



**Medweb Collage
and
Handheld Telemedicine Kit**

December 2013

Medweb Confidential – Internal Use Only

System Requirements

The computer on which you install Medweb Collage must meet minimum system requirements.

Operating system	Windows 7 Note that Collage has not been tested on Windows 8 yet
Web browser	Windows Internet Explorer 7, 8 or 9
Network and connections	Internet, USB port (to connect USB devices), Bluetooth (to connect Bluetooth devices)
Devices	Web camera, microphone

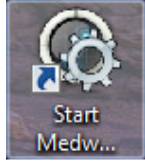
Installing the Viewer

1. Go to <ftp.medweb.com/Collage>
2. Download the plugin **06255.exe** to your computer and double-click on the Viewer icon to install it.

Installing the Collage

1. Go to <ftp.medweb.com/Collage>
2. Download **MedwebCollageSetup1407.exe** to your computer and double-click on the Collage icon to install it.

Starting the Collage from the Desktop



Collage shortcut will appear on your desktop once the Collage is installed. To start the Collage, double-click on the shortcut. Collage window will open.

Start Page - Medweb Collage, Version 3.0.6.104 - admin

Conference

Video

Participants

- Dr. Jones
- Michelle Brook
- Dr. Davis
- Dr. Torres
- Amy Wilson
- David Richards

Share

Start Page

Vitals

Ultrasound

Multiscope

Share Viewer

Stethoscope

EKG

Pulse Ox

Glidescope

EMR Gateway

Patient:

Last Name:

First Name:

Sex: ☐ Male ☐ Female

DOB: 1 1 1984

Patient ID:

SSN:

Referring:

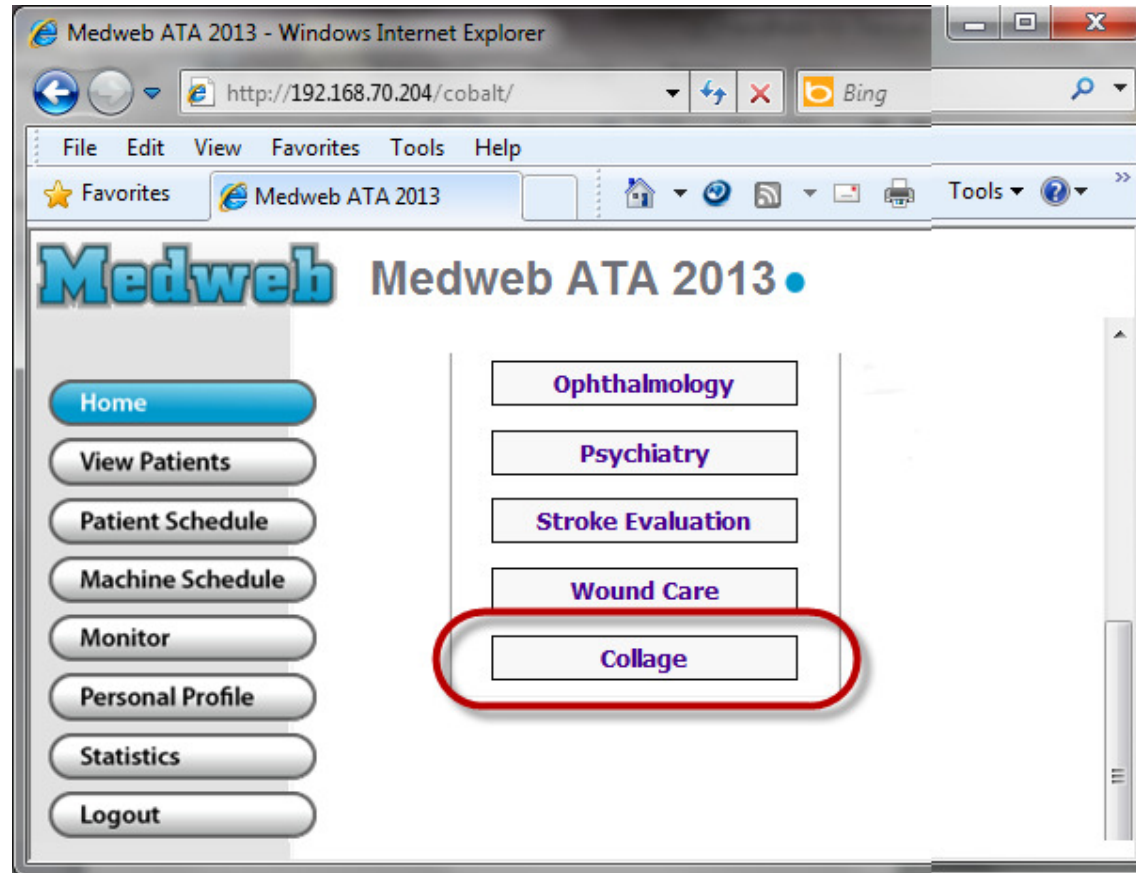
Consulting:

Vitals

T1:	-	T2:	-	PR:	-	SPO:	-	Str:	-	Sys:	-	Dia:	-	Mean:	-	Cuff:	-
-----	---	-----	---	-----	---	------	---	------	---	------	---	------	---	-------	---	-------	---

Starting the Collage from the Home page on the Medweb server

1. Log into one of the ATA Medweb servers and click the Home page on the left navigation screen.
2. Then click the Collage button.



3. Enter your login credentials and click **Run** in the pop-up window to open the Collage.

Opening the study in the Collage

1. Log into one of the ATA Medweb servers and click the View Patients page on the left navigation screen.
2. On the View Patients, find the study you want to open in the Collage and click the Collage icon next to it.
3. Click **Run** in the pop-up window to open the study in the Collage.

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[Administrator]

[New Study](#)
[Upload DCM](#)
[Upload Zip](#)
[On Call](#)
[Preference](#)

[Get Latest Plugins](#)
[Update License](#)

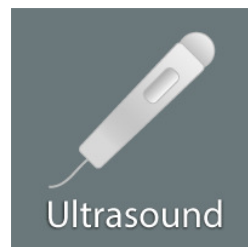
Limit: 50 Status: Read/Unread Find: Where: (any)

[Search](#)
[Advanced](#)
[Current](#)
[Clear](#)


	Name	ID	Type
Site: DEMO Station name: Selenia Modality: MG			
<input type="checkbox"/>	Ca Mg Demo	DP.104156914	BREAST
Site: Anonymized Station name: Anonymized Modality: CT			
<input type="checkbox"/>	Ca Anonymized	Anonymized	CT THORAX W/DYE

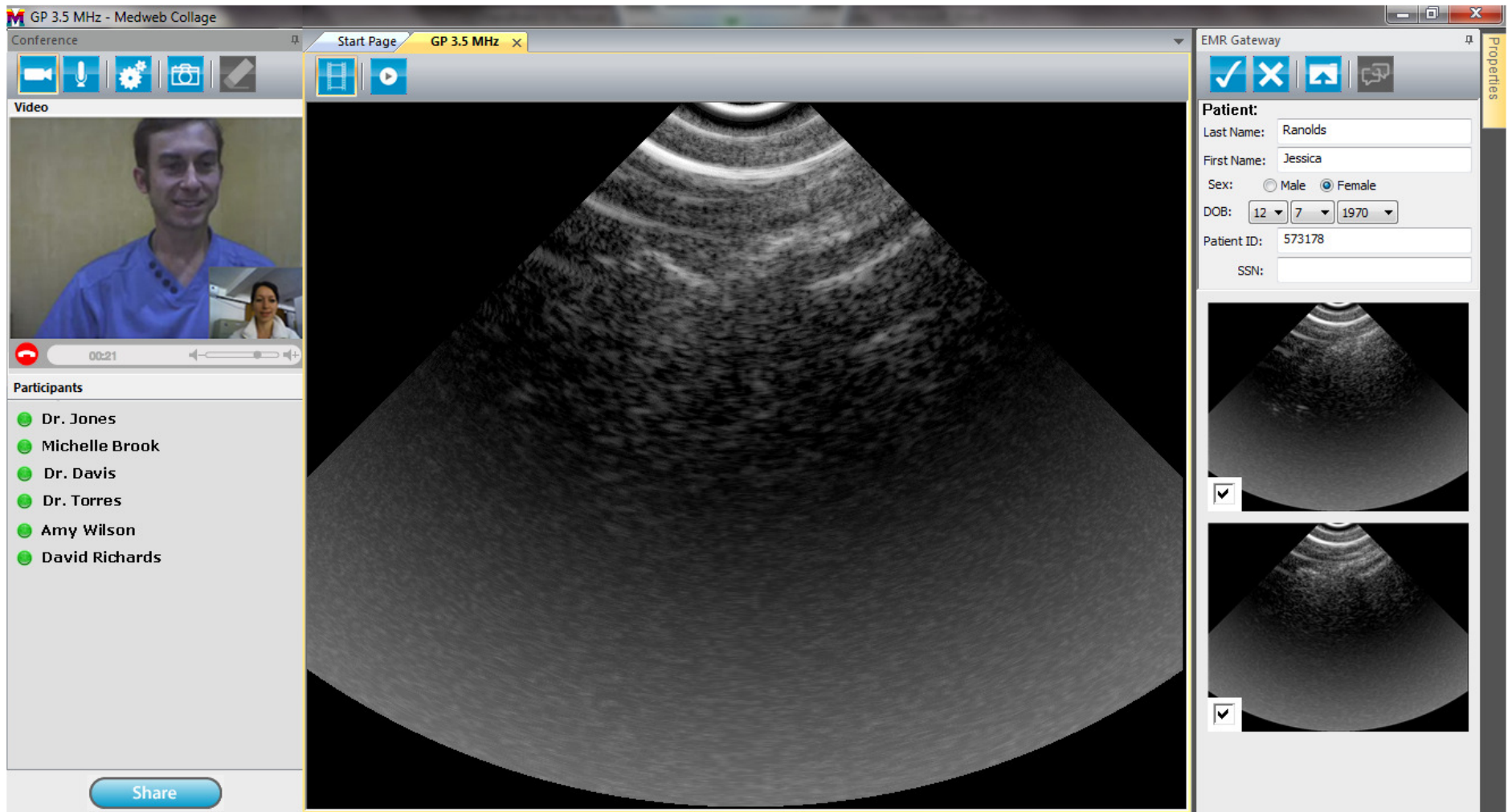
Sharing the Ultrasound stream


1. Install the Ultrasound drivers.
 - a. Go to [ftp://medweb.com/Collage/Interson Ultrasound/](ftp://medweb.com/Collage/Interson%20Ultrasound/)
 - b. Download **SeeMoreSetup - 2.0.01.exe** to your computer and double-click on the SeeMore icon to install it.
2. Connect the Ultrasound probe to the computer.
3. Log in to the Collage and click the Ultrasound button.




4. Ultrasound tab appears in the Active Devices window.

5. To start the Ultrasound exam, click the Scan button on the Ultrasound probe or click  (Start/stop US probe button) on the Collage toolbar.





6. To start sharing the US stream with other users, click  (Share button).

7. To stop the Ultrasound exam, click the Scan button on the Ultrasound probe again or click the  (Start/stop US probe button) button on the Collage toolbar.

8. To playback the Cine, click the  (Cine button) on the toolbar.

9. To capture an Ultrasound image click the Export/Capture button  on the Collage toolbar. All captured images will appear in the EMR Gateway panel on the right-hand side of the Collage.

10. To upload the study to the Medweb server, enter the Patient Last Name and other patient data. Click the Select All button  to select all images, then click Upload button  to upload the study to the Medweb server.

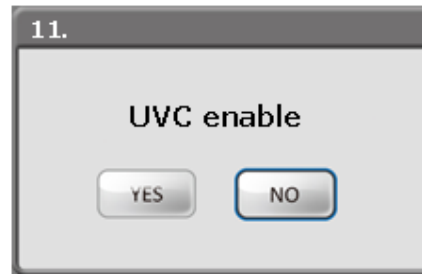
Note: To find the patient that has been registered on the Medweb server entered the patient Last name in the Last Name fields of the EMG Gateway and click Enter. If the patient with this last name had exams on the server, the pop-up list will display the relevant patient names. Click the one you need to auto-populate the rest of the patient data.

Streaming video and capturing images from the Multiscope

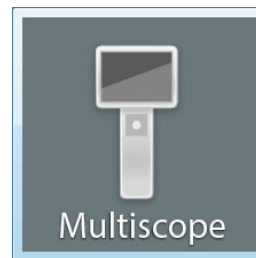
1. Click the Power button on the scope to turn it on.



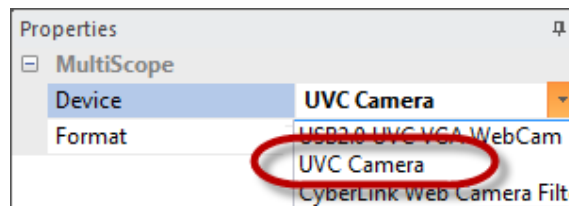
2. Press the Menu button on the scope to go to the Settings. Use the ▾ (down arrow) on the scope control button to get to settings option 11. UVC Enable.




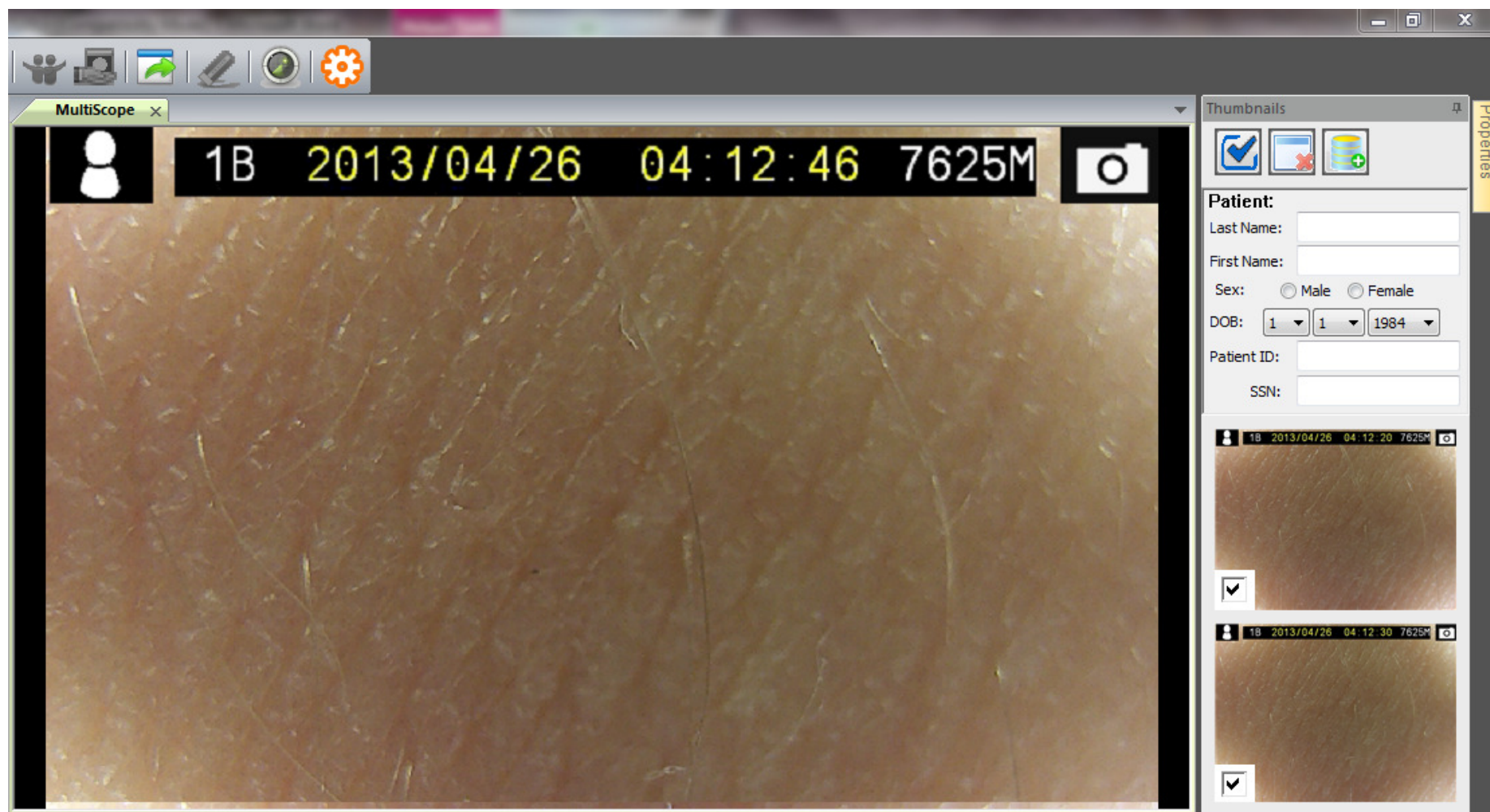
3. Select YES on the UVC Enable screen and click the Menu button on the scope again to exit the Settings.
4. Connect the scope to the computer using the white USB cable.
5. Log into the Collage and click the Multiscope button.




6. If you are working with the Multiscope in Collage for the first time, click the Properties tab on the right and select the UVC camera in the Devices drop-down menu.



7. The Active Devices window of the Collage window starts displaying the live video from the scope.
8. Click the Export button  on the Collage toolbar to capture images while streaming the video. Captured images appear in the EMR Gateway panel on the right-hand side of the Collage.



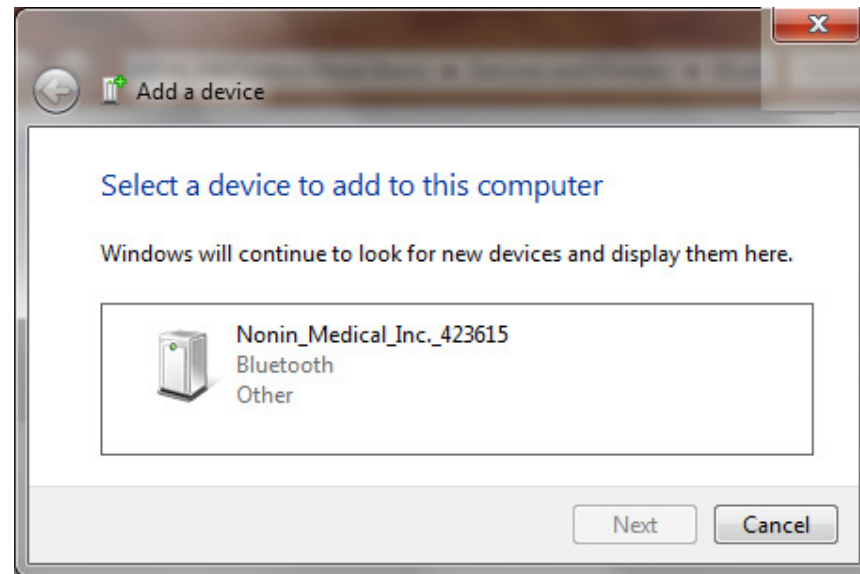
9. Once you are done capturing images, enter the patient information in the top section of the EMR Gateway panel and click the

Upload button  to upload the study to the Medweb server.

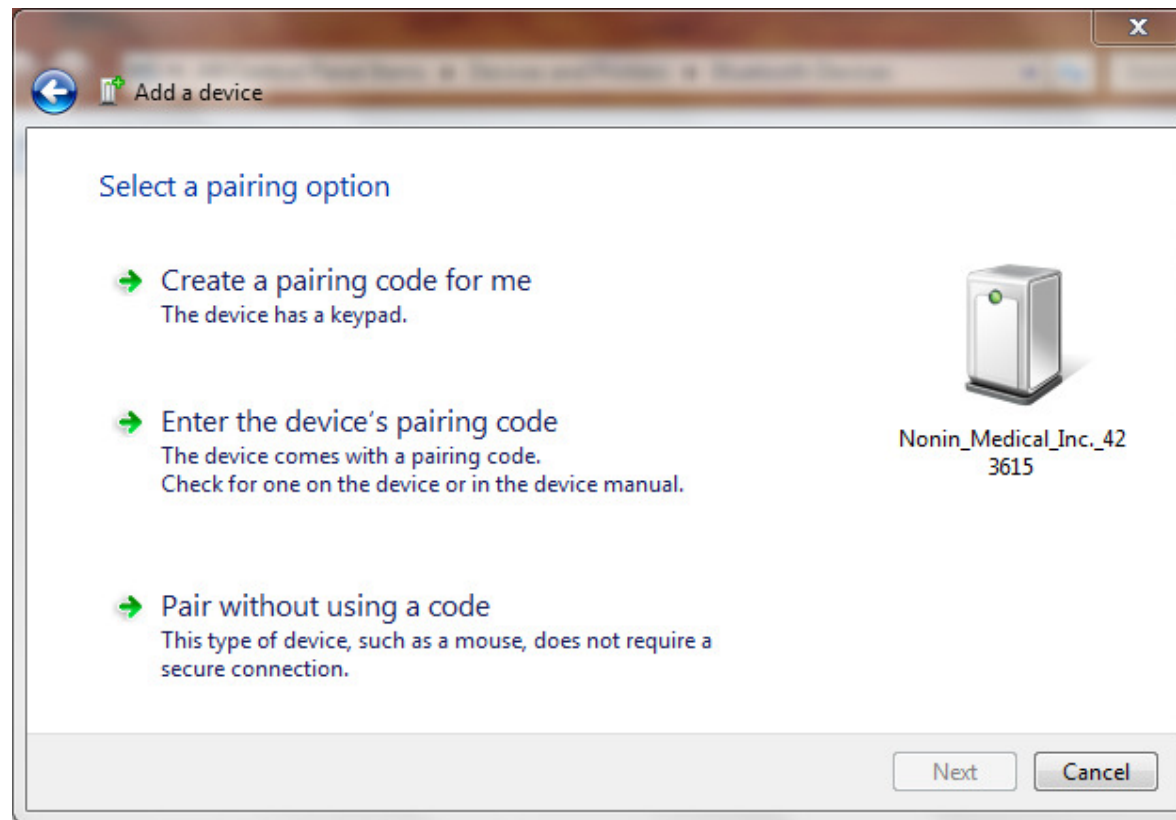
Note: To find the patient that has been registered on the Medweb server, entered the patient Last name in the Last Name fields of the EMG Gateway and click Enter. If the patient with this last name had exams on the server, the pop-up list will display the relevant patient names. Click the one you need to auto-populate the rest of the patient data.

Streaming the Pulse Ox data in the Collage (Nonin, Bluetooth device, model 9560)

1. If you have the built-in Bluetooth on your computer, open the Bluetooth Devices window.
If you do not have a built-in Bluetooth, insert the Bluetooth dongle into your computer. The Bluetooth icon appears in the bottom right corner of the system tray. Click on it to open the Bluetooth devices page.
2. Put the Pulse Ox onto your finger to activate it. The device is flashing green when activated.
3. Nonin Pulse Ox is then recognized as a Bluetooth device on the PC.

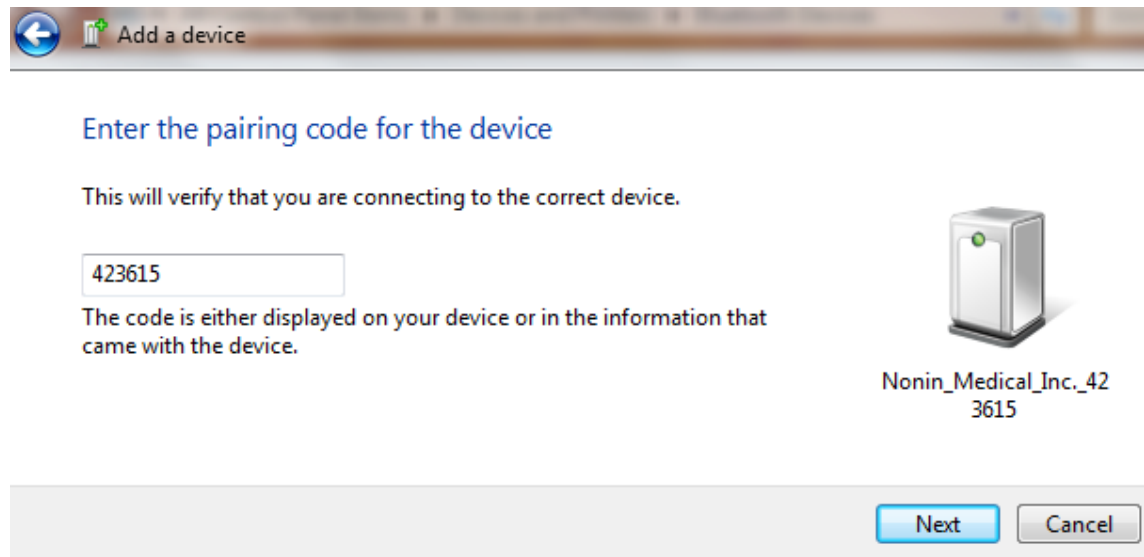


4. Select the "Enter the device's pairing code" option.

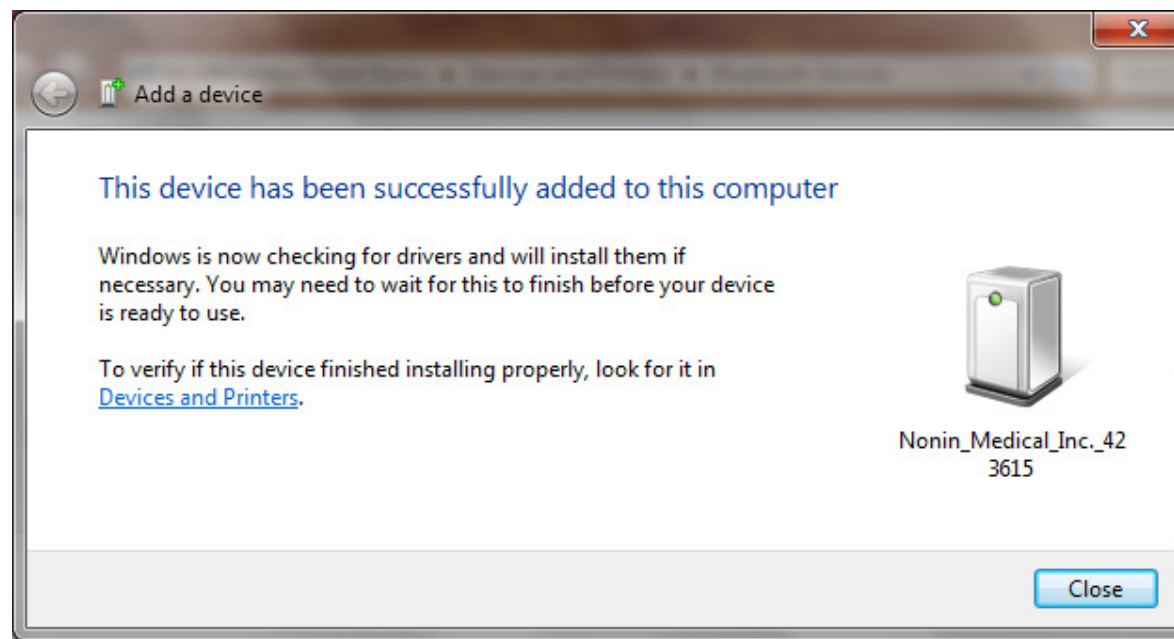


5. Enter the **PIN** that is displayed on the side of the Pulse Ox device.





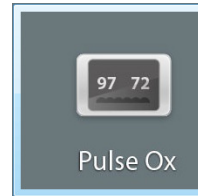
6. The confirmation that the device has been successfully added to the computer appears.



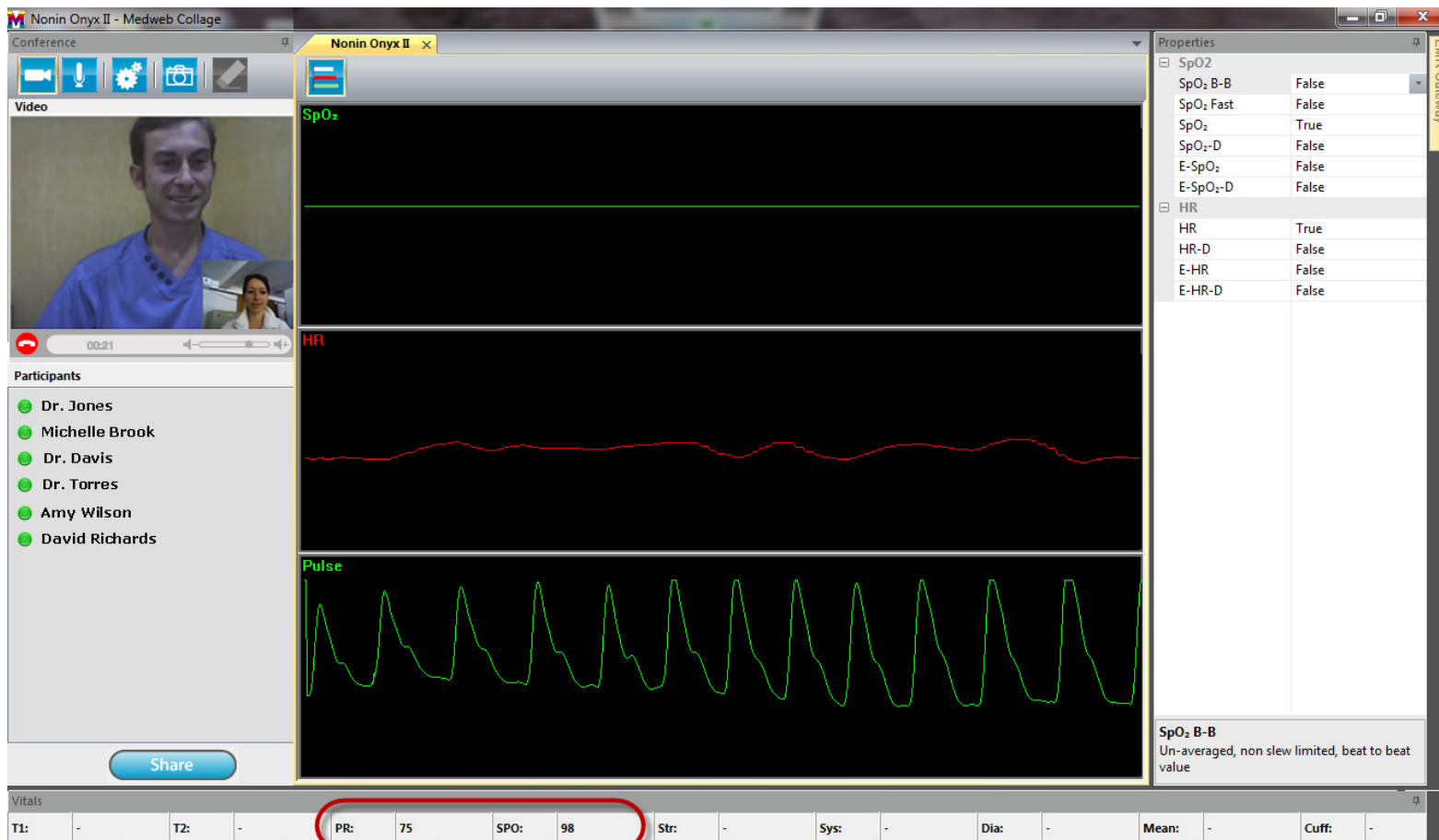
Note: When Pulse Ox is paired, right-click on Nonin on the Bluetooth devices page, select Hardware tab and check what COM port it's using (for example, COM port 11). Now when Pulse Ox is enabled on your finger and you clicked the Pulse Ox button in the Collage, select the Properties panel on the top right-hand side of the Collage. Click on COM port and in the drop-down, make sure the same one is selected that was in Nonin's properties (COM port 11, for example).

7. Put the Pulse Ox on your finger again.

8. Open the Collage and click the Pulse Ox button.



9. Pulse Ox data starts transmitting the data in the Active Devices window of the Collage. The PR and SPO values also appear on the Vitals panel at the bottom of the Collage. You can use properties panel to modify Pulse Ox parameters.



Sharing the Viewer (Providing Users with Remote Access to the Viewer)

1. Log into one of the ATA Medweb servers and click the View Patients page on the left navigation screen.
2. On the View Patients, find the study you want to open in the Collage and click the Collage icon next to it.
3. Click **Run** in the pop-up window to open the study in the Collage.

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[Administrator]

[New Study](#)
[Upload DCM](#)
[Upload Zip](#)
[On Call](#)
[Preference](#)

[Get Latest Plugins](#)
[Update License](#)

Limit: 50 Status: Read/Unread Find: Where: (any)

[Search](#)
[Advanced](#)
[Current](#)
[Clear](#)

	Name	ID	Type
Site: DEMO Station name: Selenia Modality: MG			
<input type="checkbox"/>	Ca Mg Demo	DP.104156914	BREAST
Site: Anonymized Station name: Anonymized Modality: CT			
<input type="checkbox"/>	Ca Anonymized	Anonymized	CT THORAX W/DYE

4. Once the study is open, click the Share button  in the Collage to provide Remote Access to the Collage to other users.

Anonymized (CT) , ACCN #:01234567890123456789

EMR Gateway



Medweb

Fill

No Enhance

[0] Original

HP: 1x1new

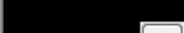
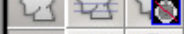
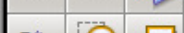
Reports : 11

Annotations : 3

Demographics : 1



A:3 C:9 A



W:450 L:70 Z:53% 1:2 Lossy S:S0000010334659 I:66

PE STUDY
Anonymized
CT THORAX W/DYE
Se: 103
Im: 66
Slice Location: -212.1
C: 100 cc VISI

A

TIOVI

Anonymized
Anonymized
Acc: 01234567890123456789
058Y M Anonymized
M
DOB: 1953-11-06
2012-06-19
17:00:41

R

L

Th: 2.500
Sp: 0.781\0.781
Pos: -210.900\ -179.800\ -212.120

P

Zoom: 53%
W: 450 L: 70



Patient:

Last Name: Michael

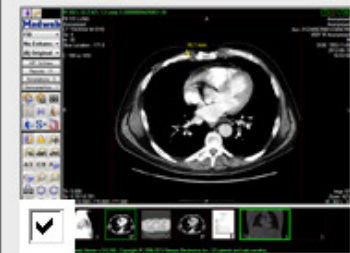
First Name: Davis

Sex: ☒ Male ☐ Female

DOB: 3 7 1977

Patient ID: 173571

SSN:



Creating a study with the ECG report in the Collage

1. Installing ECG drivers

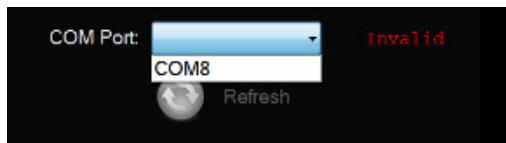
a. Go to [ftp.medweb.com/Collage/ECG/](ftp://ftp.medweb.com/Collage/ECG/)

b. Download **CardioVu_Medweb_setup_2015.exe** to your computer and double-click on the CardioVu icon to install it.

2. Insert TM-BT (Bluetooth USB) Key into PC. Windows should automatically detect the new hardware and install the drivers.

Note: TM-BT Key has been installed correctly if the COM Port is available when you open the ECG application in the Collage in the Step below.

Correctly Installed (COM8 or any other COM number)



Not Installed (No COM Port).

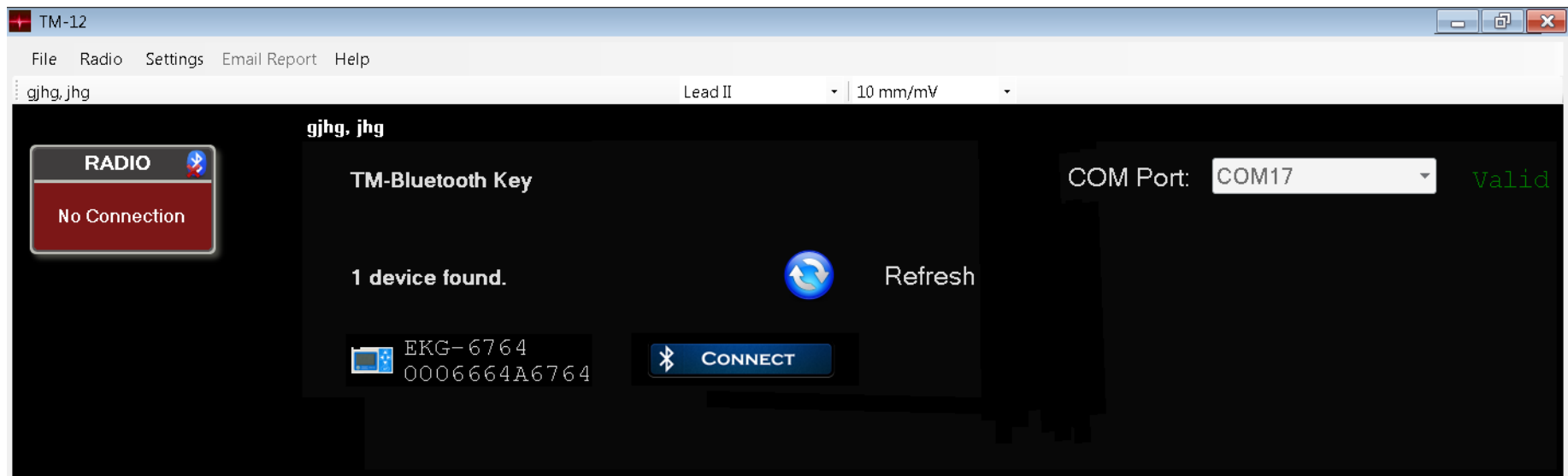


Note: Drivers are included on the Bluetooth USB Key, when you connect to the computer for the first time the drivers should automatically install, but depending on the computer this doesn't always happen. So then use the "How to Install Bluetooth USB Driver Rev 1.0" instructions to add them manually.

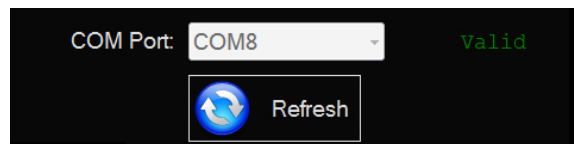
3. Insert two AA batteries into device. Wait for unit to load Review and Start menu. Select Review Leads to observe ECG for each channel. Use <arrow> keys to view leads. Press <enter> to leave Review ECG screen.
4. Attach the ECG leads to the patient or the simulator.
5. Start the ECG device, click the Down Arrow button on the ECG to go to Start Transmitting, then click the Enter button to select it. The screen will read, "Disconnected, Searching for Host. You will see the searching symbol on the LCD ((((*)))) as it tries to locate the host.
6. Open the Medweb Collage.
7. In the EMR Gateway of the Collage, enter the Patient name and click the ECG button.



The ECG application opens.

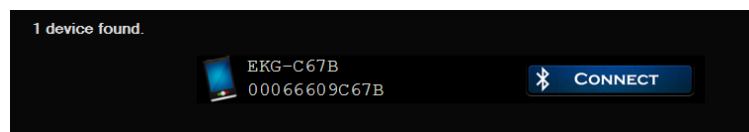


8. If a Com Port is available, select it.

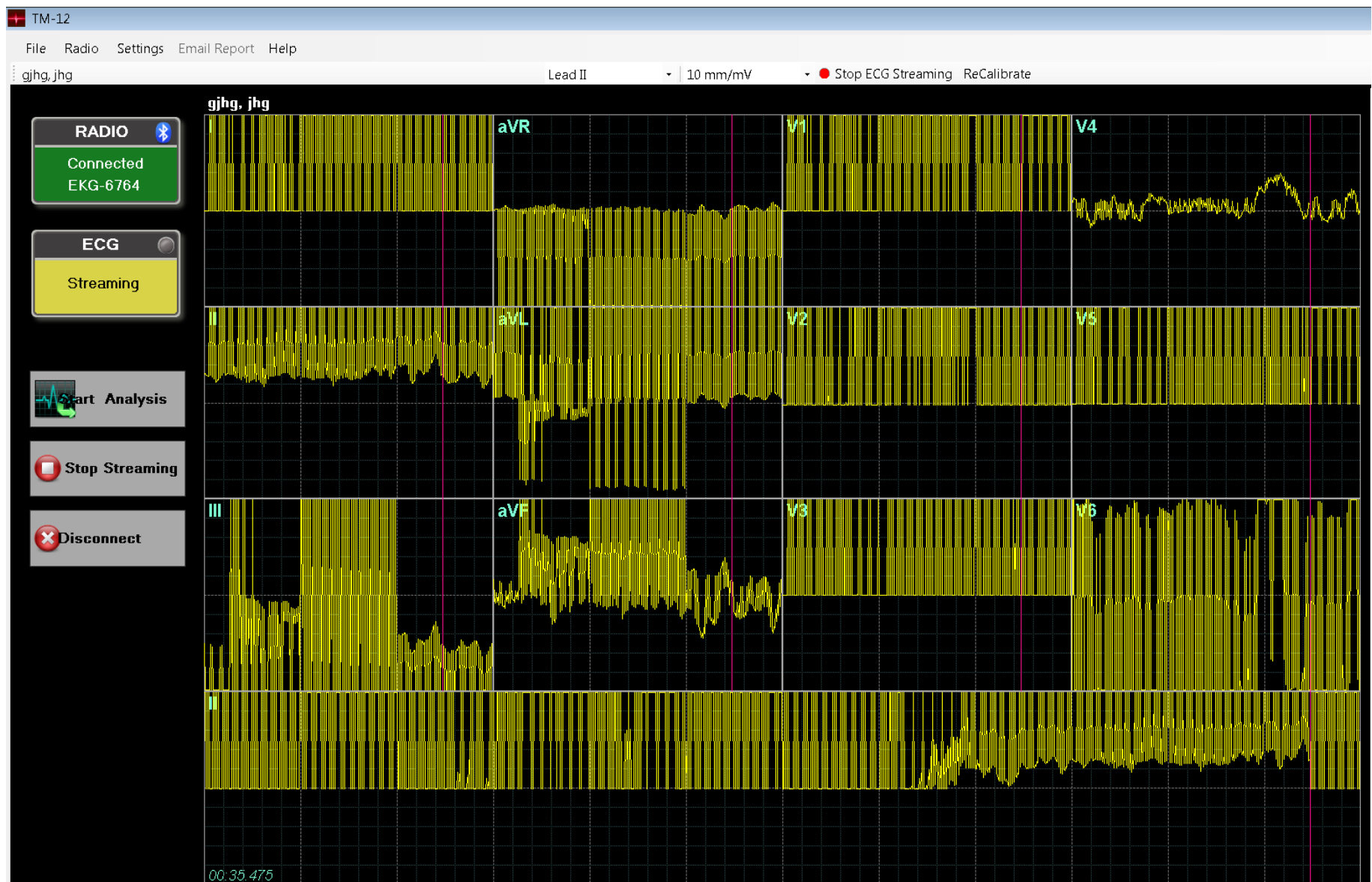


9. The software will automatically search for the device.

10. After the device is found, click Connect in the ECG application.

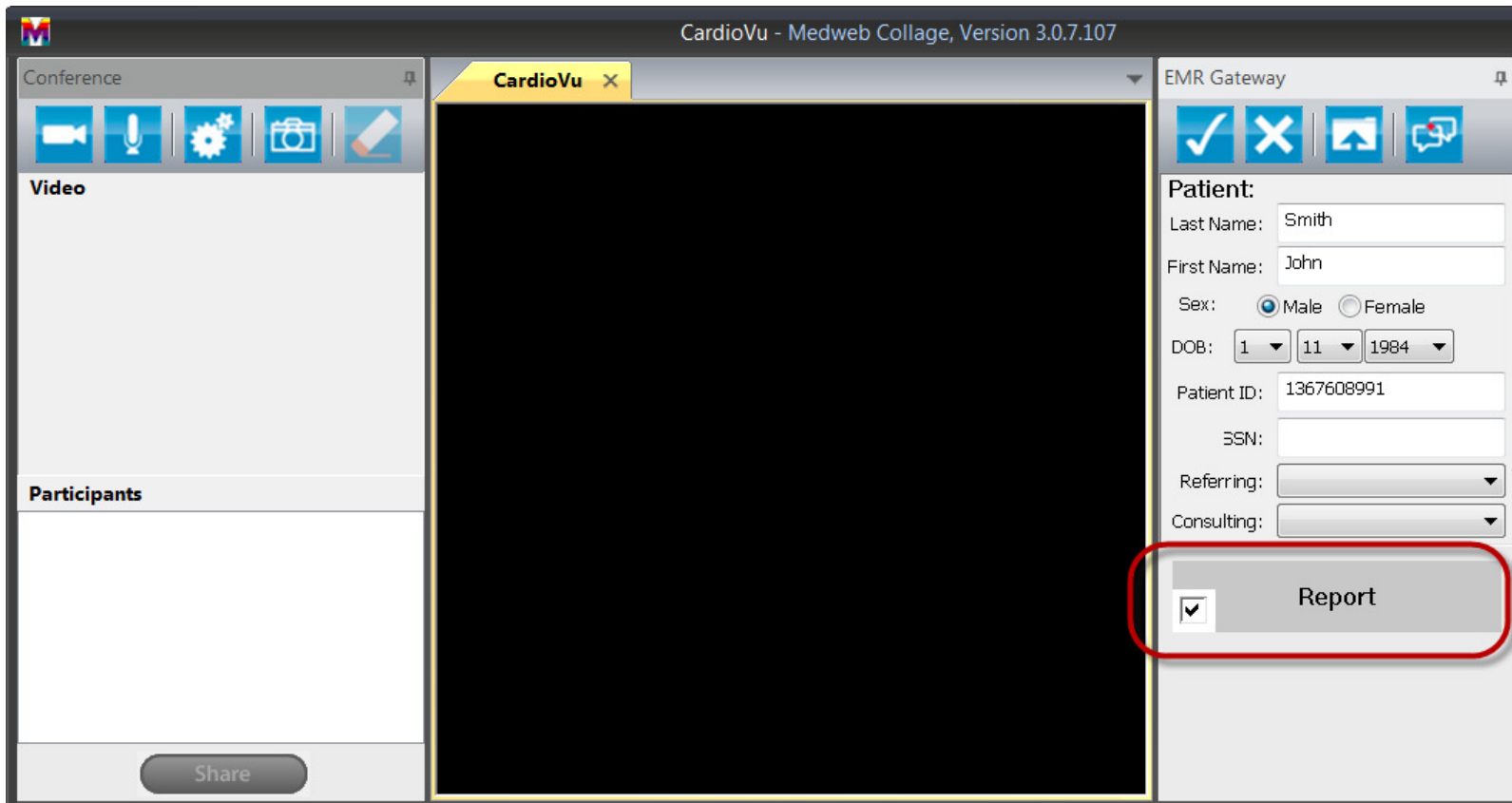



11. Patient's ECG is displayed.

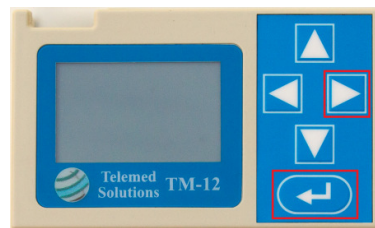


12. Once you are done, click the Stop Streaming button on the left-hand side of the ECG application. Then click the Start Analysis button right above the Stop Streaming button.

13. When the "Successfully exported PDF report" message pops up, minimize the ECG app window.
14. The ECG report will be displayed in the EMR Gateway of the Collage.



15. Click the  (Upload) button to upload the Patient record with the ECG report to the Medweb server.
16. To turn off the 12-lead unit, press <right> arrow then the <enter> key. Press <enter> again to confirm shutdown.



17. Disconnect leads from patient.

Recording audio from the Littmann Stethoscope and uploading to the Medweb server

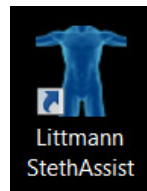
Installing Littmann Stethoscope drivers

You need to install Littmann software from the CD that comes with the Littmann stethoscope.

Insert the CD into the CD-ROM drive on your computer. The installation program should start automatically. If the program does not start, open the CD folder and double click the file labeled **setup.exe**.

Pairing & Connecting the Stethoscope with the Software

1. If your computer has built-in Bluetooth, enable it.
If your computer does not have built-in Bluetooth, plug the USB wireless dongle (that comes with the Littmann stethoscope) into an open USB port on the PC on which Littmann software has been installed and activated.
2. Click the Littmann StethAssist shortcut on your desktop to launch the application.



3. Turn the Stethoscope on by clicking the **Power** button on it. Then click the **M** button, select Connect on the LCD screen. Then click the **M** button again. The Bluetooth icon should be blinking on the LCD screen of the stethoscope.



4. In the Littmann StethAssist application, select Add New Scope from the Target Stethoscope drop-down. Then click "Yes, connect now" button.



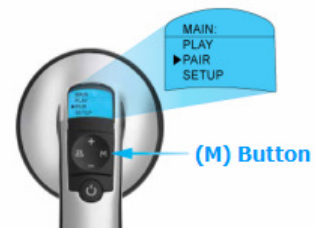
5. Follow the instructions displayed on the screen. Enter the PIN that is displayed on the stethoscope LCD screen. Enter the ID for the stethoscope, for example, Dr.Jones. When ready, click the Pair Now button.



To connect to a Model 3200 stethoscope for the first time, you must follow the steps below to "pair" the stethoscope with StethAssist™.

Step 1:

Press (M) on the stethoscope. Use (+) and (-) to select "PAIR". Then press the (M) button again. A 4-digit PIN number will appear on the stethoscope LCD screen.

**Step 2:**

Enter the PIN number here:

Step 3:

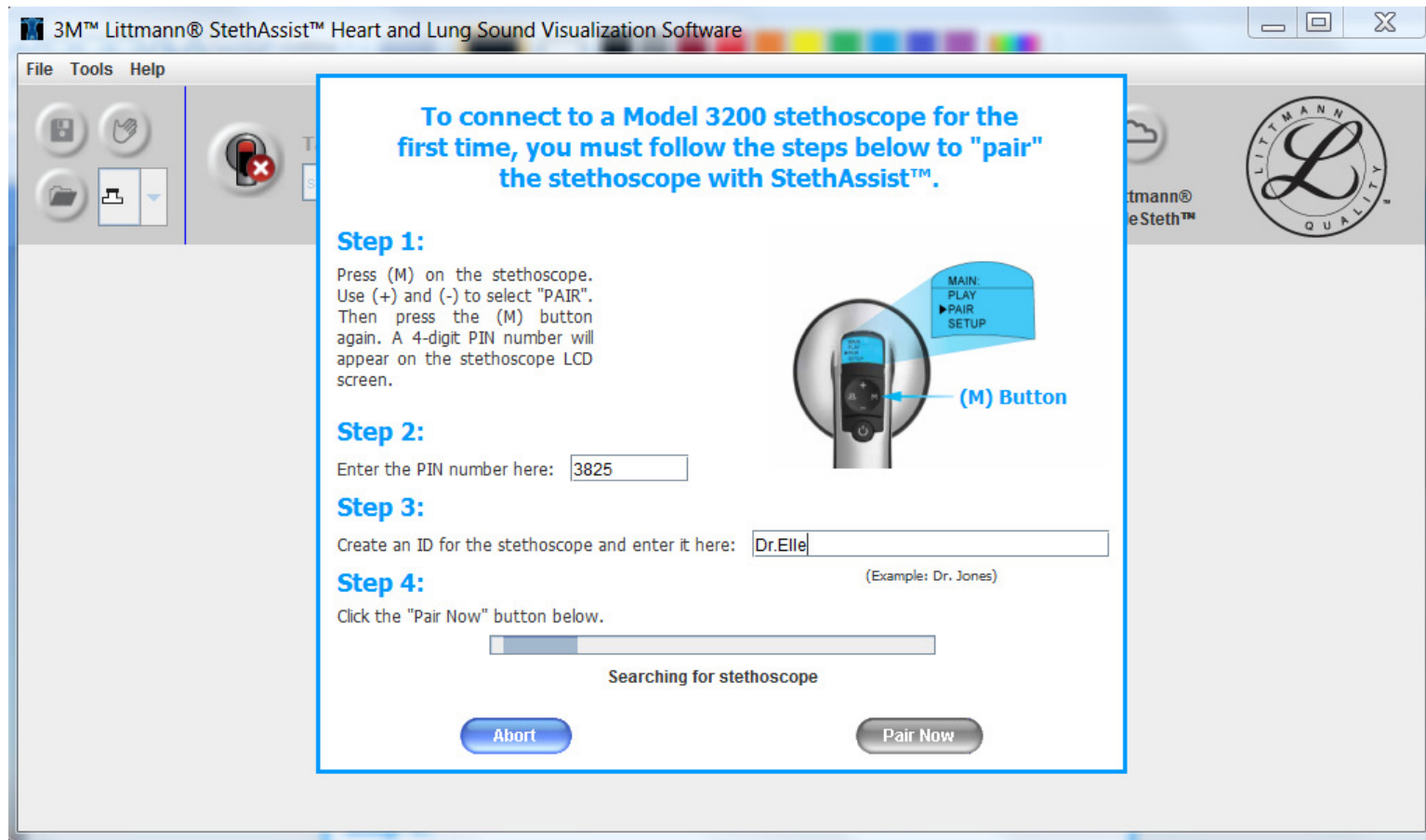
Create an ID for the stethoscope and enter it here:

(Example: Dr. Jones)

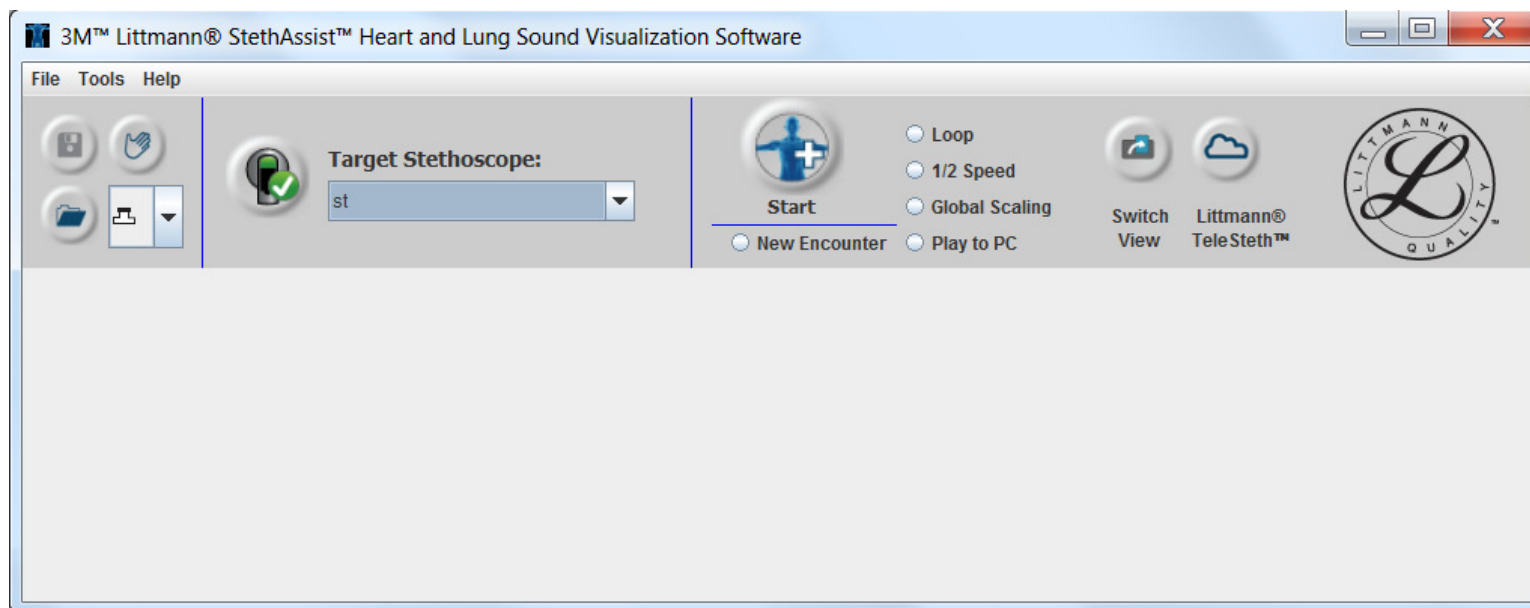
Step 4:

Click the "Pair Now" button below.

Littmann StethAssist software will be searching and then pairing the device.



6. Once the device is paired, the main application screen appears.



If the stethoscope is connected, the Stethoscope Connection button displays a green check mark

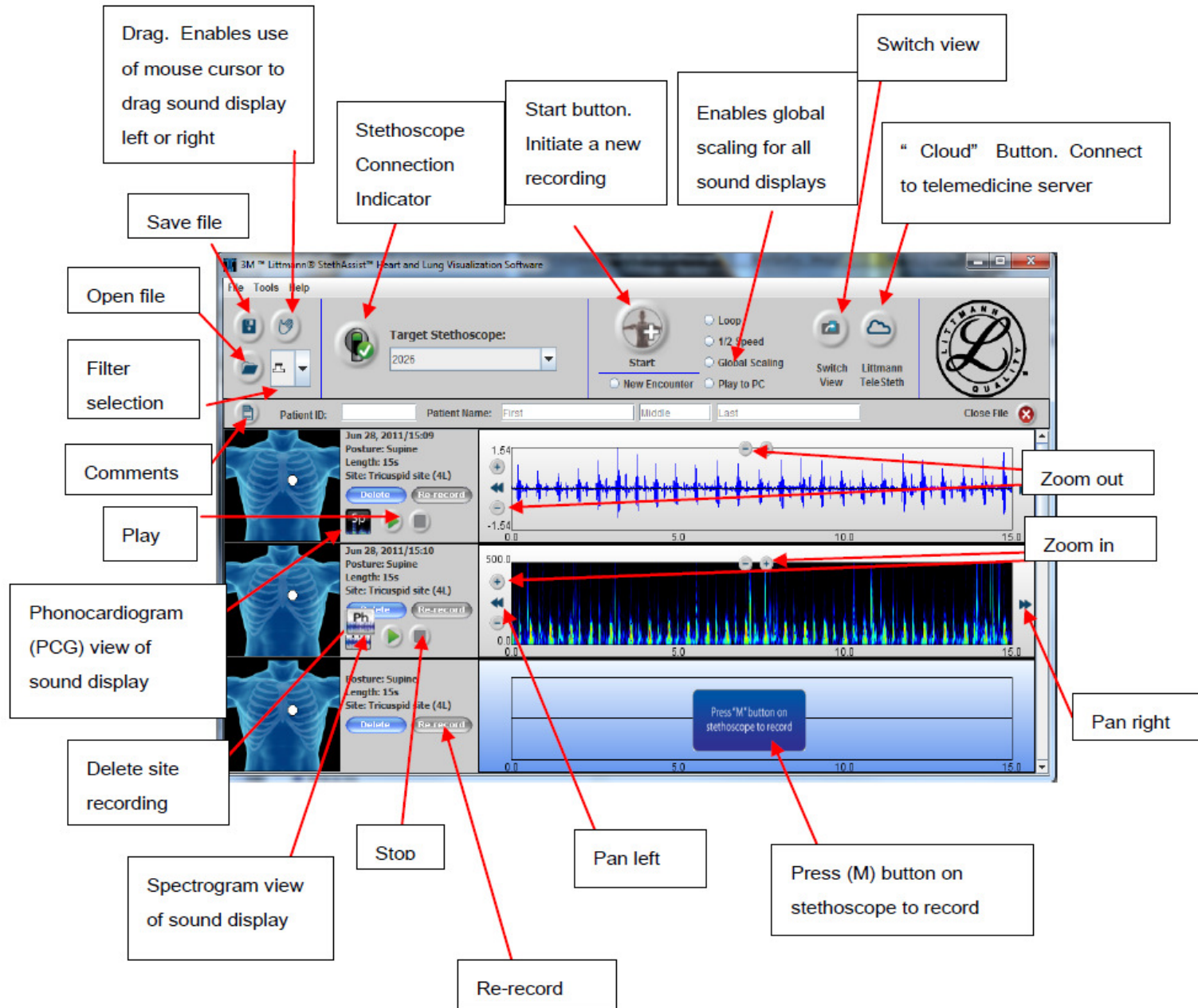


If your stethoscope is not connected, the Stethoscope Connection button displays a red X



7. Close Littmann StethAssist application.

Littmann StethAssist Software Icons and Buttons



Drag. Enables use of mouse cursor to drag sound display left or right

Stethoscope Connection Indicator

Start button. Initiate a new recording

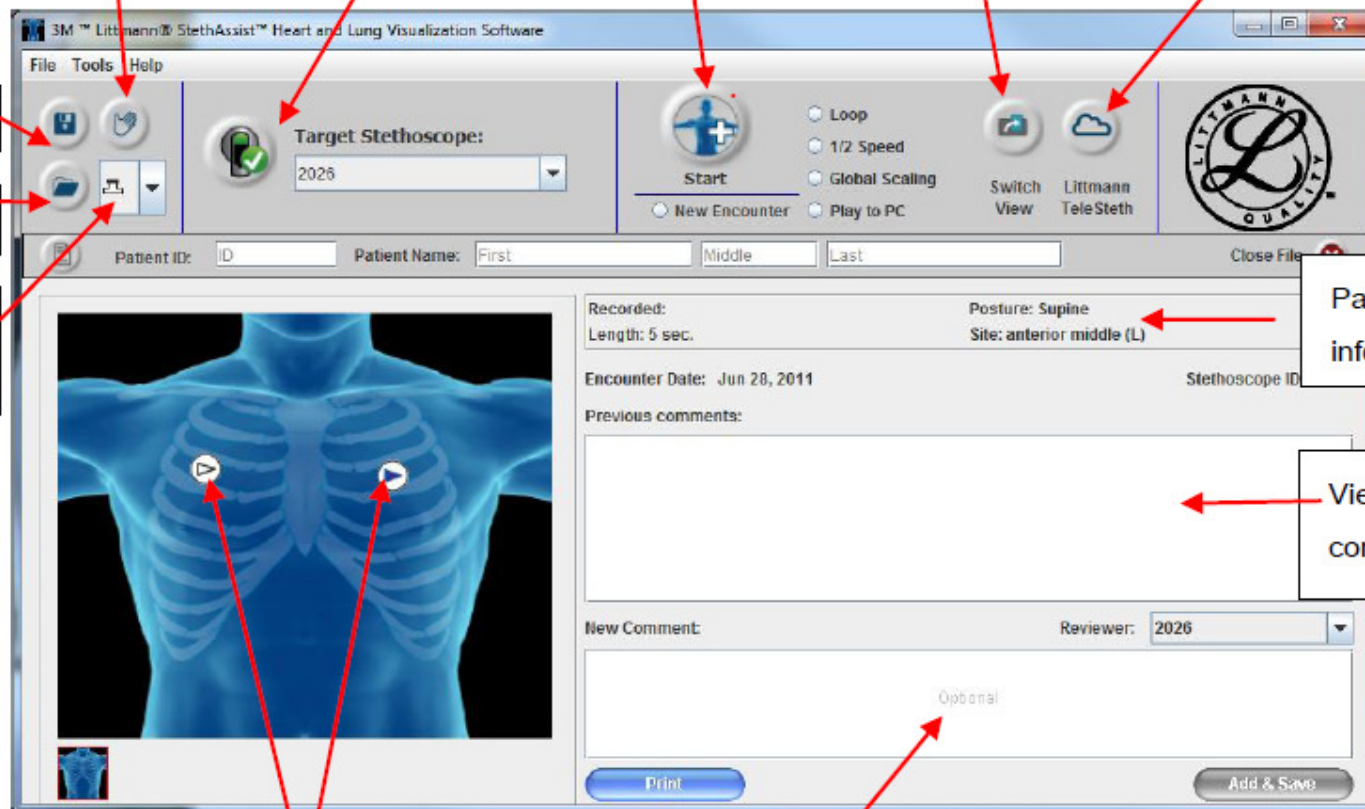
Switch view

" Cloud" Button. Connect to telemedicine server

Save

Open file

Filter selection



Patient information

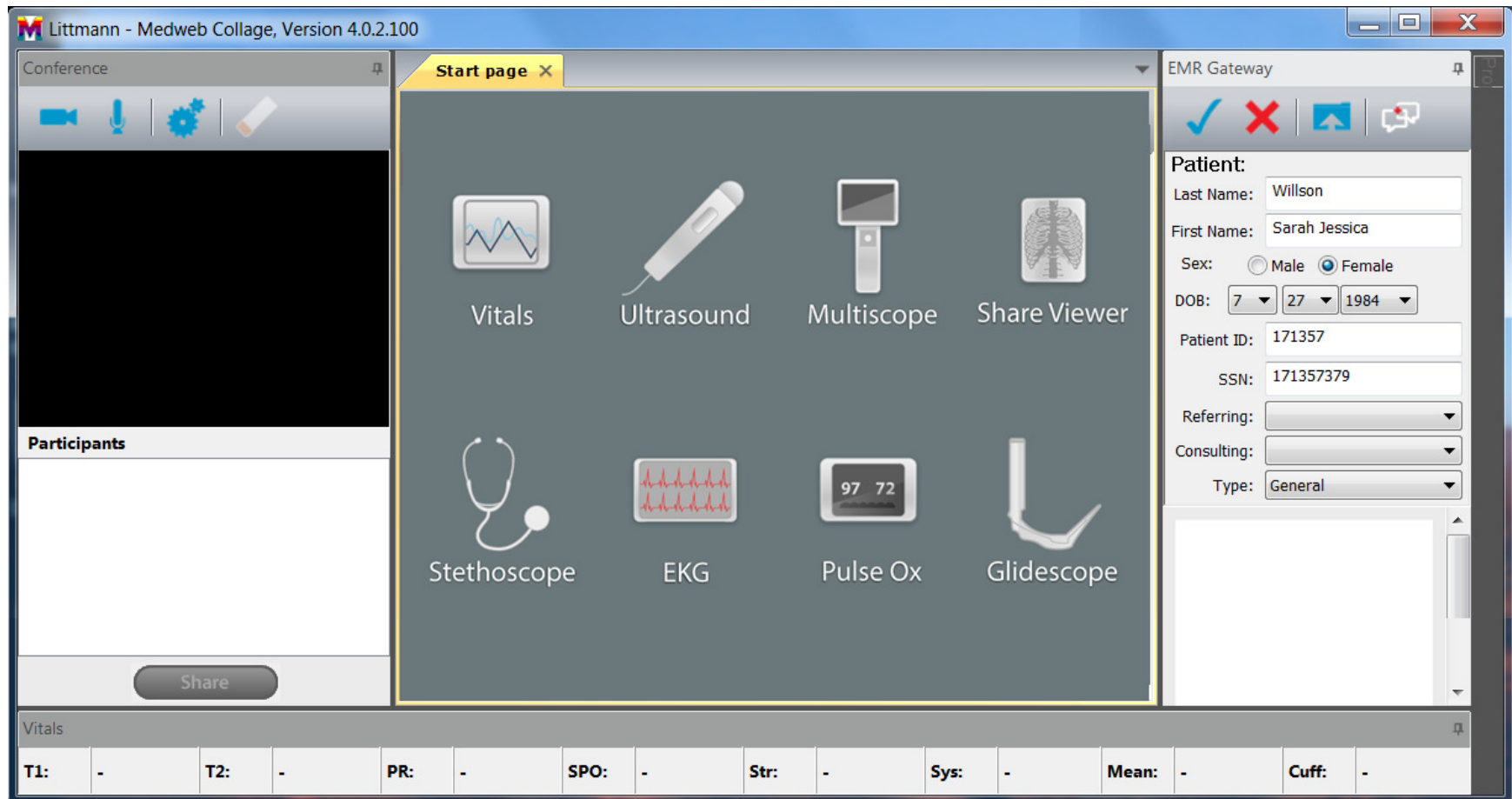
View previous comments here

Indicates the site of each recording. Click on a site to play the recording.

Add new comments here

Creating a study with the Littmann recording in Collage

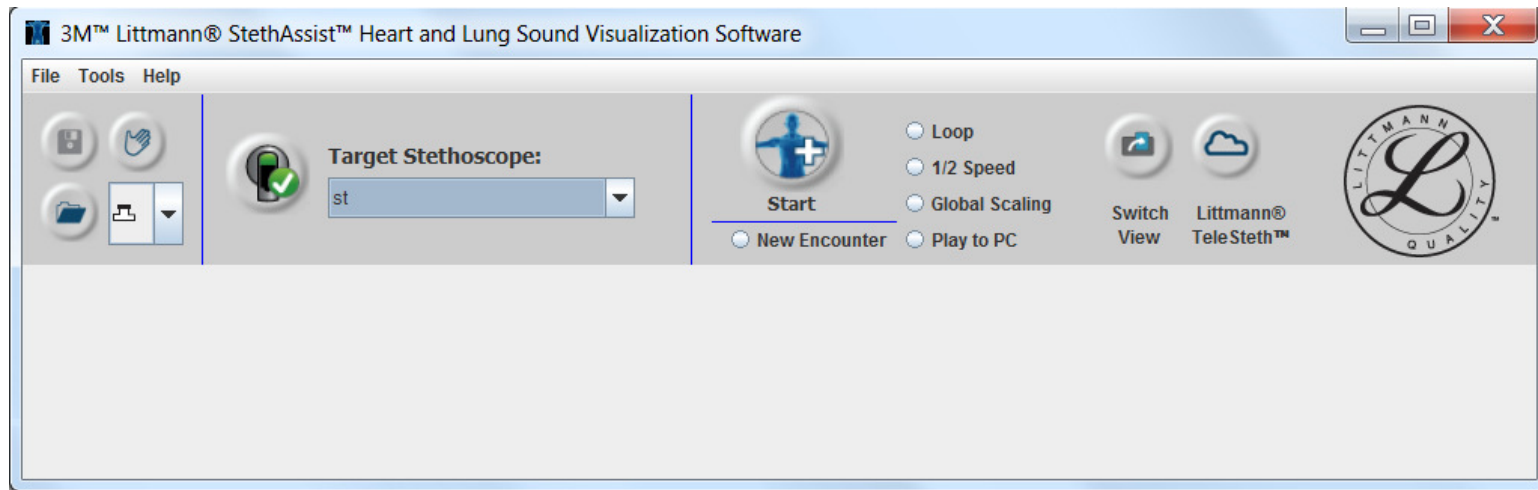
1. Open the Medweb Collage.
2. In the EMR Gateway of the Collage, enter the Patient name, DOB, Patient ID.



3. Click the Stethoscope button in the main Collage window.



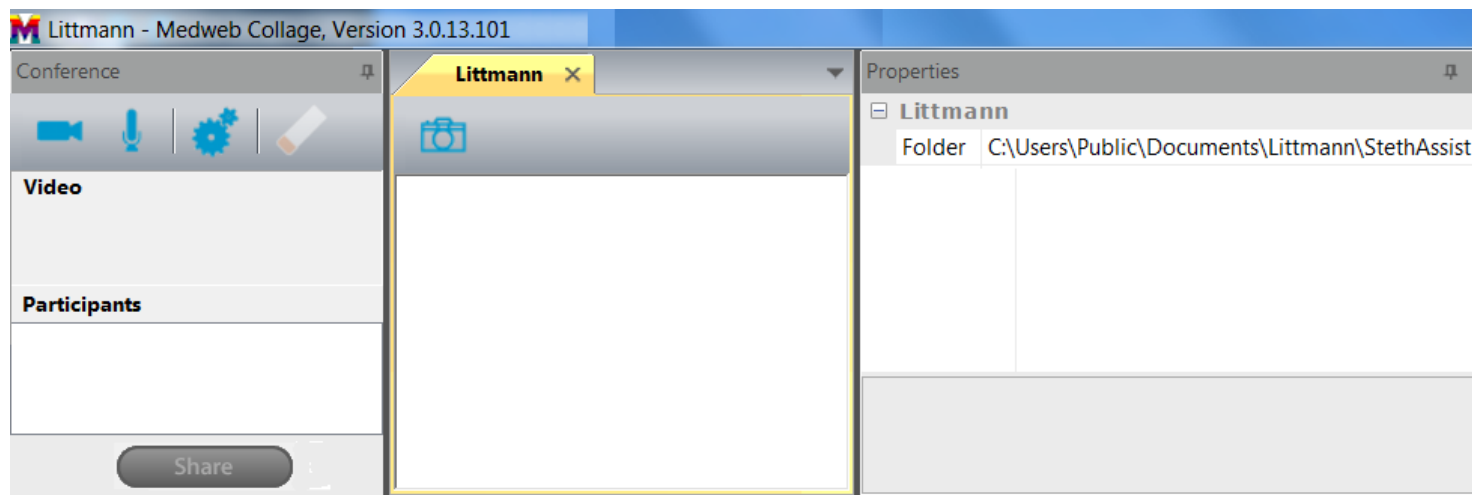
Littmann StethAssist software launches.

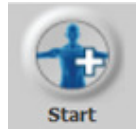


Note: If you are working with the Littmann stethoscope in the Collage for the first time, click the Properties tab on the right-hand side of the Collage and make sure that Collage is pointed to this folder on the computer -

C:\Users\Public\Documents\Littmann\StethAssist

Collage is monitoring C:\Users\Public\Documents\Littmann\StethAssist folder for new audio files acquired with the Littmann stethoscope.





4. To create a patient exam, click the Start button in the Littmann StethAssist window.

5. In the Recording Set-up window, enter the patient posture, recording length. Click OK.

Note that entering the Patient ID and Patient Name in this Recording Set-up window is not mandatory, as we have entered this information in the EMR Gateway section of Collage.

Upload from stethoscope onboard memory

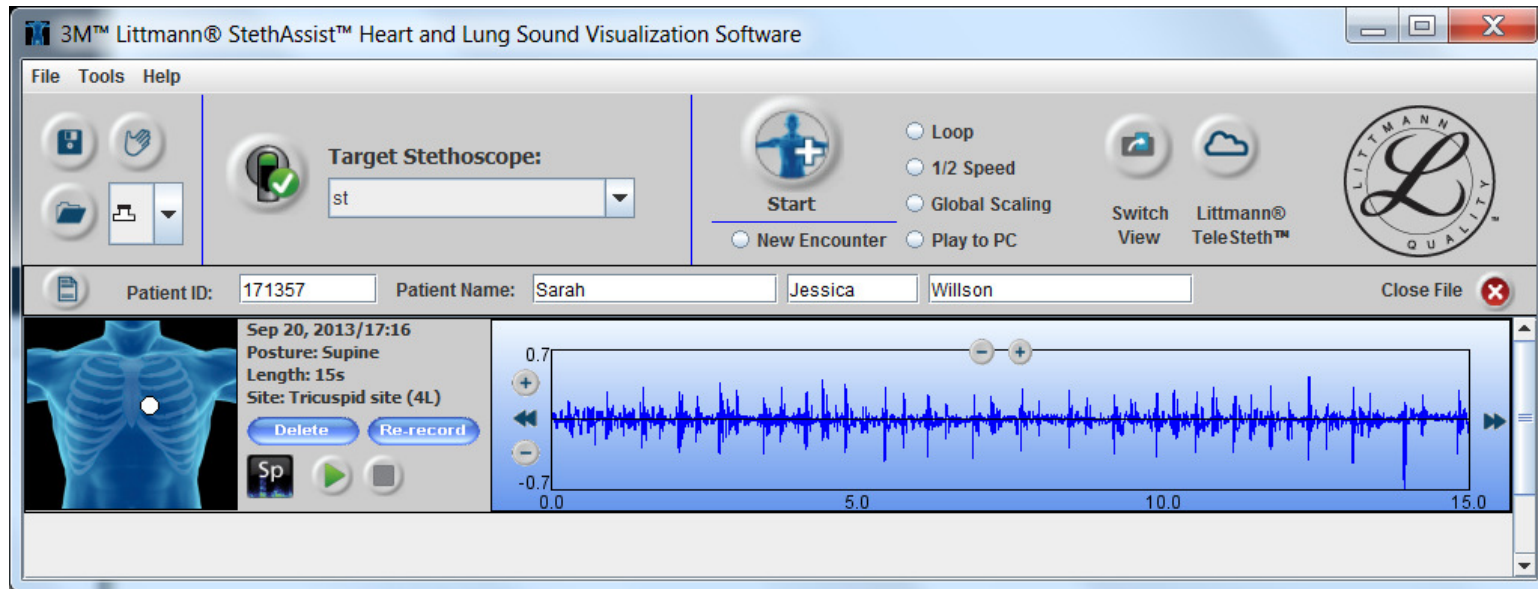
Select the recording length (5-60 seconds)

Click the "Preset Sites" button to select a recording site or click on the appropriate area of the large image to manually designate the site. To switch to a different image, click an alternate thumbnail view.

Select the patient posture

Preset Sites

6. Position the patient in the desired posture. It is preferable to auscultate on top of bare skin. Press the M button on the stethoscope to begin recording. The heart and lung sound visualization will appear on the screen. You can listen to the recorded sound, re-record it if necessary or delete it.



7. When you are satisfied with the recording, click the Save button  in the top left corner of the Littmann StethAssist window.

By default, recordings are uploaded and stored on the Medweb server in the **.zsa** format. Littmann strongly recommends to playback the recorded heart and lung sounds using the Littmann stethoscope and Littmann StethAssist software. Recordings played back through the PC audio jack or speakers may not be accurate. .zsa file format allows users to open the recordings from the Medweb Viewer right in the Littmann StethAssist software and view all the accompanying visuals along with listening to the sound.

8. The audio file appears as Report in the EMR Gateway section.

Littmann - Medweb Collage, Version 4.0.2.100

Conference

Participants

Share

Littmann

EMR Gateway

☒ ☐ ☐ ☐

Patient:

Last Name: Willson

First Name: Sarah Jessica

Sex: ☐ Male ☒ Female

DOB: 7 27 1984

Patient ID: 171357

SSN: 171357379

Referring:

Consulting:

Type: General

☒ Report

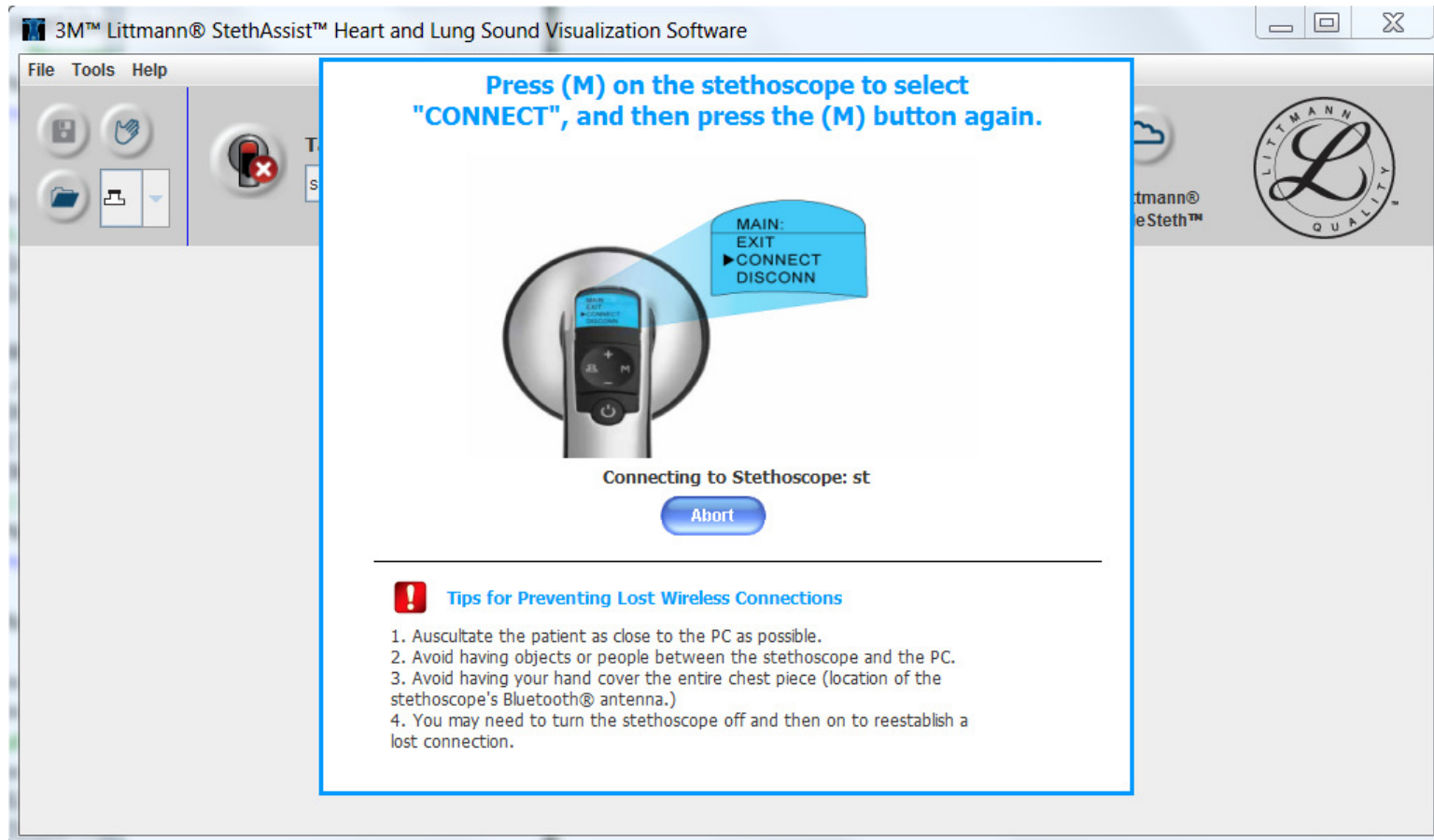
Vitals

T1:	-	T2:	-	PR:	-	SPO:	-	Str:	-	Sys:	-	Mean:	-	Cuff:	-
-----	---	-----	---	-----	---	------	---	------	---	------	---	-------	---	-------	---

9. Click Upload button at the top of EMR Gateway to upload the study to the Medweb server.

Note: Once the audio file is uploaded to the Medweb server, it is removed from the C:\Users\Public\Documents\Littmann\StethAssist folder on the computer.

If the stethoscope got disconnected, the Stethoscope Connection button displays a red X. Press the **M** button on the stethoscope, select Connect, then press **M** again.

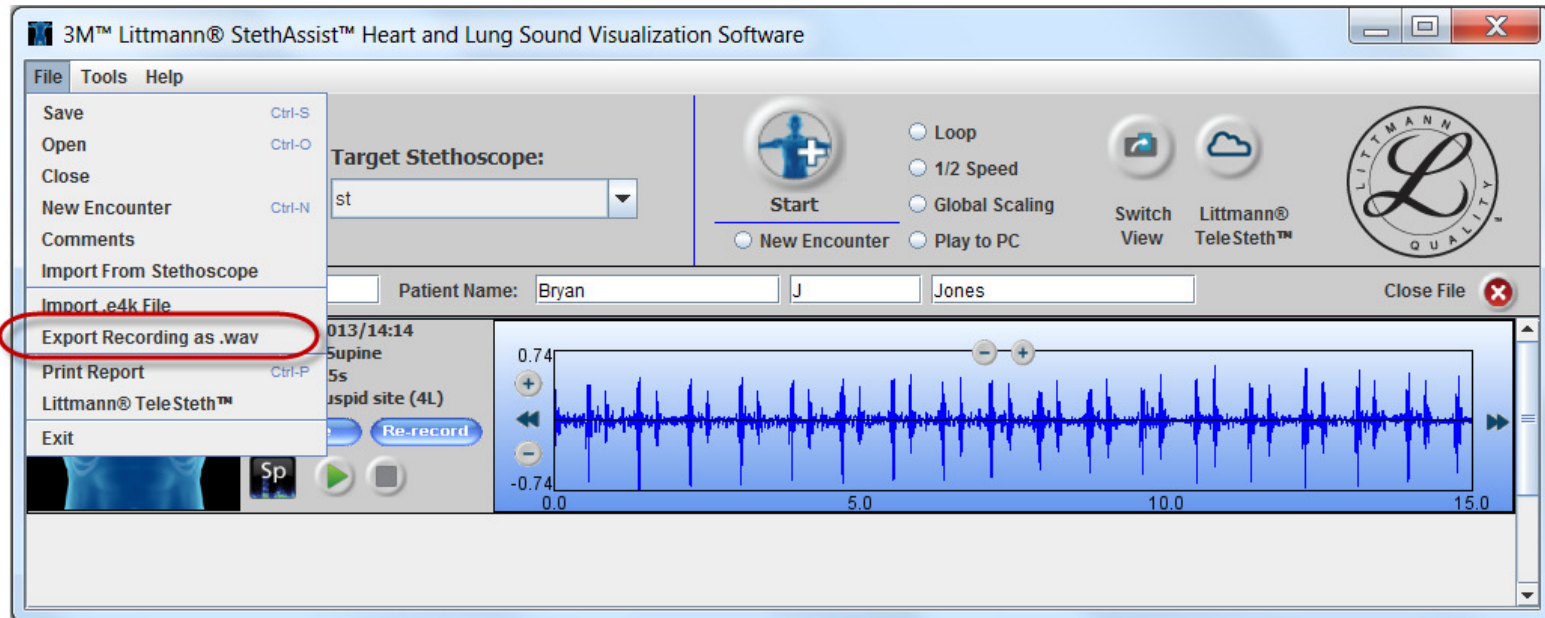


Uploading recordings to the Medweb server in the .wav format

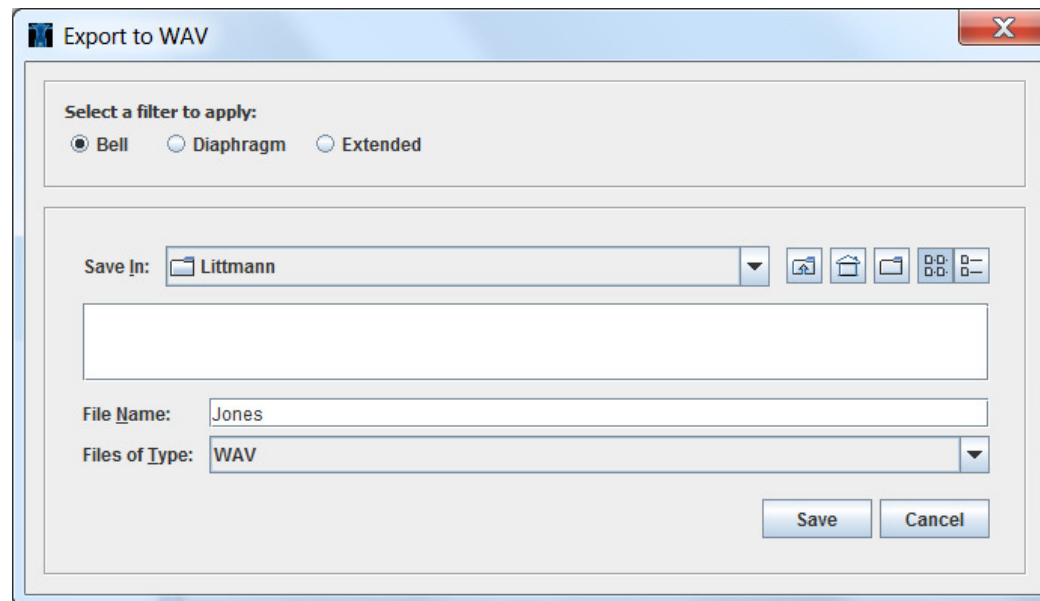
If users that will be listening to recordings do not have the Littmann stethoscope and software, you can upload the recordings to the Medweb server in the **.wav** format. When you click on the .wav report in the Medweb Viewer, it opens in the media available on the user's computer for playing audio files back.

1. Create a folder on your computer where you want to save .wav files from the Littmann Stethoscope.
For example, C:\Users\Public\Documents\Littmann

2. Open the Medweb Collage.
3. Click the Stethoscope button in the main Collage window.
4. Click the Properties tab on the right-hand side of the Collage and change the folder to the new one you created above.
For example, C:\Users\Public\Documents\Littmann
5. In the Littmann StethAssist window that opened, create a recording.
6. Click File at the top of Littmann StethAssist and select **Export Recording as .wav**.



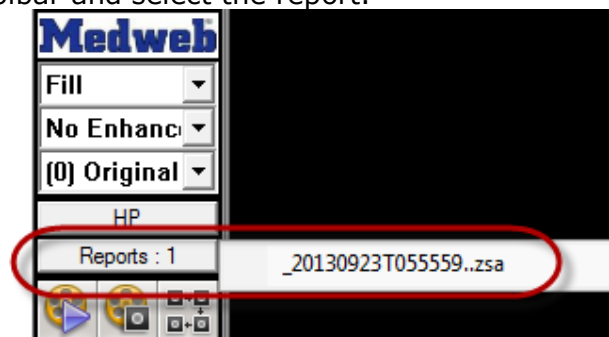
7. In the Export to WAV window select the folder that you created for Littmann files on your computer. Click Save.



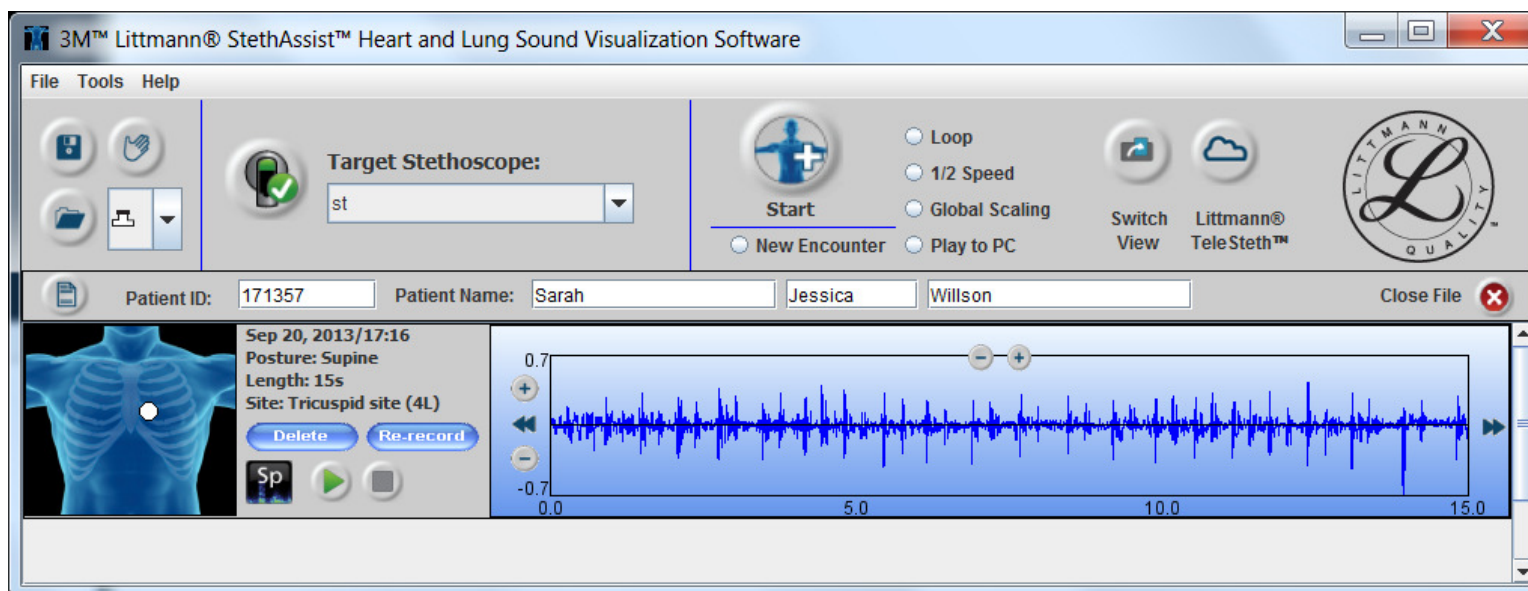
8. The audio file will appear as Report in the EMR Gateway section.

Playing Back a Recording

1. Log into the Medweb server and find the study.
2. Open the study in the Medweb Viewer.
3. Click the Reports button on the Viewer toolbar and select the report.



4. The recording opens in the Littmann StethAssist software.



5. Select the Play to PC radio button. Then press the green Play button to begin playback.

Littmann StethAssist software plays what you see in the graph. Note that during playback a red cursor scrolls across the sound display in synchrony with the recording. Click the Stop button to end the playback.

By default, the software will play the sound track back through the Littmann Model 3200 stethoscope. Make sure it is connected.

Note: The amplitude or volume of the recorded sounds may be less than what was heard during the initial recording. Use the "+" button on the vertical axis of the waveform graph or on the stethoscope keypad to increase the volume.

CAUTION: It is strongly recommended that a Littmann® Model 3200 stethoscope is used to listen to recorded physiological sounds with 3M™ Littmann® StethAssist™ Software. The audio quality of physiological sound recordings played back through the PC audio jack or PC speakers may not be an accurate representation of the recorded sound due to the PC's sound card, sound card drivers, and/or the frequency response of the headphones/speakers.

Streaming and capturing audio from the Thinklab Stethoscope

Installing Thinklabs Stethoscope drivers

You need to download and install the Phonocardiography software.

1. Go to [ftp.medweb.com/Collage/ Thinklabs Stethoscope/](ftp://medweb.com/Collage/Thinklabs%20Stethoscope/)

Username: medwebupload

Password: int3ftp!\$

Note that you can also download the software from <http://www.thinklabsmedical.com/software-download.html>

Scroll to the Get Your Copy of Thinklabs Phonocardiography Software Below section and click the Windows icon.

2. Download **thinklabs_phonocardiography_powered_by_audacity-win-1.2.6.exe** to your computer and double-click on it to install.

The Thinklab scope comes with 2 cables. You only need to use the longer cable to connect to the PC's audio port.

Record a file and save it. The file is saved in .aup format.

You can also export as a wav or mp3. Although you need the Lame mp3 encoder to export mp3's.

Instructions, with a link to the download can be found here -

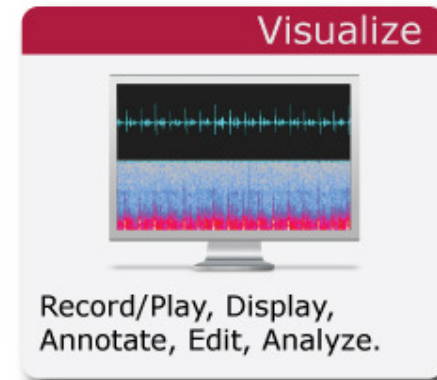
Just install Lame and the first time you try to export an MP3 it will ask you to navigate to the lame_enc.dll file located in the lame program files directory. This only needs to be done the first time.

Visualize heart and lung sounds with Thinklabs Phonocardiography. Expand the capability and power of your Thinklabs digital stethoscope by capturing sounds on your iPod, PC or Mac Notebook. Now you can display, edit, amplify, filter, slow down playback rate, show spectrograms and more.

Thinklabs Phonocardiography Software provides easy visualization and editing of heart sounds and lung sounds recorded from your Thinklabs Digital Stethoscope. The software can be downloaded free and works with both PC or Apple Mac computers. With Thinklabs Phonocardiography, you can use your Thinklabs Stethoscope to take Auscultation to a whole new level, whether you are in Medical Education or Clinical Practice. Here are just some of the features and benefits:

Easy to Use

- Record and Playback sounds as if you are using a simple tape recorder.
- Display and visualize sounds very clearly and intuitively.
- Manipulate sounds with ease, using your mouse.
- Save results easily in sound files or group sets of sounds in Project files.



Capture Sounds

- Record from your Thinklabs Stethoscope directly to a Notebook Computer.
- Import recordings from your iPhone, iPod Touch, Sony or other digital recorder. Sound files can be emailed directly from your iPhone or Touch.
- Import recordings from email attachments or downloaded from the Internet.



Playback and Export Sounds

- Play back sounds on a PC via headphones, or via your Thinklabs Stethoscope.
- Edit and Export sounds to new files for lectures, emails, podcasts, websites, or burn CDs.

Visualize Sounds

- Display heart sound Waveforms.
- Display lung sound Waveforms.
- Display Spectrograms (frequency spectrum) of heart sounds and lung sounds.
- Display Waveform and Spectrograms together to correlate timing and frequency.
- Display FFT's of a segment of sound to observe frequency content.

Manipulate Sounds

- Amplify Sounds after they have been captured.
- Filter recorded sounds to refine recordings or look for specific sound characteristics. Both standard pre-set filters and user-defined filters can be used.
- Rate Change – Slow down recordings so that details such as splits are more audible.

Edit, Annotate and produce Electronic Medical Records

- Cut, Copy or Paste sound segments.
- Label Sound tracks to identify specific events such as S3, S4, murmurs, etc.
- Import groups of sounds for one patient, or a group of patients into Projects that can be saved, so that you can later open a single Project file to access all related Sounds.
- Save images of Waveforms and Spectrograms along with Labels for medical records or research papers.



Auscultation Research for Advanced Users

- Investigate heart sounds and lung sounds for new diagnostic methods.
- Develop software analysis methods. Thinklabs Phonocardiography is built on the award winning Audacity Open Source platform. The software source code is freely available for any researchers or software developers who wish to expand the power of auscultation with new analysis software.