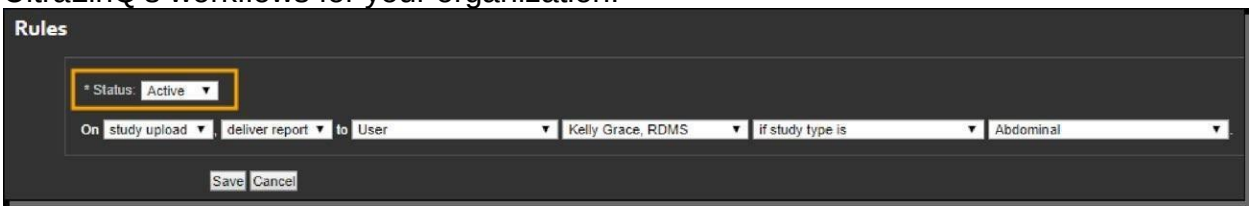
Set workflow rules by following these steps.

Navigate to the Admin page from the header link at the top of the page.

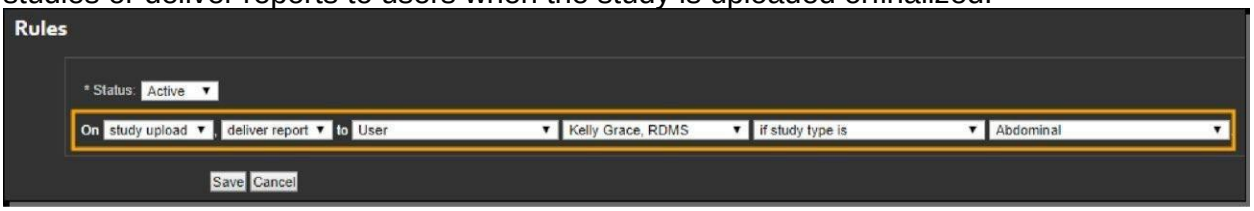
Click the **Workflow Rules** link. Existing rules are shown in the Rule list.

Add a new rule by clicking **Add a Rule**.

Select the rule's status from the drop-down list. Only Active rules are applied to UltraLinQ's workflows for your organization.

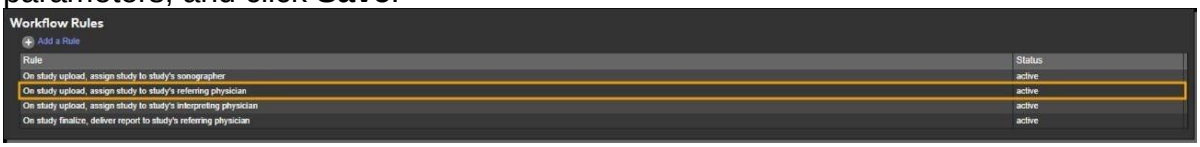


Select the parameters for the rule from the drop-down lists. Rules can assign studies or deliver reports to users when the study is uploaded orfinalized.



Click **Save** to add the new rule to the Rule list.

To edit an existing rule, click the rule in the Rule list. Change the rule's status or parameters, and click **Save**.



Note: While a rule cannot be removed, a rule can be made inactive by switching its status from Active to Inactive.

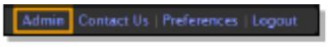
7.11.11 Selecting the Patient Identification Scheme

NOTICE: Changes to the patient identification scheme do not affect existing exams and patients. Changes to the patient identification scheme are only applied to exams uploaded after the changes have been saved.

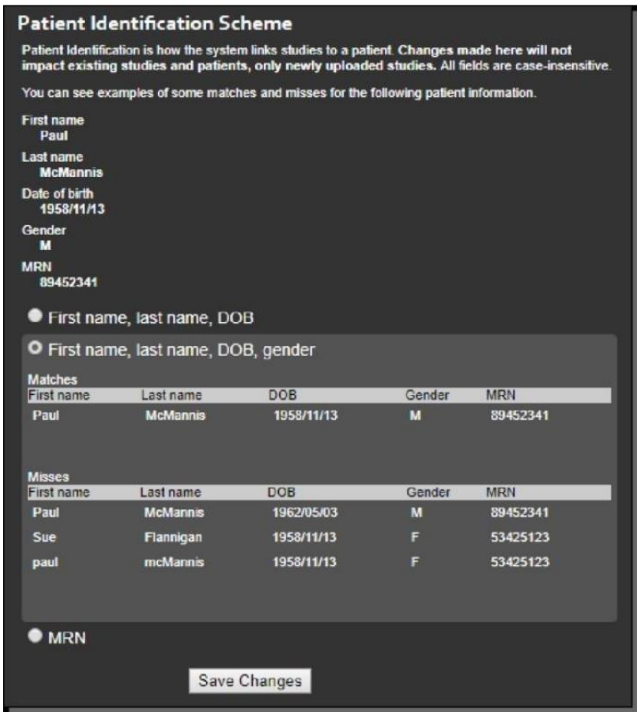
The patient identification scheme links exams to an individual patient. Fields in the patient identification scheme are not case sensitive. Account administrators can select the patient identification scheme for their organization.

Select the patient identification scheme by following these steps.

Navigate to the Admin page from the header link at the top of the page.



Click the **Patient Identification Scheme** link.



Select one of the following options:

First name, last name, DOB

First name, last name, DOB, gender

MRN

Note: Click each option to view examples of matches and misses for the scheme.

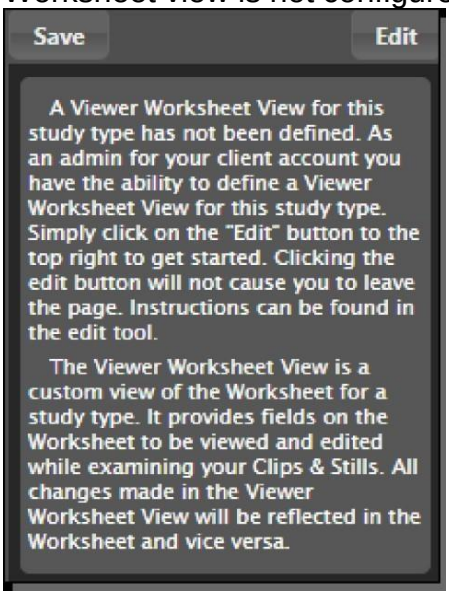
Click **Save Changes**.

7.11.12 Configuring the Worksheet View

Worksheet view shows a customized worksheet panel on the Clips & Stills tab of the Exam page. Worksheet view is only available in the Flash viewer. The Worksheet view must be configured by an account administrator.

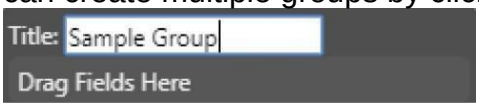
Configure the Worksheet view by following these steps.

From the Clips & Stills tab of the Exam page, click to enable Worksheet view. If Worksheet view is not configured, a message displays.



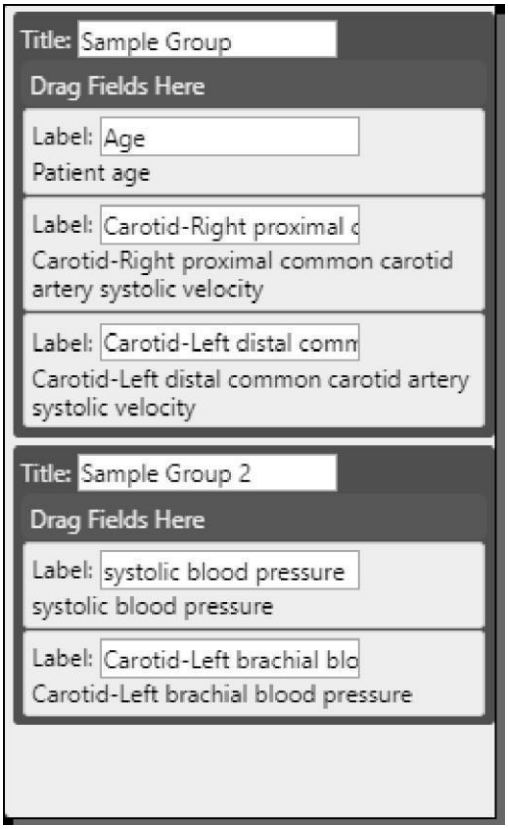
799269896. Click **Edit**. A pop-up window appears. Clicking **Click for instructions** gives more information on configuring the Worksheet view.

799269897. Click **Create Group** to create a group of fields visible in Worksheet view. You can create multiple groups by clicking **Create Group** again.



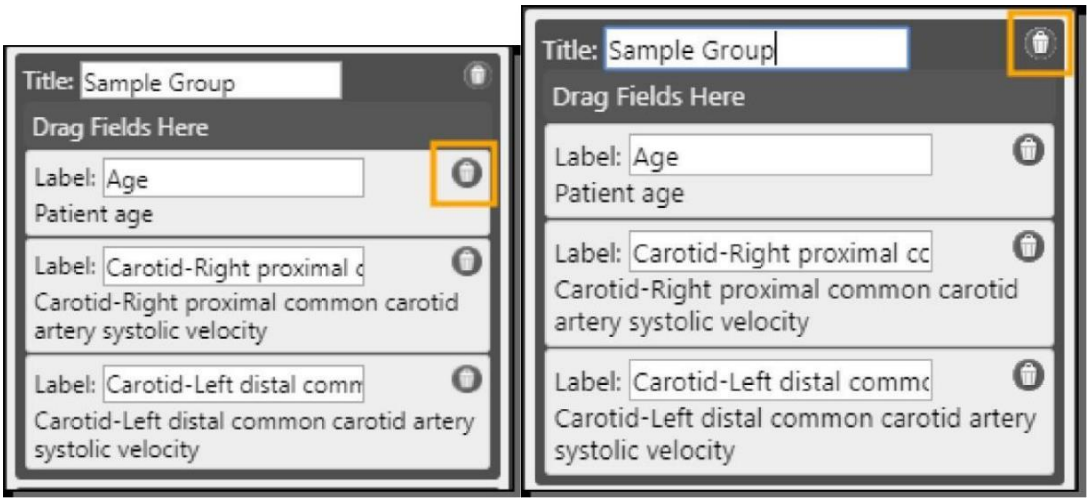
799269898. Enter a name for each group in the Title field.

799269899. Drag and drop fields from the right panel to the **Drag Fields Here** area for each group. You can edit the label for each field.



799269900. To rearrange the order in which fields appear, drag and drop the fields within the group.

799269901. To delete a field from a group, hover over the field and click in the Field area. To delete a group, hover over the group and click in the Title area.



7.11.13 Integrating UltraLinQ with Other Applications

If transferring reports to a third-party application, UltraLinQ offers several integration options. The Integration module is required for all integrations. Contact your account manager or Technical Services for more information on the Integration module.

7.11.13.1 HL7 Integration

If your third-party application accepts HL7 messaging, UltraLinQ can send an ORU message that includes a preliminary or final report. All HL7 messaging requires a VPN tunnel between UltraLinQ's data center and your server.

UltraLinQ supports the following integration methods for HL7 messaging:

- A text report included within the ORUmessage
- A base-64 encoded PDF encapsulated within the ORU message
- A PDF sent to a SFTP server maintained by the client with a file pointer included within the ORU message

Note: UltraLinQ does not accept inbound HL7 messaging at this time. Any values required for filing an exam must be included with an exam's DICOM data (usually in the DICOM worklist) or entered manually within UltraLinQ.

7.11.13.2 SFTP Integration

If your third-party application accepts PDF files, UltraLinQ can send a PDF to a SFTP server maintained by the client. UltraLinQ can customize the file path and file name based on any field populated from the UltraLinQ application.

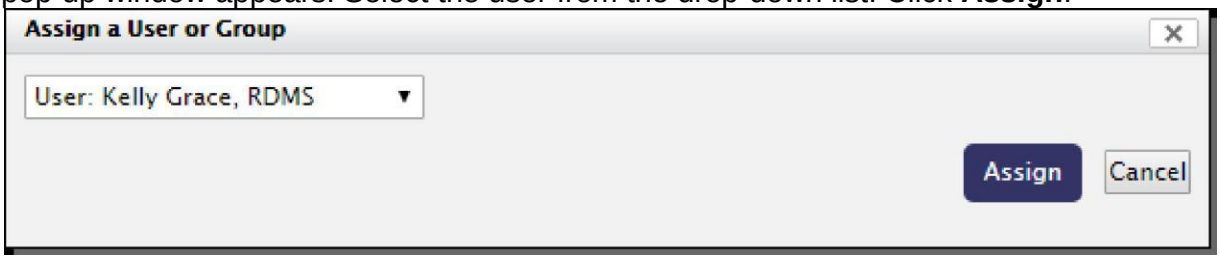
7.11.14 Assigning Exams

Assign an exam to a user by following these steps.

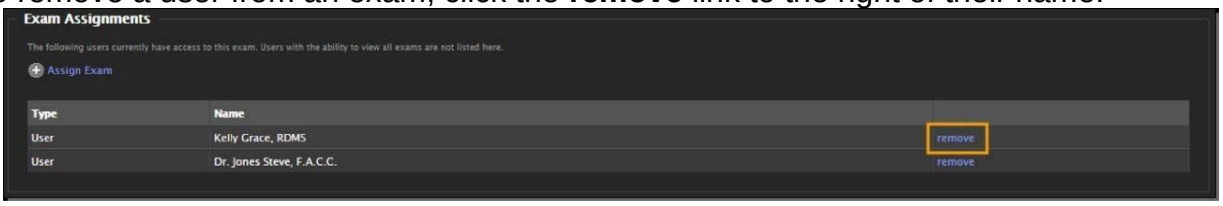
Navigate to the Admin tab of the Exam page for a finalized exam.

Click **Assign Exam** in the Exam Assignments section.

A pop-up window appears. Select the user from the drop-down list. Click **Assign**.



To remove a user from an exam, click the **remove** link to the right of their name.

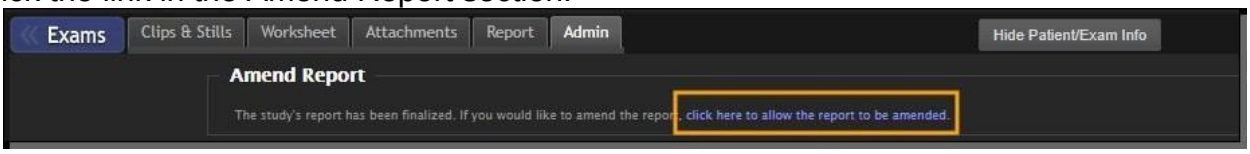


7.11.15 Marking Reports as Amendable

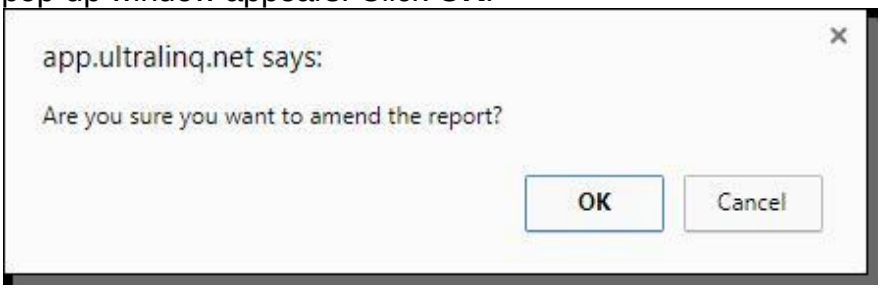
Allow a user to amend an exam's report by following these steps.

Navigate to the Admin tab of the Exam page for a finalized exam.

Click the link in the Amend Report section.



A pop-up window appears. Click **OK**.



7.12 UltraLinQ Troubleshooting

When using UpLinq, you may encounter the following issues. Try these fixes to resolve them. If you still have trouble, contact Technical Services.

7.12.1 Cannot Reach UltraLinQ with Web Browser

Make sure that your computer has access to the Internet and that you are using a compatible browser:

Internet Explorer 11 without compatibility mode (discouraged)

Microsoft Edge 39.x or 40.x

Firefox 55.x or 56.x

Chrome 61.x or 62.x (recommended)

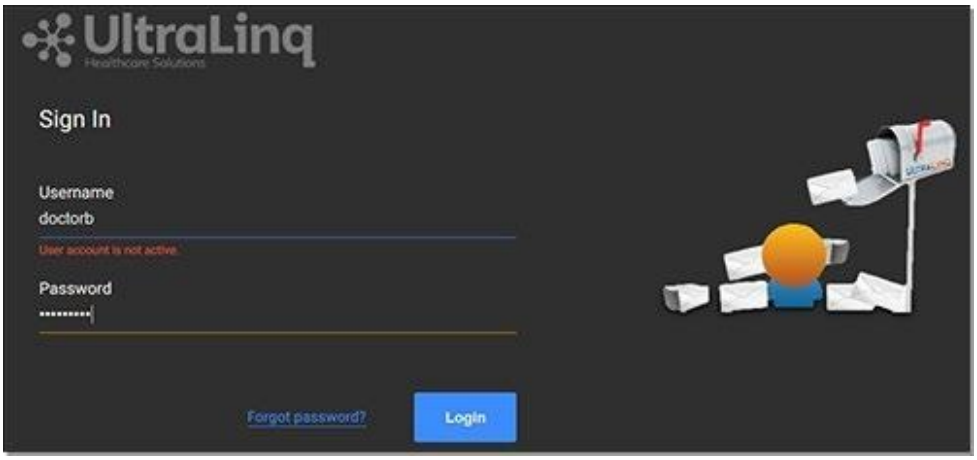
7.12.2 Cannot Log into UltraLinQ

Make sure that your credentials were entered correctly.

7.12.3 User Account Is Not Active

UltraLinQ deactivates accounts after five failed login attempts. If you receive the error, "User account is not active," after five failed login attempts, reset your password.

If you are a new user and your account is still inactive after resetting your password, contact your organization's HIPAA officer to activate your account.



7.12.4 Forgotten Password

On the Login page, click the **Forgot your password?** link to reset your password.

7.12.5 Clips Aren't Looping

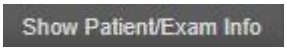
If you are using the Flash viewer and clips do not loop within UltraLinQ, try disabling the Hardware Acceleration option within Flash.

In UltraLinQ, right click an image or clip, and select **Settings**. Uncheck the **Enable hardware acceleration** box.

7.12.6 Missing Worksheet

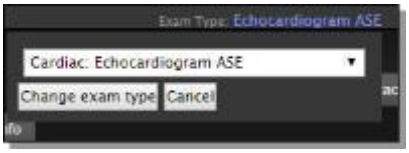
Make sure that your preference for Worksheet Location is, "The worksheet is visible on the Worksheet tab."

If the Worksheet tab on the Exam page is still blank and two **Save Worksheet** buttons appear, the worksheet did not load correctly.

To reload the worksheet, click 

to show patient demographics and exam information. Click the Exam type link.

A drop-down list appears. You do not need to change the selection in the drop-down list. Click the **Change Exam Type** button.



The Exam page refreshes, and the worksheet should load correctly.

8 Recommended Security Practices

To protect patient data, UltraLinQ recommends the following security practices.

8.1 Using Secured Wireless Networks

Only access UltraLinQ from a secure Internet connection. If you are using Wi-Fi, make sure that you connect to a secured wireless network.

8.2 Creating Strong Passwords

UltraLinQ recommends passwords that:

- Are at least eight characters in length
- Contain at least three of the following four types of characters:
  - Lowercase letters
  - Uppercase letters
  - Numbers
  - Special characters (e.g. !, @, #, $, %, ^, &, *)

At minimum, your UltraLinQ password must:

- Be at least six characters in length
- Contain one or more numbers
- Contain one or more letters of any case

To increase the required minimum length (six characters) of passwords for your organization, contact Technical Services.

8.3 Protecting Your Login Credentials

Don't share UltraLinQ accounts. Account administrators should not reuse usernames.

8.4 Logging out After Each Use

Log out of UltraLinQ after each session. UltraLinQ logs you out automatically after 30 minutes of inactivity or if you log into UltraLinQ from a different location or web browser.

8.5 Using an Antivirus

Install an antivirus program on your computer and update it regularly.

McAfee Total Protection is not recommended for computers installed with UpLinq.
McAfee Total Protection and UpLinq are not compatible.

9 Maintenance

UltraLinQ Healthcare Solutions, Inc. maintains and backs up data uploaded to the UltraLinQ Core System. All data is stored for the required amount of time defined by regulatory authorities. No client intervention is needed.

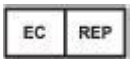
10 Symbols and Abbreviations

The following are symbols and abbreviations that may appear in the UltraLinQ Core System and this guide. These lists are not comprehensive.

10.1 Symbols

Consult the *Instructions for Use*

Manufacturer

 :Authorized Representative in the European Community

: Catalog Number, Reference Number, Re-Order Number

Warning, Caution

CE marking

10.2 Selected Abbreviations

ACR: American College of Radiology

ASE: American Society of Echocardiography

AP: aortopulmonary

AVI: audio video interweave (file)

BMP: bitmap file

BP: blood pressure

BSA: body surface area

cath: catheterization

cm: centimeters

CPT: Current Procedural Terminology (code)

CSV: comma-separated values (file)

DICOM: Digital Imaging and Communications in Medicine standard (file)

DOB: date of birth

DOC: Microsoft Word document (file)

DVT: deep vein thrombosis

Echo: echocardiogram

EDV: end-diastolic volume

EHR: electronic health record (or EMR, electronic medical record)

EKG: electrocardiogram

GHz: gigahertz

HIPAA: Health Insurance Portability and Accountability Act of 1996

HL7: Health Level Seven International Standards

ICD: International Classification of Diseases (code)

ID: identification

IMT: intima-media thickness

in: inches

JPEG: Joint Photographic Experts Group (file)

KB: kilobytes

LBULB: left carotid bulb

LUQ: left upper quadrant

mbps: megabits per second

millimeters

MP4: MPEG-4 Part 14 (file), where MPEG stands for the Moving Picture Experts Group

MR: magnetic resonance

MRN: medical record number

NEMA: National Electrical Manufacturers Association

OB: obstetrics

OCR: optical character recognition

ORU: observation result (in HL7 messaging)

PACS: picture archive and communication system

PDF: Portable Document Format (file)

PNG: portable network graphics (file)

PSV: pressure-support ventilation

px: pixels

RAM: random access memory

RTF: rich text format (file)

RUQ: right upper quadrant

SCP: service class provider

SFTP: Secure File Transfer Protocol

SSD: solid state drive

US: ultrasound

XLS: Microsoft Excel worksheet file

XML: extensible markup language file

11 About UltraLinQ Healthcare Solutions, Inc.

UltraLinQ Healthcare Solutions, Inc. is a quality-driven, customer-centric company committed to innovation in clinically relevant medical software and device solutions. We're determined to help physicians, technologists, and admins advance the delivery and practice of healthcare.

Our mission is to improve global healthcare through a digital health platform which cost-effectively changes the delivery of intelligent diagnostic care and clinical workflow to all healthcare providers, regardless of their location, skill level, or setting.

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