Teleradiology Management System

User Guide

Tech Supplement

Revision 2

December 2019

CONTENTS

Technician Role Description 3

Life Cycle of an exam in SIXPACS 3

Login 4

Vehicle selection 4

Worklist 5

Exploring the worklist 5

- View Patient Detail 6
- Assigning/Paging Orders 7
  - Paging a Tech 7
  - Receiving a Page 8
  - Assigning a Tech 9
- Group Functions 10
- Set Next Stop 10

Tech Worklflow 11

- Selecting Patient 12
- Creating A visit 16
  - Adding Orders to The Visit 17
- Updating the Exam Record 17
- Scan paperwork (Paper Scanner) 18
  - Scanner Dialog buttons 19
- Scan Paperwork (CamScanner) 21
  - On Your Phone 21
  - On Your Computer 26
- Uploading Images 26

Completing the visit 27

Escalate an order to management 28

Assign radiologists/cardiologists 28

Tech Map 29

Group Functions 32

Getting Directions 32

Show ETAs 33

Burning A CD 34

APPENDIX A - CD Burning Software installation 36

TECHNICIAN ROLE DESCRIPTION

The Technician is responsible for performing the exam assigned to them and uploading the images to the server that will be read by a radiologist. The Technician can also verify and makes necessary change to the patient and exam info that was entered by the staff/ dispatch. They can search patient records, add a new patient or add an existing patient and have it directly assigned to them.

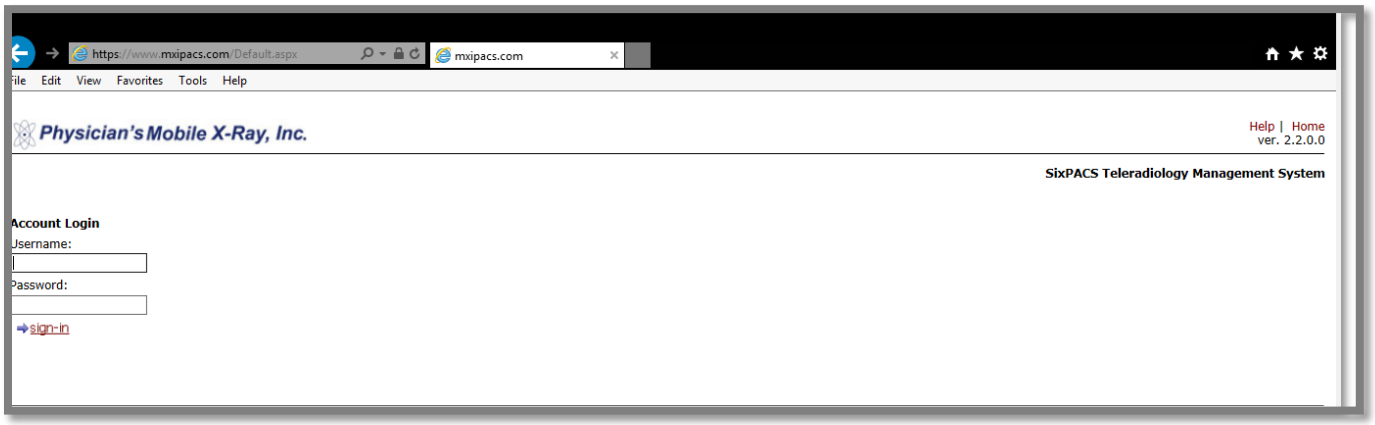
LIFE CYCLE OF AN EXAM IN SIXPACS

RECEIVED	Once a call has been received and the exam detail has been entered, the exam is moved to the "Received" status and is ready to be assigned to a tech.
ASSIGNED	Exams are assigned when they have been dispatch to a tech. They are assigned directly to the tech by a dispatcher, or they are automatically assigned when the tech receives page through their cellphone device. The exam records will remain in the "Assigned" status until the Tech adds then to a visit.
IN PROGRESS	"In Progress" is used by the Tech to compile and send all the information necessary to complete a visit. A visit can contain a single patient, or multiple patients. Keeping track of visits and the number of patients seen in a visit helps facilitate the billing process.
COMPLETED	Once the techs as completed the information necessary for a visit, the visit is marked "completed", and it is ready to be reviewed by the radiologist.
TO BE TRANSCRIBED	After radiologist has viewed the images associated with an exam and dictated the result and impression, it is marked an moved to the status of "To Be Transcribed"
TO BE FAXED	Once a report is created, the exam status is change to "To BE Faxed". From here, the report is faxed to the facility.
TO BE CALLED	When a positive report is faxed, the status changes to "To Be Called". The dispatcher then calls the facility to verify that they receive the report. The exam is then manually marked "Called" an status moves to "To Be Billed".

TO BE BILLED	After the report has been faxed to the facility the exam is moved to a status of “To Be Billed”. The record will stay in the worklist for 24 hours and then will be removed from the worklist.
CANCELED	Canceled exams appear at the top pf the worklist and will stay there for 24 hours. If an exam is canceled for any reason, it is flagged as canceled.

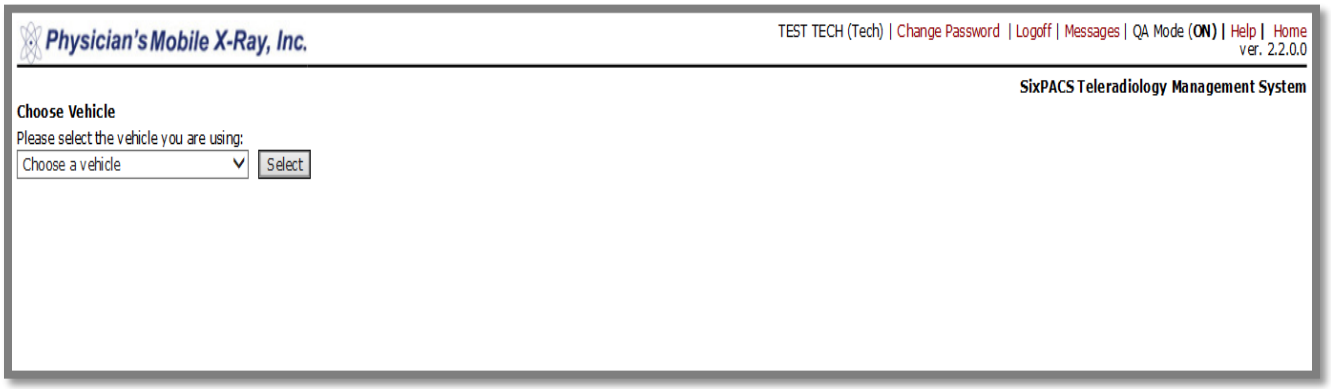
LOGIN

Each Technician will be able to login from any computer with a suitable browser. At the login screen, the user enters his username and password.



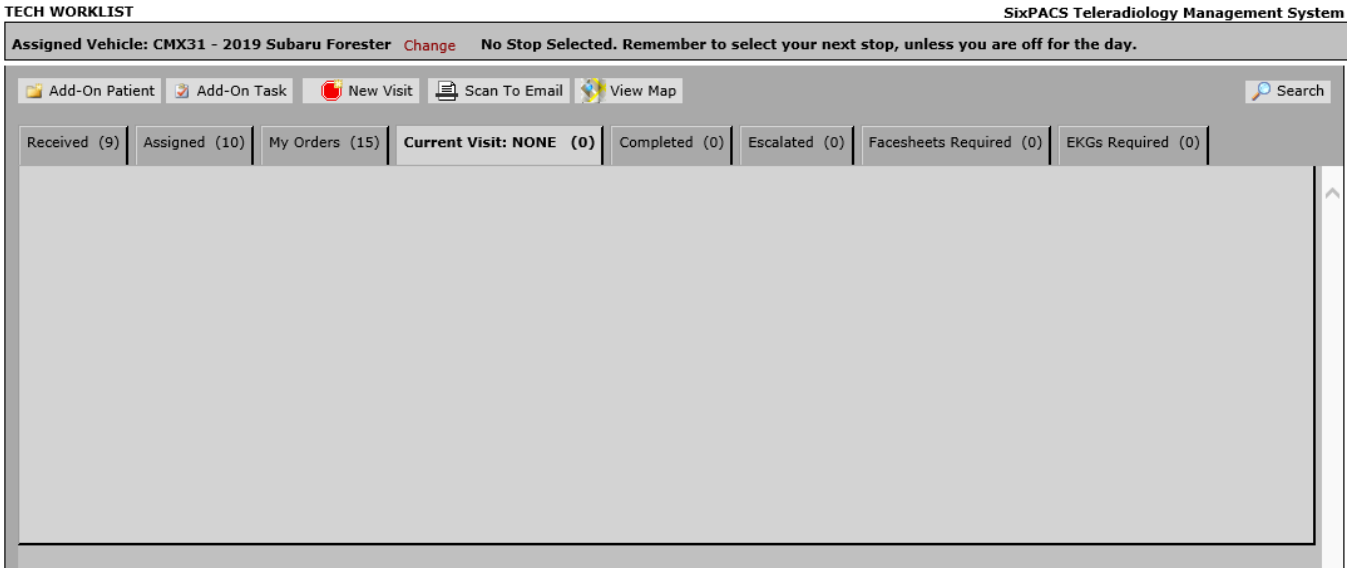
VEHICLE SELECTION

After successfully entering username and password, the tech has to select a vehicle.



WORKLIST

After selecting a vehicle, the tech worklist will be displayed.



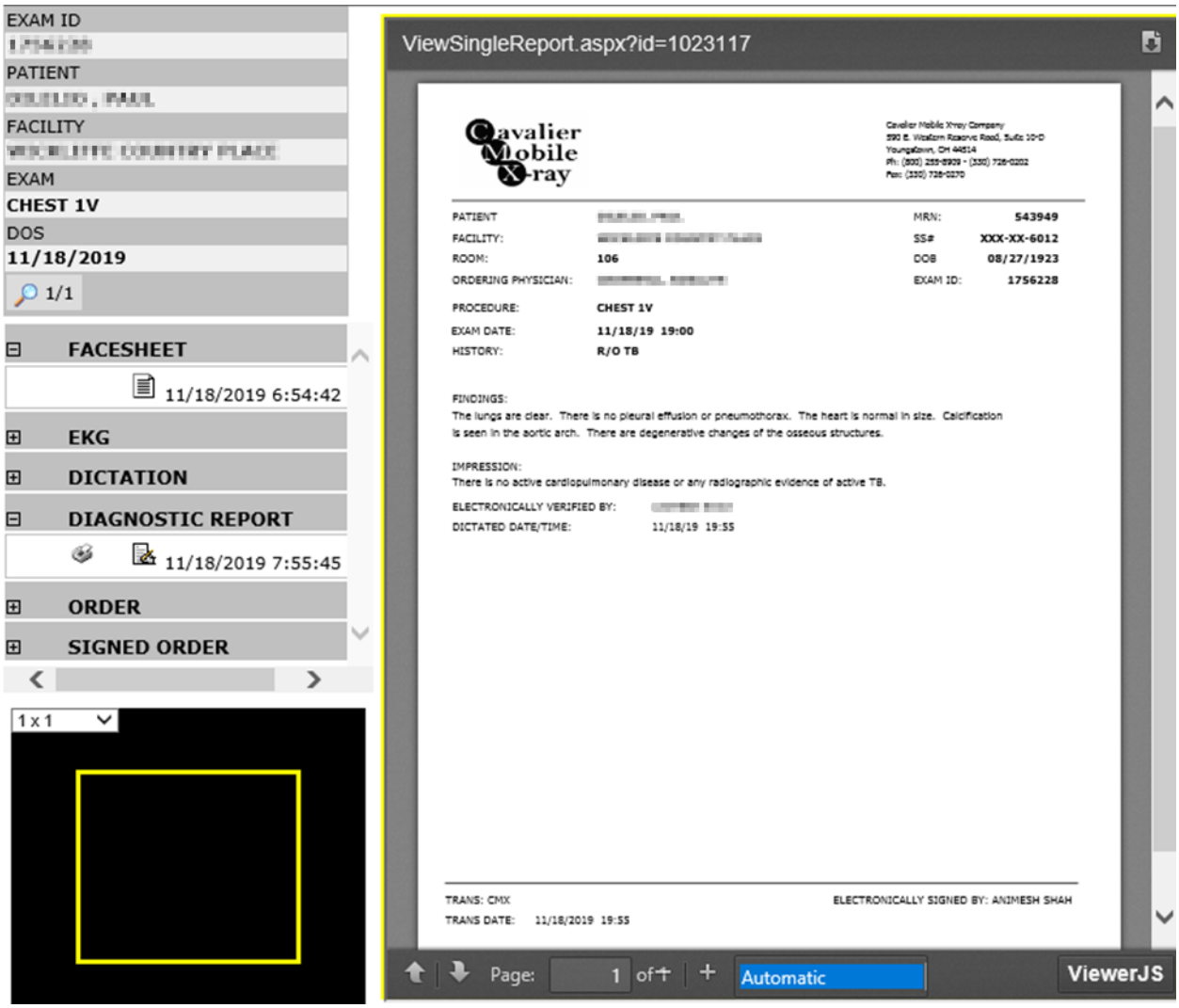
EXPLORING THE WORKLIST

The worklist consist of a series of tabs. The first six (6) tabs represent a status of the order and the last two (2) tabs display a list of orders that do not have a Facesheet or EKGs scanned into the system. The tabs also show the number of orders that currently within each tab. The currently active tab will be displayed in bold text; each order is initially displayed in a "collapsed" manner in order to make the entire list more readable. The information shown includes whether the order is a stat, the type of order, facility name, patient name, patient name, SSN and the date of birth.

VIEW PATIENT DETAIL

The user can view the patient detail and order history by clicking on the Patient Detail button on the order. The order history is shown, along with buttons to view prior images, reports, etc.

Clicking on the highlighted button above displays the document interface, where orders, reports, facesheets and images can be seen.

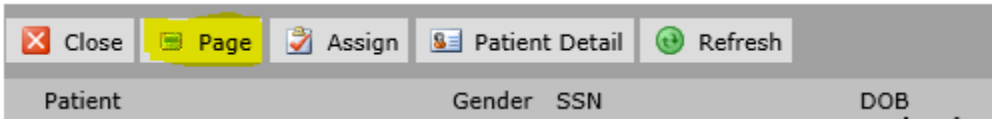


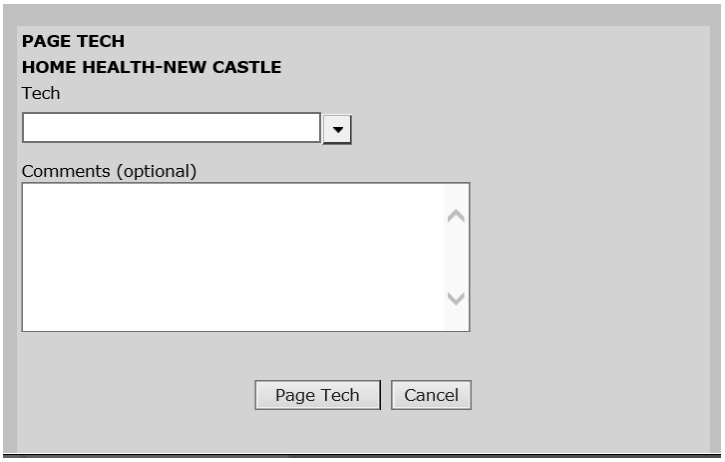
ASSIGNING/PAGING ORDERS

The 'Received' tab in the worklist shows orders to be performed that have not been assigned to a tech. The user has the ability to Page another tech, or assign the order to themselves.

PAGING A TECH

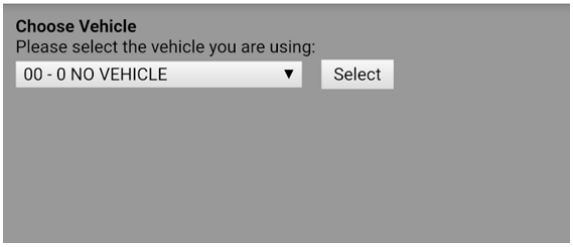
To page an order to a tech, select an order from the 'Received' tab, and click on the **Page** button.



Select the tech you wish to page, and enter any necessary comments. Click on **Page Tech**. An email will be sent to the tech, with a link to view the order.	

RECEIVING A PAGE

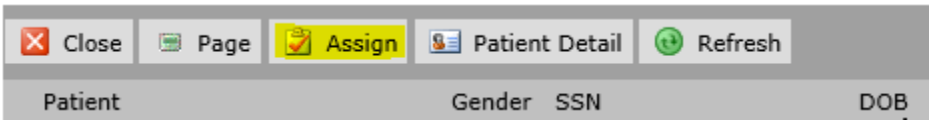
When a page is sent to a tech (typically via email), the message includes a link to view the order. The following steps show the process of receiving a page.

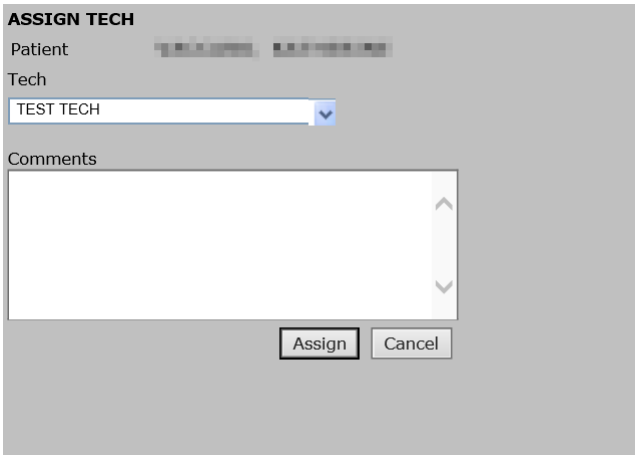
When opening a page, the user must click the button to continue.	
If the user is being tracked by vehicle, and has not selected a vehicle, they must do so now.	

The order is now shown. If this is the next order to be performed by the tech, the user can click on “Set As Next Stop”. This will then show the order as the next stop on the dispatch map, and the worklist.	

ASSIGNING A TECH

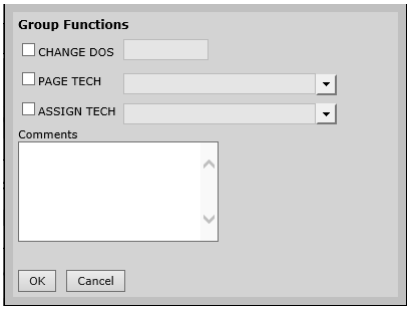
To page an order to a tech, select an order from the ‘Received’, or Assigned tab, and click on the **Assign** button.



Select the tech you wish to assign, and enter any necessary comments (required). Click on **Assign**.	

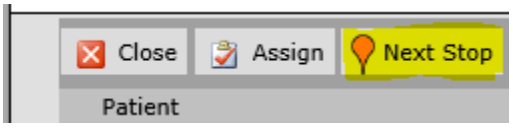
GROUP FUNCTIONS

Some functions, such as paging, assigning, and changing the date of service can be performed on multiple orders at the same time.

From the worklist, select the checkbox next to the orders of interest, and click on **Group Functions**. The user then selects the function to be performed, enters appropriate comments (required), and clicks on **OK**.	

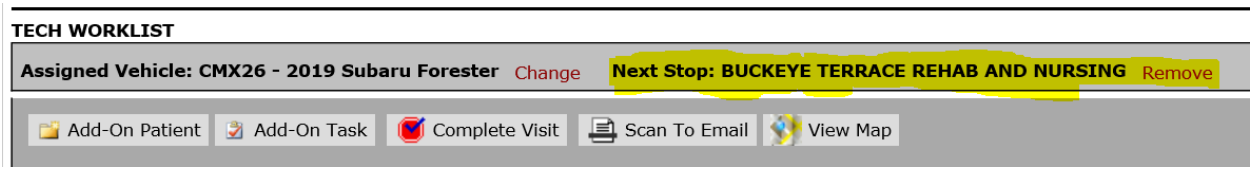
SET NEXT STOP

By setting the next location that the tech is going, other users can make more informed decisions on how to delegate the day's work.

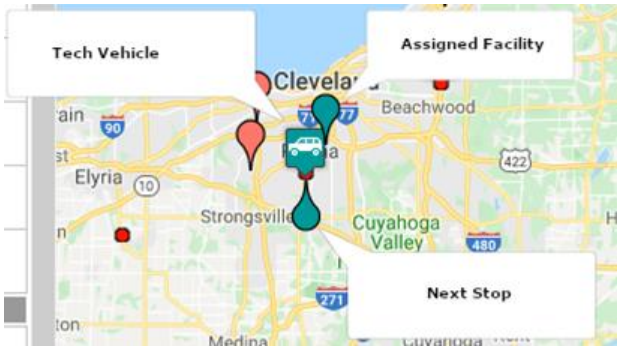
To set the next location, the user either selects an order from the 'My Orders' tab, and clicks the **Next Stop** button, or clicks on the **Set As Next Stop** button in a page that	

they received	

The next stop will be displayed at the top of the Tech Worklist.

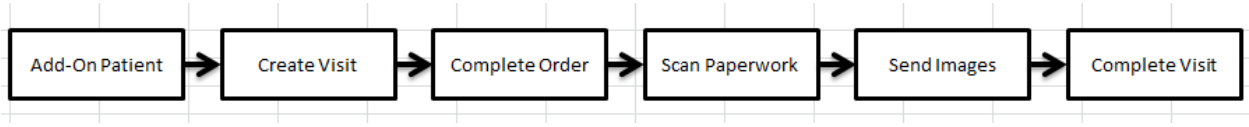


The Dispatch and Tech maps will reflect where the tech is going, with an “upside-down” marker, as shown.



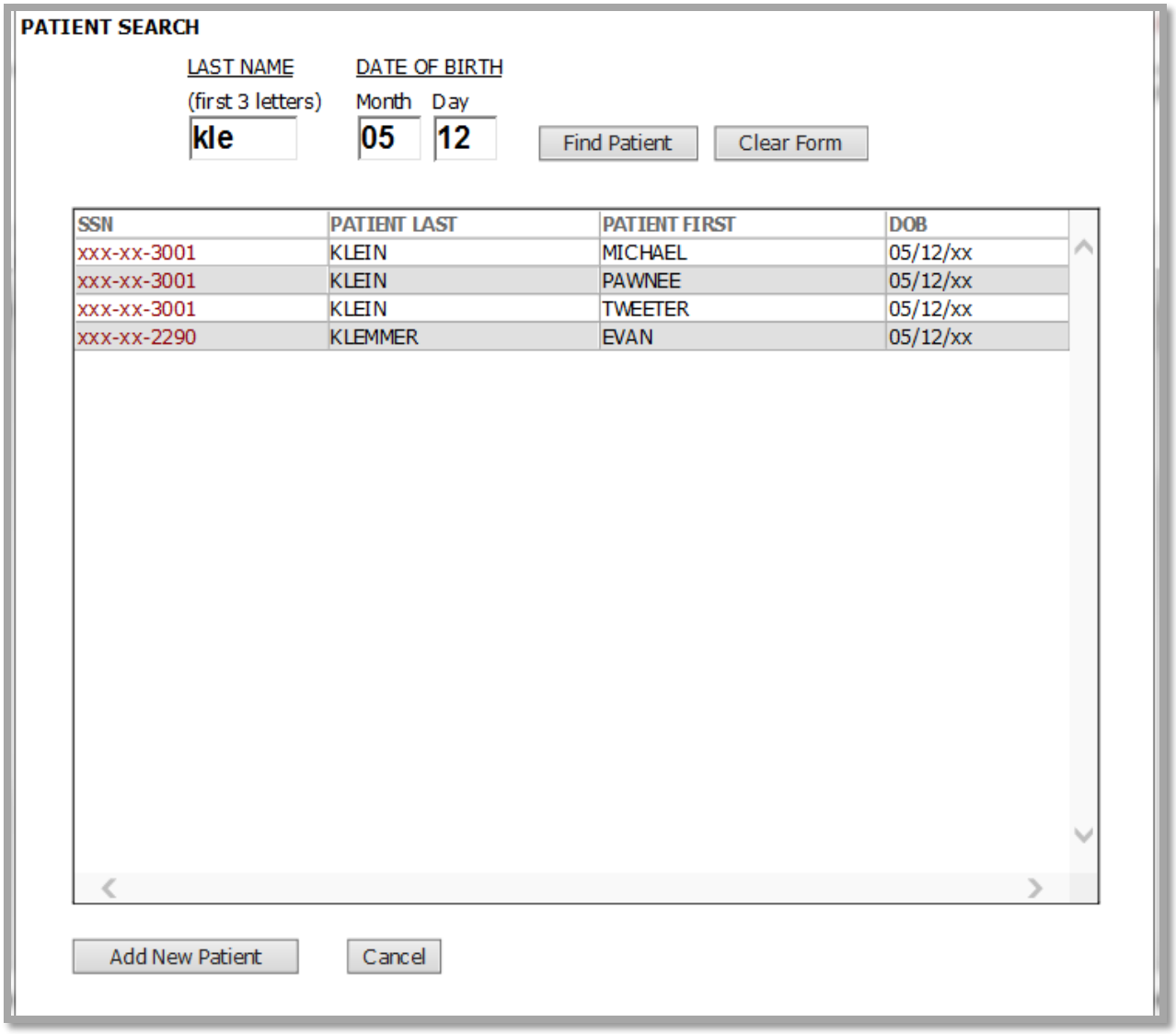
TECH WORKLFLOW

The chart below show the typical workflow of the PACS. Not all steps will be taken for each order.



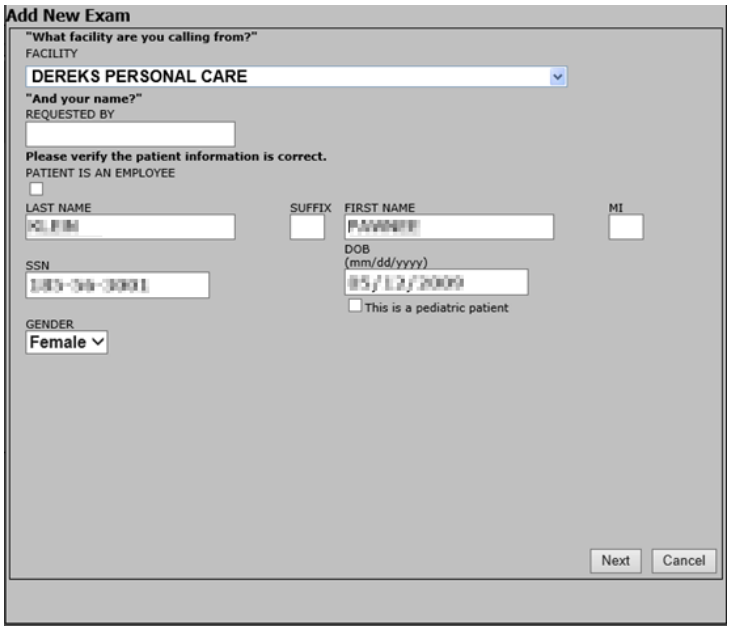
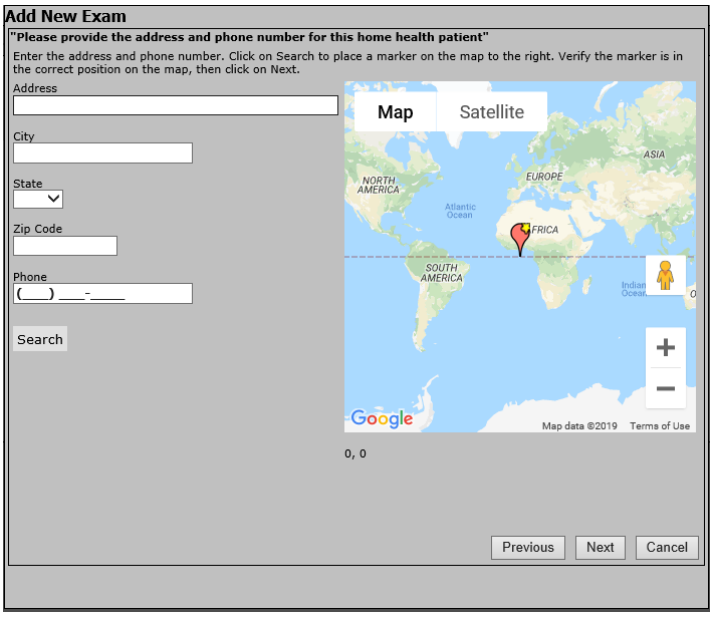
ADD-ON PATIENT

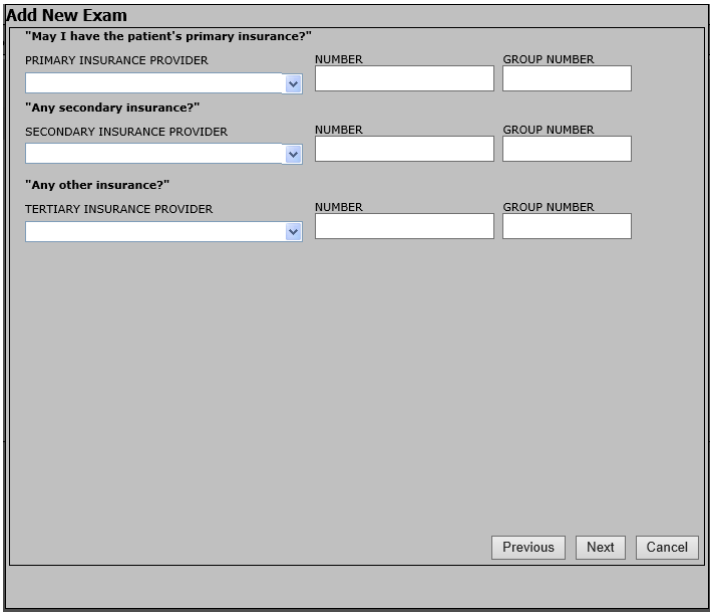
The Tech can perform an Add-On Patient meaning the tech can add a new patient or order to their own worklist. From the tech worklist, click “Add-On Patient”. This action takes the user to the search page. Enter the patient’s first (3) letter of the last name, along with the month and day of Date of birth. Then click “Find Patient”. Any record matching the search criteria will be displayed in the list below the search boxes. Select the proper patient from the list by clicking on their SSN. If no record matches the search criteria, click on the “Add new Patient” in the lower left corner if the patient is not display in the list.

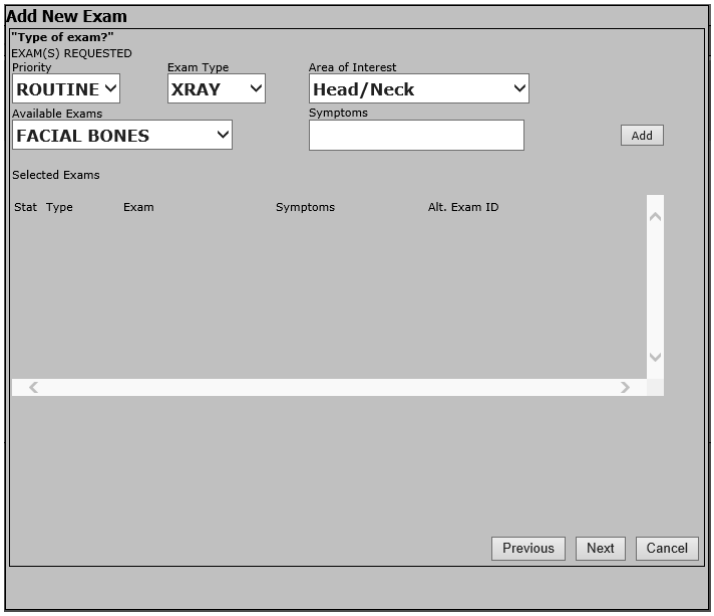
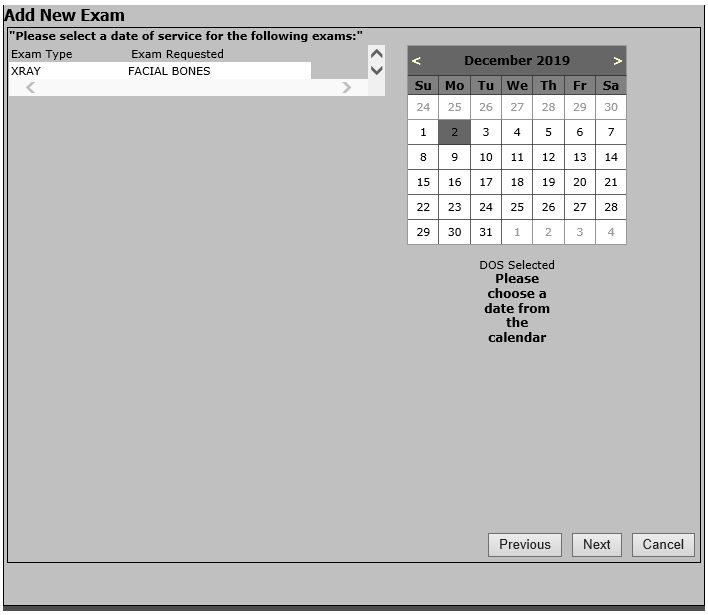


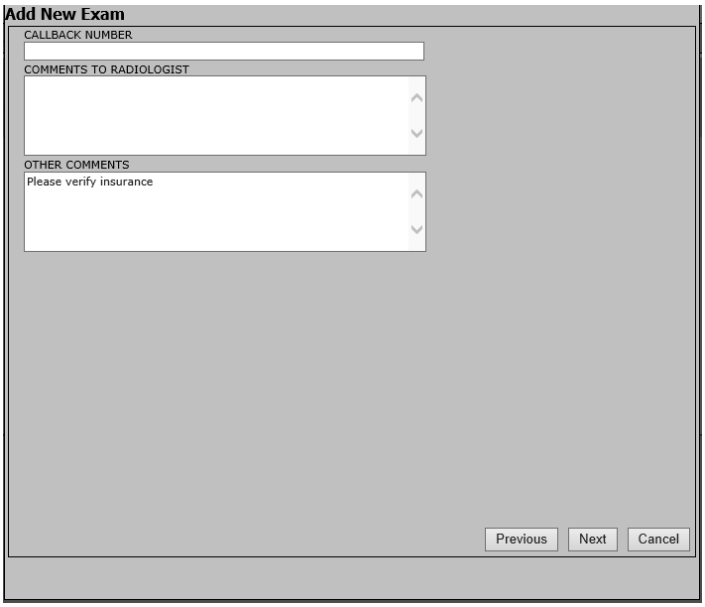
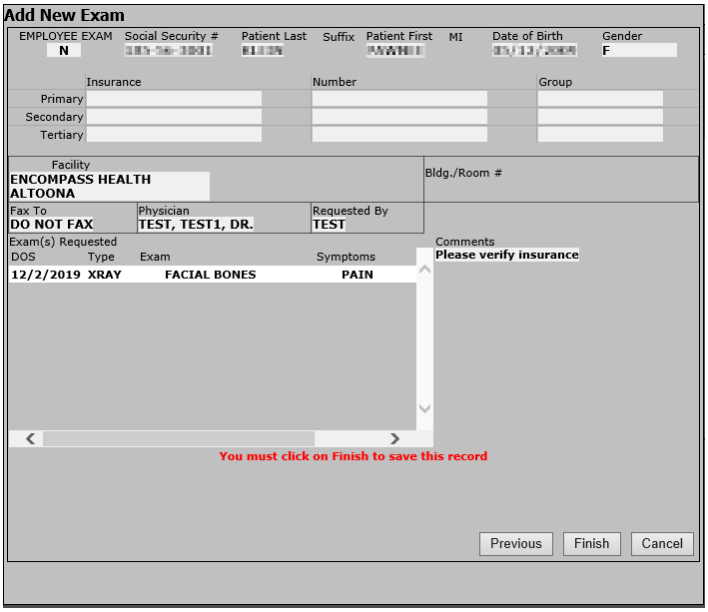
SELECTING PATIENT

After selecting a patient, an “Add New Exam” dialog box pop up. The user has to provide all necessary required information.

Enter the facility and who requested the exam. Verify that the demographic information matches the patient, and click on **Next**.	
If the order s for a home health patient, enter the patient's address and click on **Search**. Once the address is located on the map, click on **Next**.	

Enter the patient's insurance information and click on **Next**.	
Enter the room number of the patient, the location to fax the report and the ordering physician name. Click on **Next.**	

Choose the exams requested. Note that multiples exams can be added, as well as different types of exams (X-ray, US, Cardio, etc.…). Click **Next.**	
Select the date of service for this order. If this is a stat order, or if it is for an employee, choose the correct checkboxes. Click **Next**	

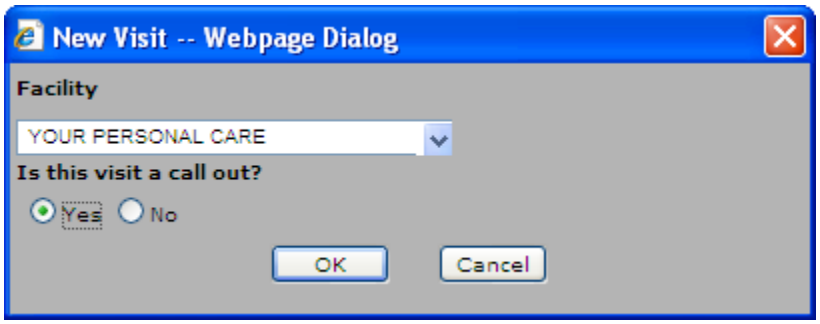
Enter any necessary comments, and a callback phone number. Click on **Next**.	
Review the information that was gathered. Click on Finish to create the order. The order will be automatically assigned to you, and the patient will appear on the worklist under the 'My Orders' tab.	

CREATING A VISIT

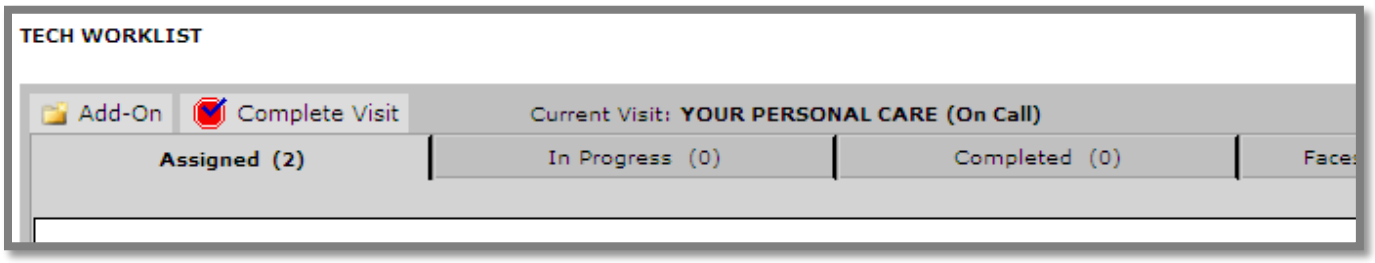
Once an exam has been assigned, it is available to be completed by the tech. This involves creating a visit, updating the exam record with time of exam, and the proper exam types performed, (i.e. HAND LT 2V, WRIST LT 2V, etc.). After the order record is updated, the appropriate paperwork is scanned, and the images can then be sent to the server, using the Exam ID as the accession number of study. The first step in the process is to create a visit. A visit is created for each physical visit to

the facility. The purpose of creating a visit is to track the number of patients seen for billing purposes. It is also used to track whether the visit was done while the Tech was on call, to help with calculating call pay.

To create a visit, click on the "New Visit" button, at the top of the worklist. The new visit dialog box will display..



The facility dropdown box only shows the facilities associated with the exams assigned to the Tech. Select a facility, and the appropriate choice for call, and click OK. The current visit will now be displayed at the top of the worklist. If it is a call visit, the words "On Call" will also be displayed. The "New Visit" button will now be replaced with a button marked "Complete Visit". The current visit tab will also show the facility selected.

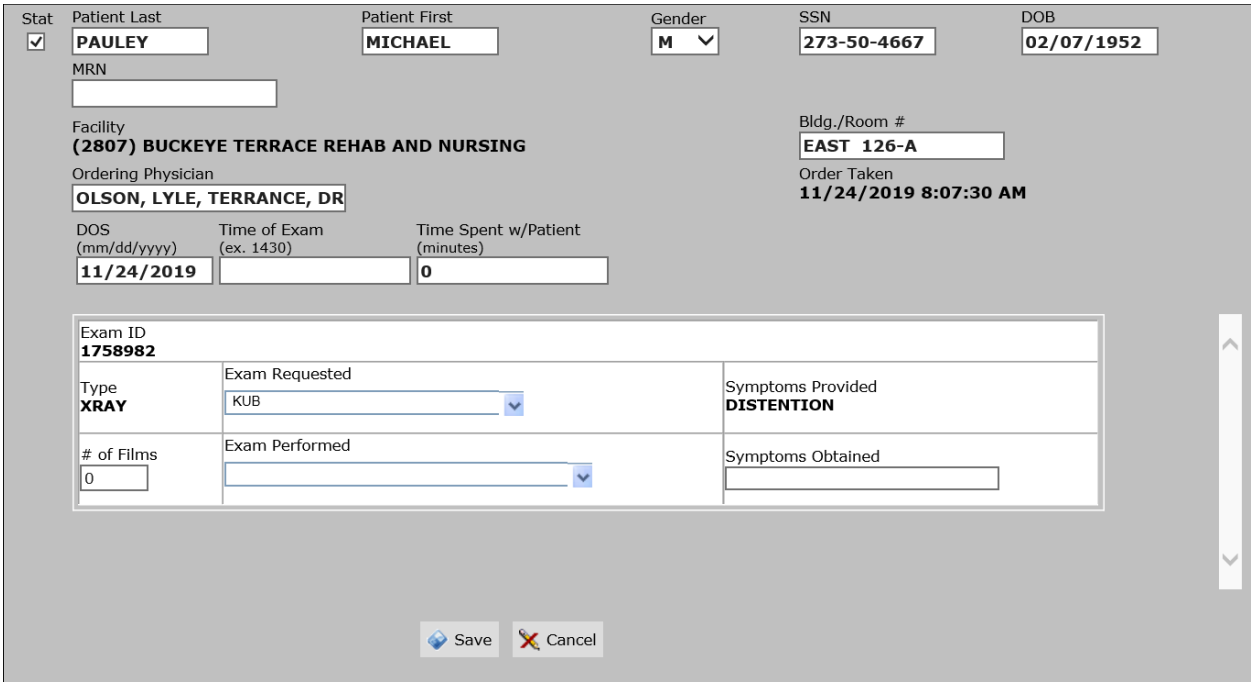


ADDING ORDERS TO THE VISIT

Once a visit is created, the user can add orders to the visit. From the "My Orders" tab, select an order from the list, and click on the **Add** button. The order will now be present under the "Current Visit" tab.

UPDATING THE EXAM RECORD

To update the exam record, click on the order from the "Current Visit" tab in the worklist. This will bring up the order detail. Click on the **Edit Order** button. The Edit Order dialog box will appear as shown in the figure below.



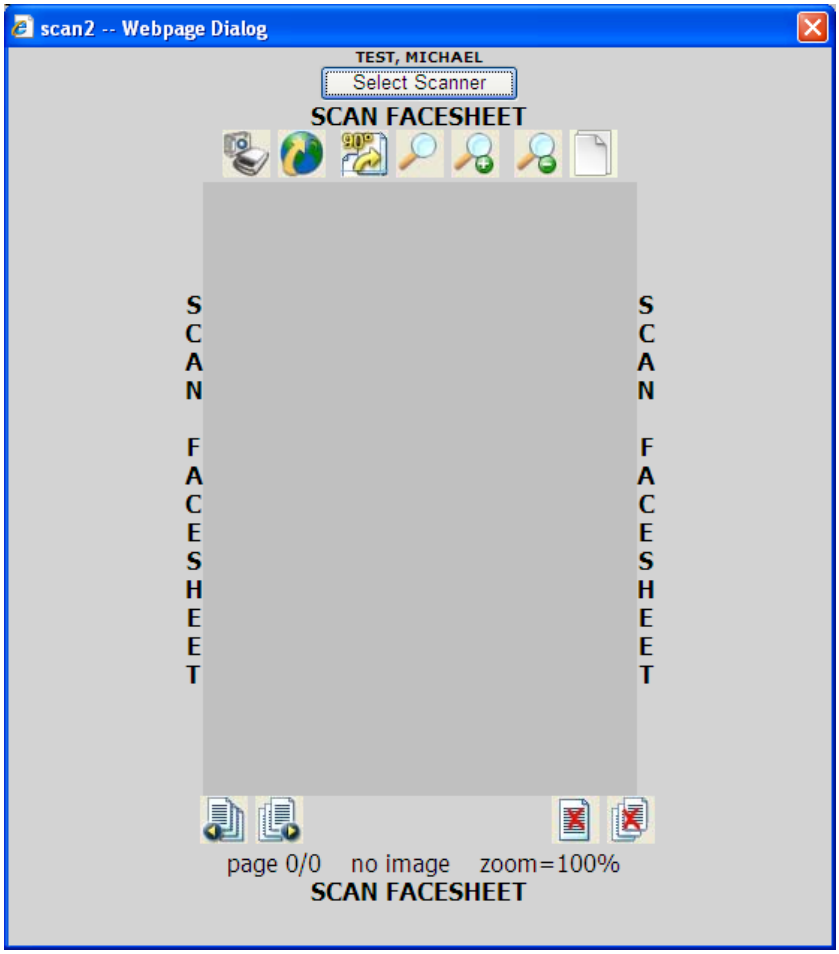
Edit Order Dialog

Verify that the patient information is correct, and then select the correct procedure from each dropdown list next to the exams that have been performed. Enter the time of the exam. For updating the order record click on the **Save** button. If you fail to enter all the required information, an alert will be shown, indicating what is required. Once the order is updated and all information is entered, the Exam ID for each procedure will be displayed. Pay special attention to enter the correct Exam ID that corresponds to the study when it is entered into the image software.

SCAN PAPERWORK (PAPER SCANNER)

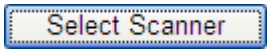
Once the exam record is updated with the exams performed, you must scan the appropriate paperwork. On X-Ray and ultrasound exams, the paperwork required is the Facesheet, In the case of EKGs; the printed EKG is scanned separately from the Facesheet. To scan a Facesheet, click on the scan Facesheet button. This will bring up the Facesheet dialog box, shown below. Click on the “Acquire Image” button. This will bring up the scanner interface. If you need to scan multiple sheets, scan each one individually, then click on done in the interface. If you close the interface and open it again, any previous scans will be replaced. Once you have scanned all the pages, click on the send button. Close the dialog when finished. To scan an EKG, click on the scan EKG button. Follow the instructions for scanning a Facesheet.

Remark: Failure to scan a Facesheet or EKG on an exam that requires one result in a reminder dialog to display on the worklist stating that there are Facesheet/ EKGs missing. Clicking on the “Facesheet Required” tabs will display the patient records that need a sheet scanned



Scan Dialog

SCANNER DIALOG BUTTONS

Button	Description
SELECT SCANNER 	Some computers have more than one device for scanning images. If you have an issue with the paper scanner, click this button to make sure that the scanner is listed. If it is not in the list, try unplugging the scanner from the computer and plugging back in. Also make sure that the cable is securely attached at both ends.
ACQUIRE IMAGE	Opens the scanner interface to scan a document.

SEND	Sends the scanned image to the server.
ROTATE 90°	Rotates the currently displayed image 90 degrees clockwise.
ZOOM TOOL	Zooms into the current image.
ZOOM IN	Zooms into the current image.
ZOOM OUT	Zooms out of the current image.
LOAD	Loads a scanned file from the file system.
PREV PAGE	Displays the previous page (multiple page scan)
NEXT PAGE	Displays the next page (multiple page scan)

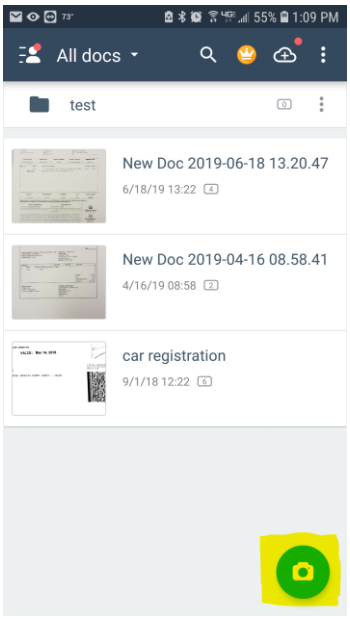
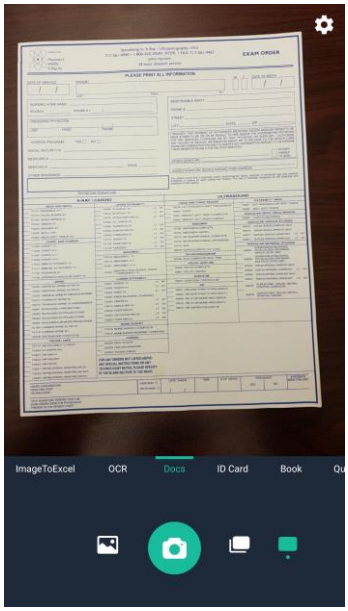
DELETE PAGE	Deletes the currently displayed scanned page.
DELETE ALL	Deletes all scanned pages.

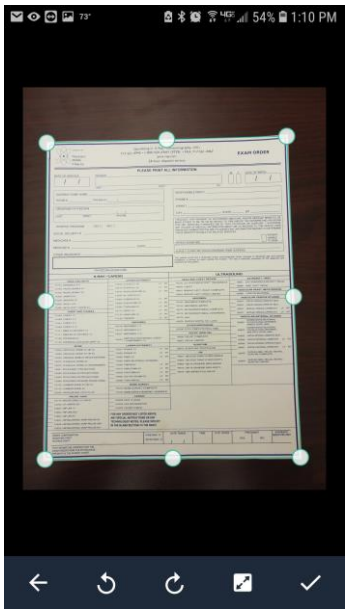
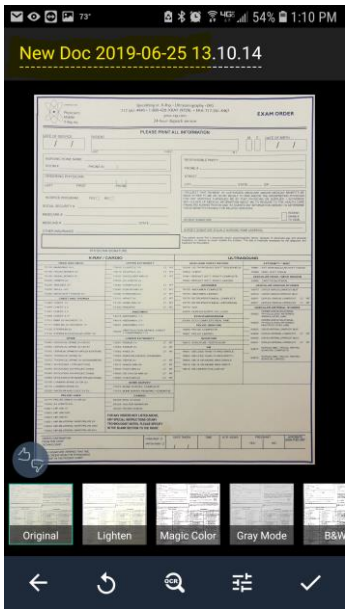
SCAN PAPERWORK (CAMSCANNER)

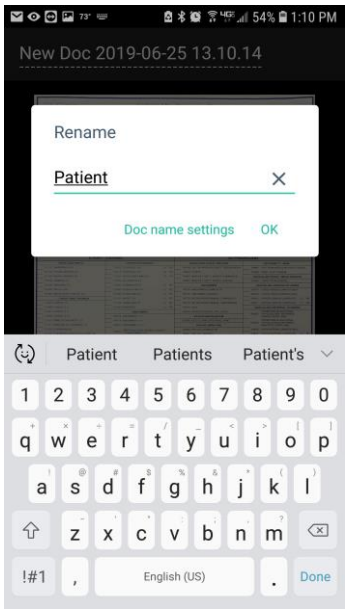
CamScanner is an app that runs on a smartphone. It is used to scan documents, by taking a picture, and converting the picture into a PDF file. Once the document is created, it can be sent to the laptop, where it can then be uploaded to the PACS. In order for CamScanner to send scans to your laptop, you must connect your phone to the MiFi. The wireless network name should be the same as the name of the laptop (i.e. PMXLTxxx). If your phone and laptop are not both connected to the MiFi, the scan will not transfer to the laptop.

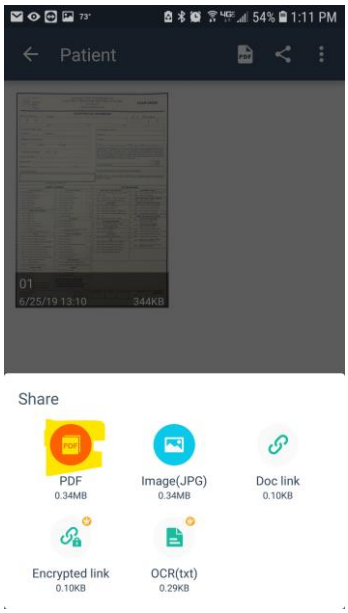
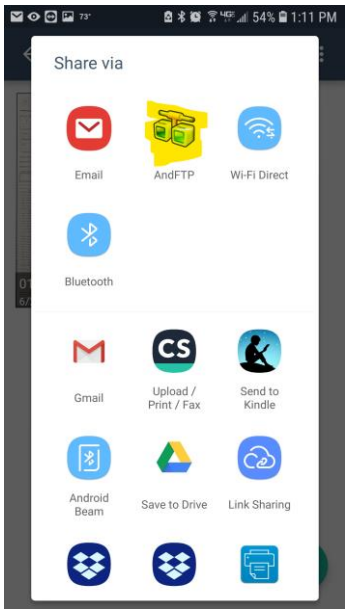
ON YOUR PHONE

Launch the CamScanner app	

Press the Camera Scan Icon on Bottom-Right corner	
Try your best to capture the entire document under good lighting conditions. Press the button to take scan.	

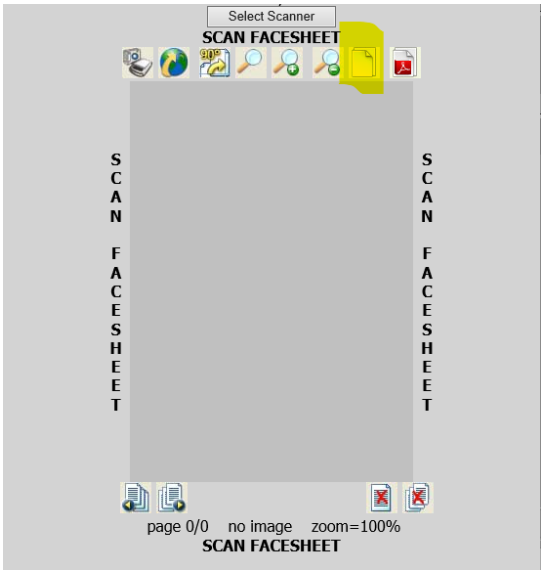
CamScanner will try to automatically crop document, adjust crop as needed, by dragging the dots around the document. Touch the button to apply crop.	
Touch "New Doc…." to rename the file.	

After renaming, Touch 'OK' to rename the file.	
Click on to complete adjustments Tap the Share Button	

Select PDF	
Select AndFTP	

Select OK	

ON YOUR COMPUTER

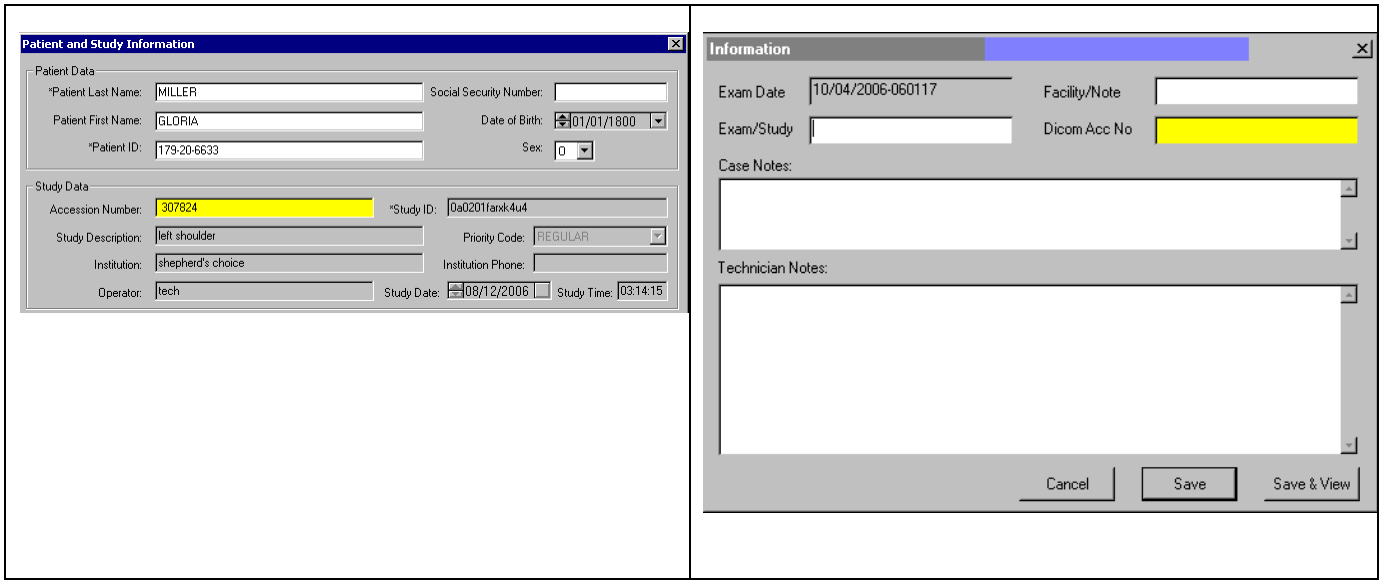
Select scan facesheet, order or EKG, depending on the document. In the Scanning interface, click on the upload button (second from top right) Select the document to upload and click on OK. Click on to send the document.	

Be sure to routinely delete the files from your phone and the computer.

UPLOADING IMAGES

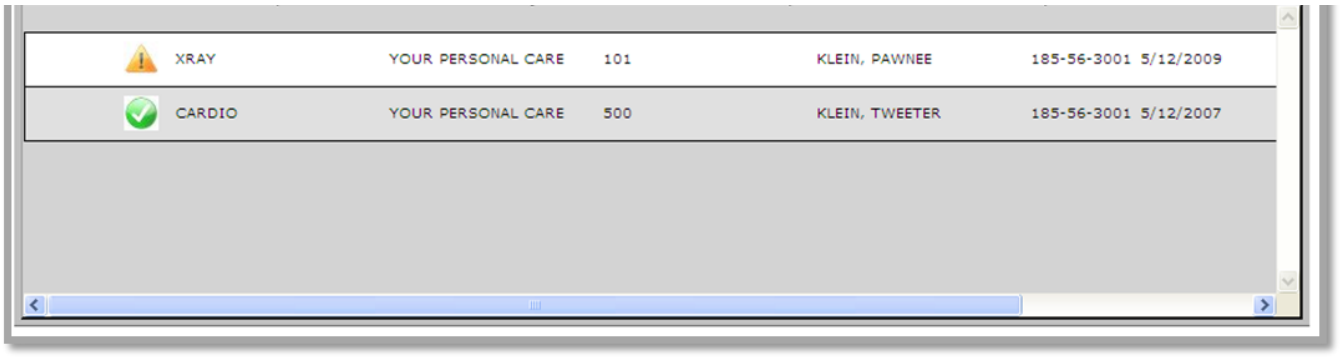
Once the order record is updated with the required information, you are ready to upload the images to the server. Again, take note of the Exam ID for each exam listed in the order. This number is used as the accession number, and ties the

images to the exam record. The process of uploading images is dependent on whether the type of acquisition software and hardware is used. All images that are uploaded are now tied to the exam record with SIXPACS and the Tech must add the exam ID to the upload. For example, in Kodak software, this is added in the "Accession Number" field. In Xscan, the exam ID is added to the "DICOM Acc No" field. Once the images have been sent to the server, the order detail will display a magnifying glass and will show the number of images for each exam. Click on the "Refresh" button to update the information in the order detail.



COMPLETING THE VISIT

The process of completing orders, scanning paperwork and sending images is repeated for each order in the current visit. The orders listed in the "Current Visit" tab include an icon that indicates whether the order has enough information for the visit to be completed. An example of this behavior is shown in the figure below:



The first order shown is missing information required for the order to be complete (i.e. Facesheet, time of exam, images, etc.) This is shown by the alert symbol (Yellow triangle with exclamation mark). The second order contains all the information required. The complete symbol is shown. The complete symbol must be shown for each order before completing the visit. If any order is not ready to be completed, you will not be able to complete the visit.

Note: There may be circumstances where you cannot complete the visit (equipment failure, transmission errors, wrong information entered into acquisition software, etc.…) to continue to process more orders, the Tech will need to escalate the order to management for them to assist with resolving the issue. Click on the "Complete Visit" button. The current visit will change to "NONE", and the status of the orders will change to "Completed".

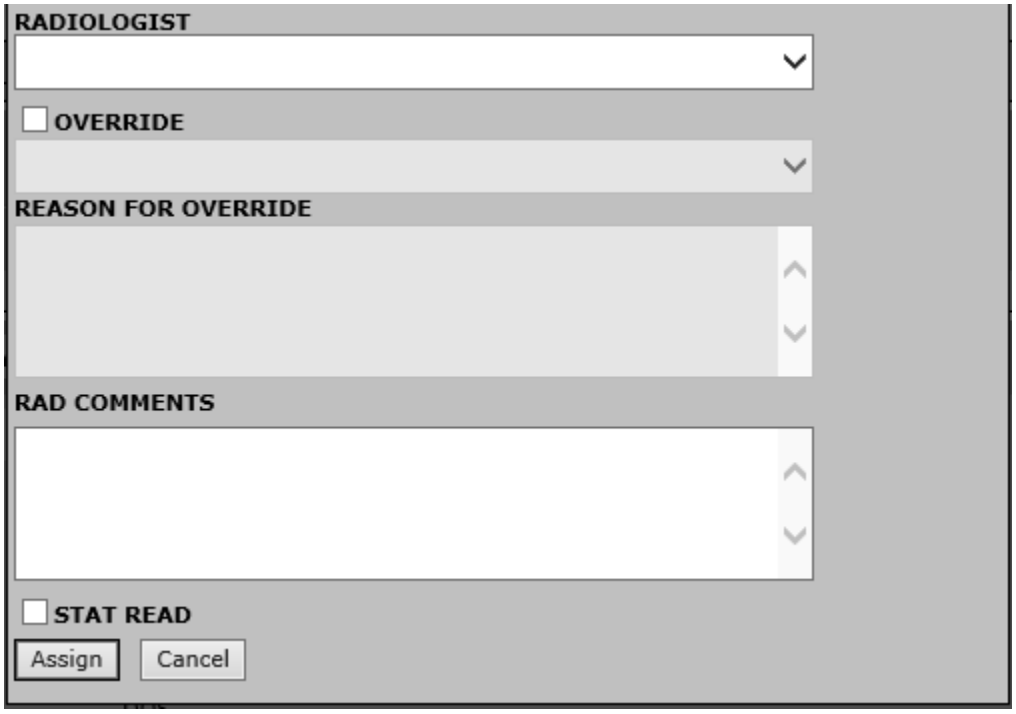
ESCALATE AN ORDER TO MANAGEMENT

Circumstances may arise where an order cannot be completed by the Tech. These circumstances include image transfer issues, where the wrong accession number was entered into the system, incorrect images attached to exams, etc.… When this occurs, the tech must escalate the order, so that management can take the appropriate actions to have the exam read.

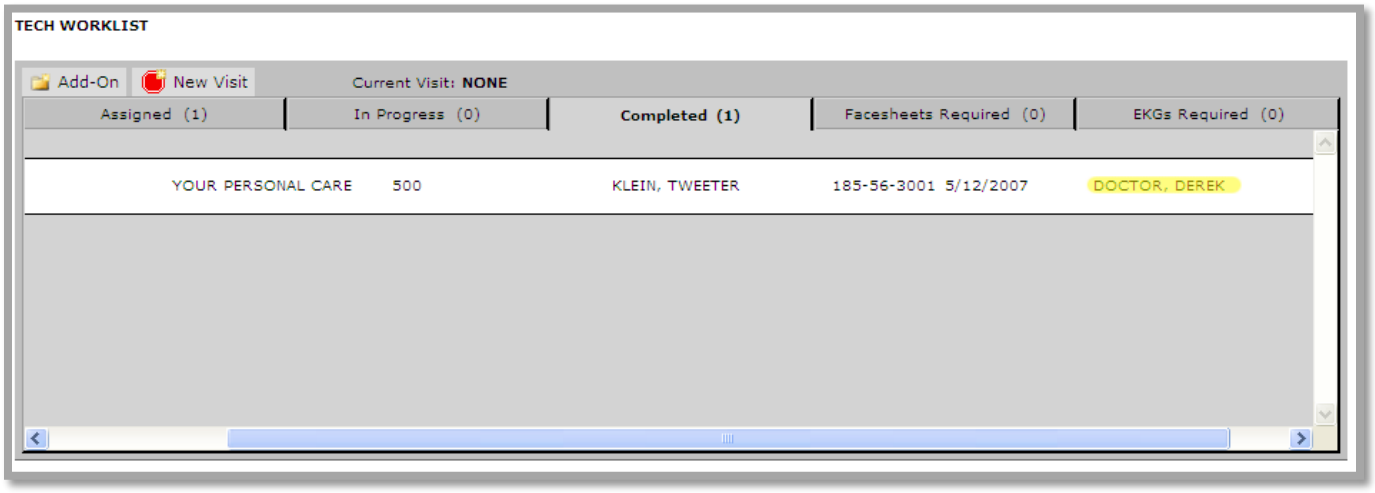
To escalate an order, click on the **Escalate** button. Enter an appropriate comment in the dialog box that appears, and click on OK. An email will be sent to management with the order information and the comments that you have entered. The order will change to an "Escalated" status, and the visit can then be successfully completed.

ASSIGN RADIOLOGISTS/CARDIOLOGISTS

The last step in the process is to assign a radiologist/cardiologist to the completed studies. As soon as images are present for each exam in the order, the "Assign Rad" button will be displayed. Click on the **Assign Rad** button. The Assign Radiologist Dialog will be displayed as shown below:



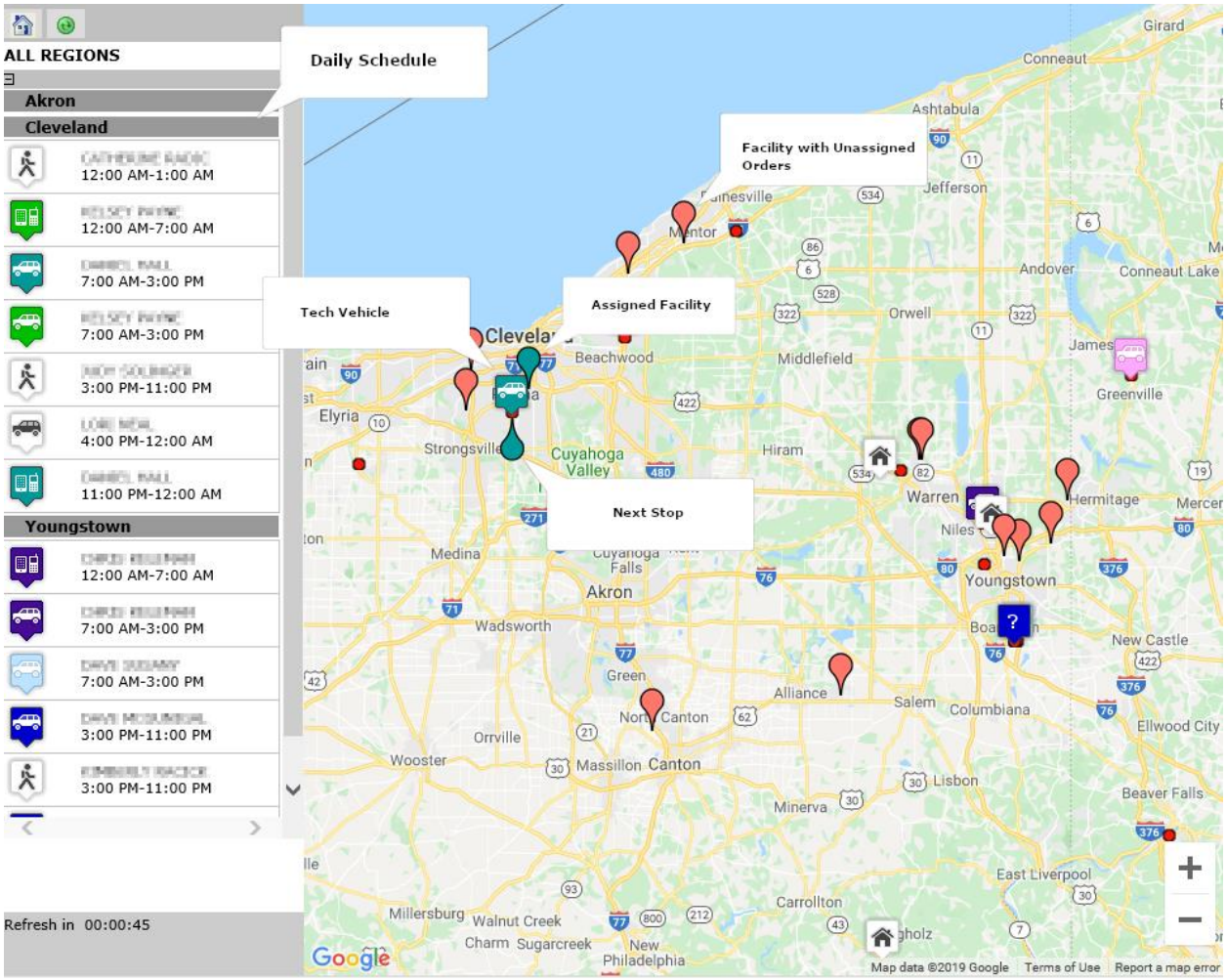
Select a radiologist and click “Assign”. The radiologist will be shown on the worklist, to the right of the patient’s date of birth.



TECH MAP

Another tool provided to the tech is the Tech Map. This map shows the work to be performed, along with the position of each vehicle. To view the map, click on the **View Map** button on the worklist.

The tech map will be displayed, similar to the below image:

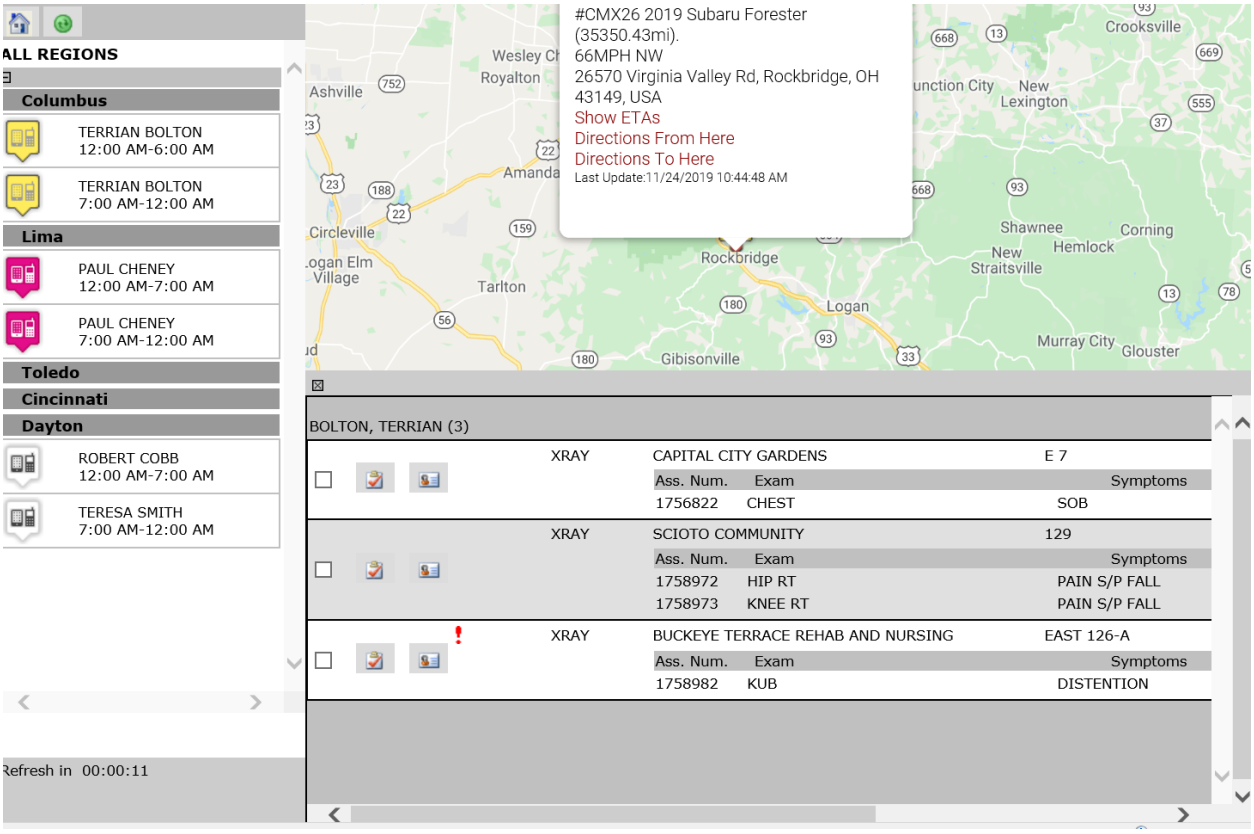


The left pane of the map window shows the schedule of the techs for the entire day, based on which areas the user is allowed to see. Within each district, the schedule is shown from midnight to midnight, showing each person's shift.

On the map, various icons represent tech vehicles, unassigned and assigned orders. A tech's next stop is displayed with an upside-down marker.

Putting the cursor over a vehicle will show the tech currently using the vehicle, along with their shift.

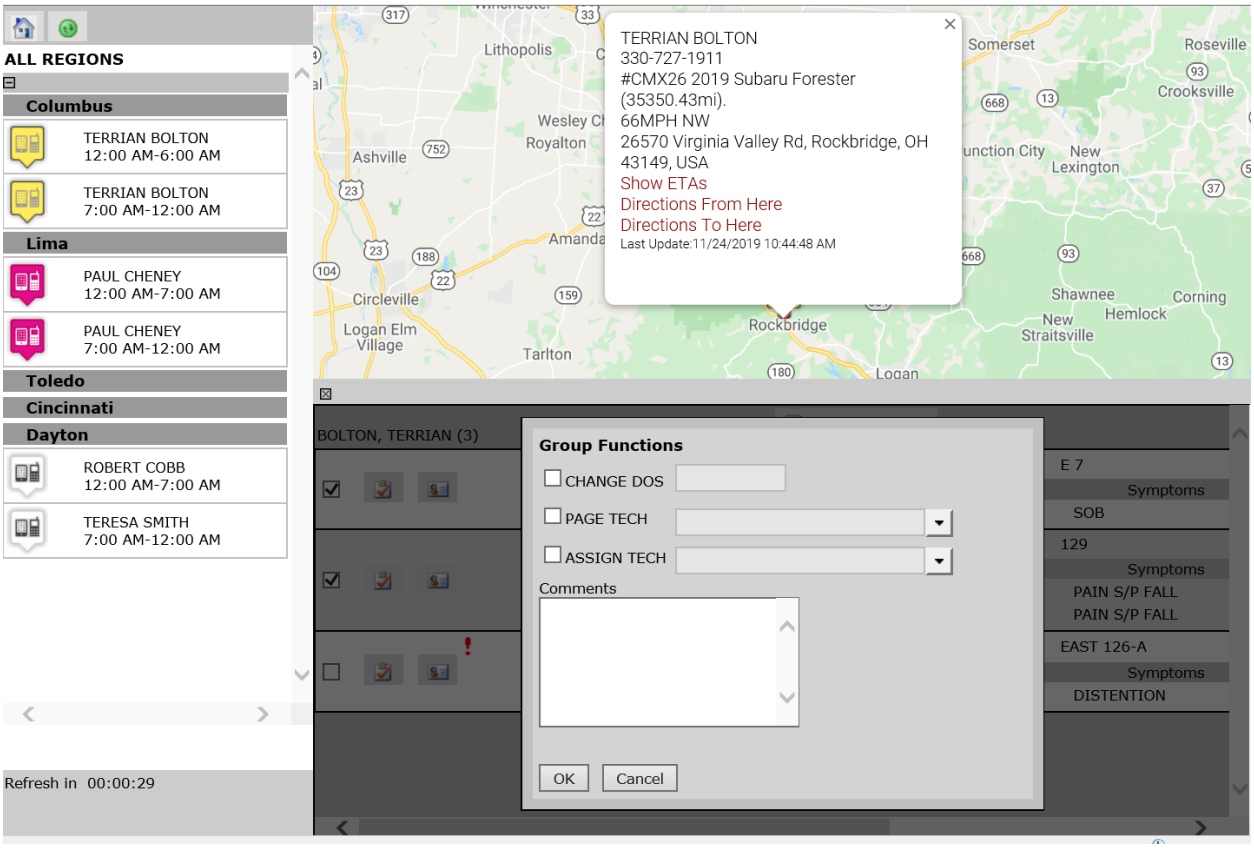
Clicking on a tech vehicle will show a list of orders currently assigned to that tech.



The user can assign or page orders directly from the map, by click on a marker, and taking the appropriate action for each order.

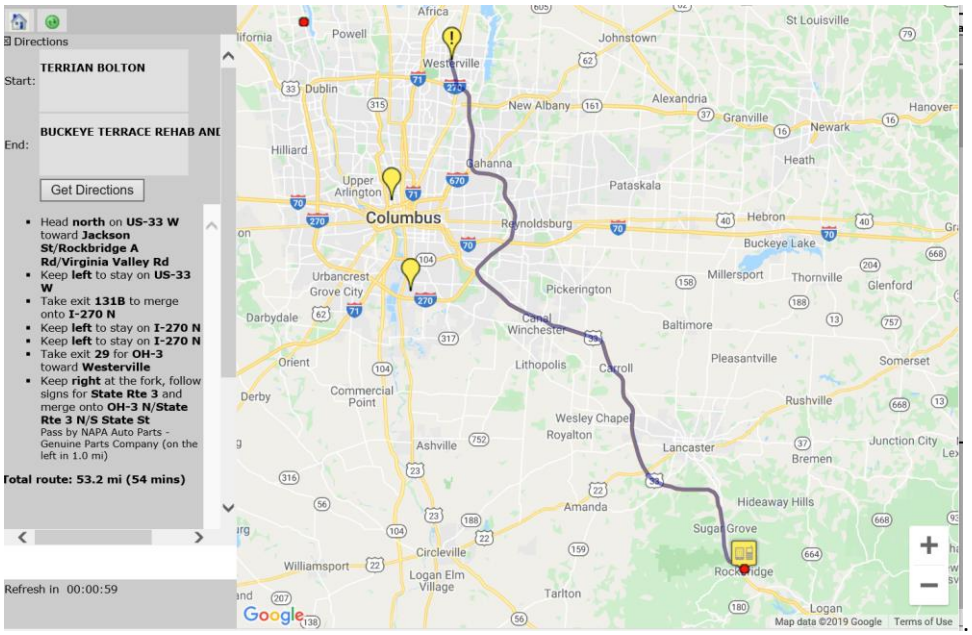
GROUP FUNCTIONS

Multiple orders can be changed, by clicking on the checkboxes next to the order, and clicking on **Group Functions**.



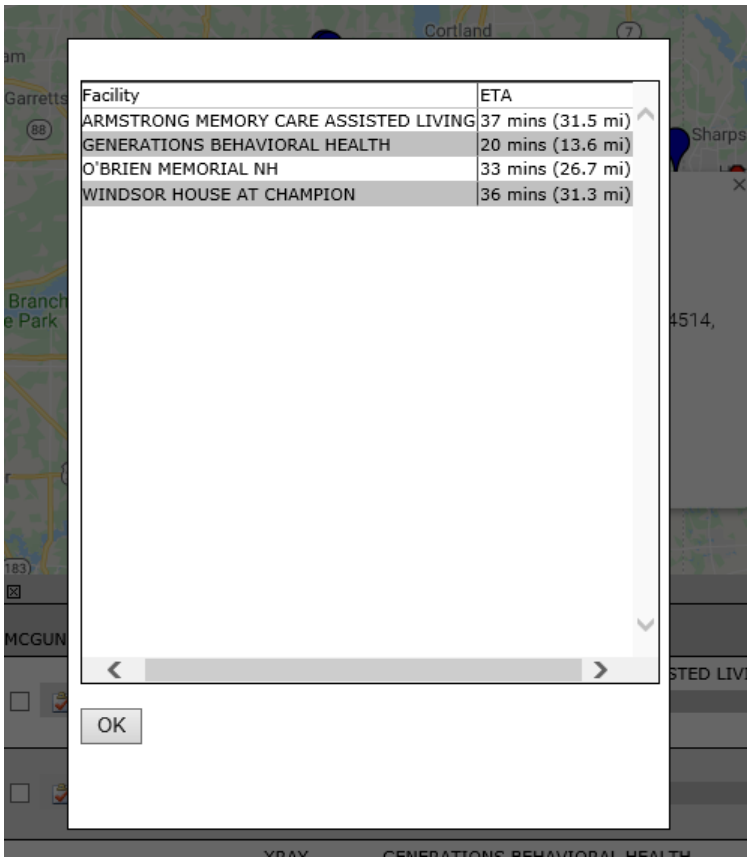
GETTING DIRECTIONS

The map can provide driving direction between any two markers on the map. Select the first marker, and select “Directions From Here”. Then, select another marker, and click on “Directions To Here”. Finally, click on **Get Directions**. A line will be drawn on the map, showing the route, with turn-by-turn directions on the left pane



SHOW ETAS

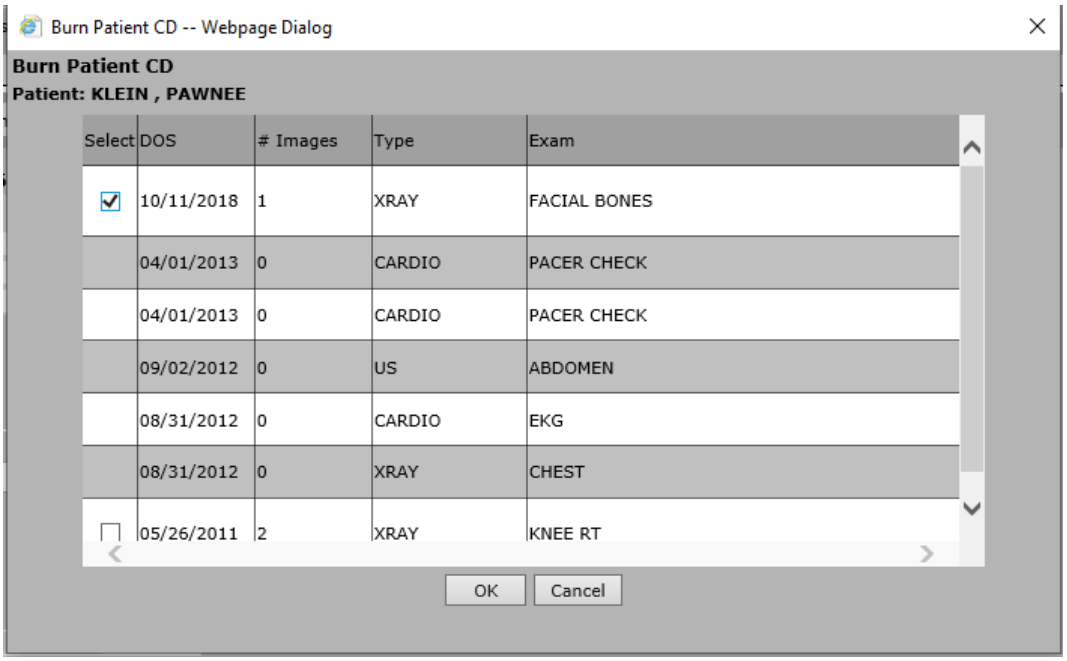
Clicking on a tech vehicle and then selecting “Show ETAs” will display a list of all facilities assigned to the tech, along with the drive time and distance to each location from the tech’s current position.

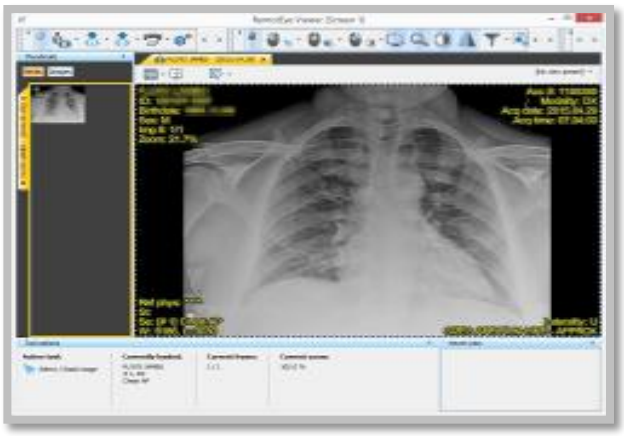


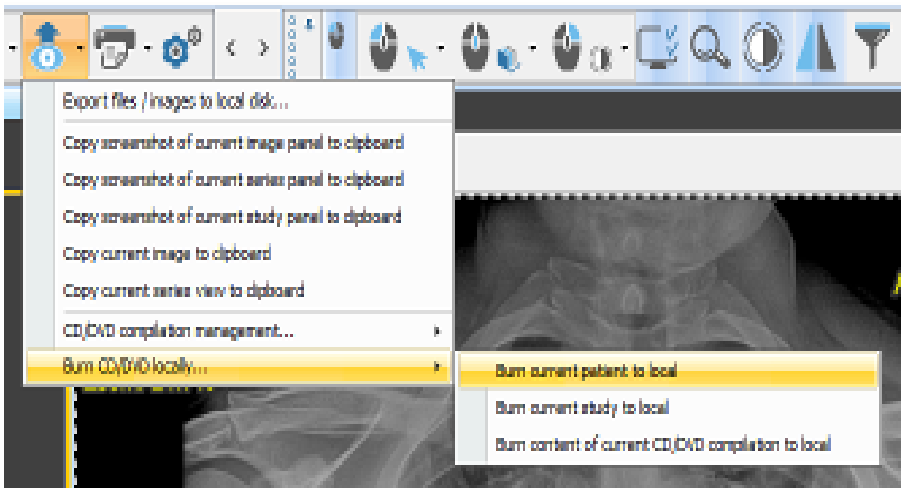
BURNING A CD

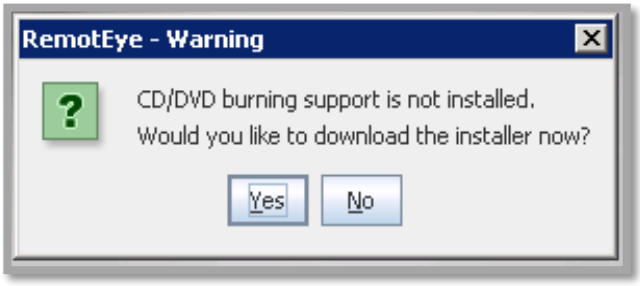
The RemotEye allows the user to burn patient images to a CD using the 6PACS application. Before burning images to a CD, the user has to make sure the software is already installed.

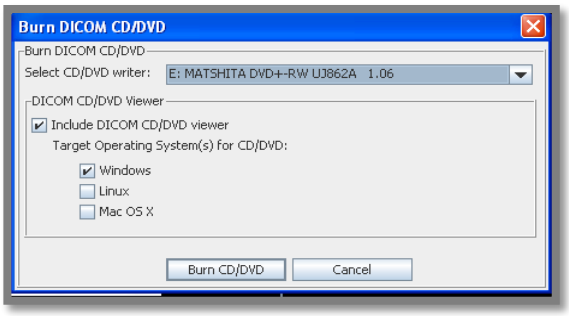
Step 1: Select the order, and click on “Burn CD”.	

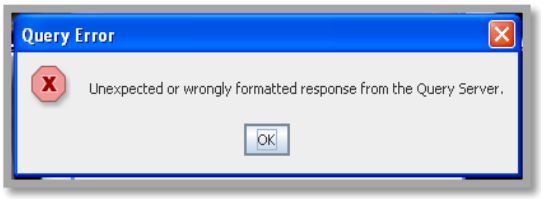
Step2: At this time, the “Exam History” panel should be open. Click on the checkbox (es) next to the exam(s) that you need to burn on the CD.	

Step 3: RemotEye Viewer to load and display the images from the selected exams.	

Step 4: Click on the “Save/Export” button, and select “Burn current patient”, under the “Burn CD/DVD locally” menu.	

If the following dialog box appears it means the burning CD software has not been downloaded. Click on the “Yes” button and follow the instructions for downloading the burning CD software, under “Software Installation” below. If you don’t see the dialog box, it means the software is already installed. Continue to step 5.	

Step 5: The “Burn Dicom CD/DVD” dialog box window will be displayed. Make sure that there is a blank CD in the drive and click on “Burn CD/DVD” button.	

If you get a “Query Error” dialog, just click on OK button. The CD will continue to be written.	

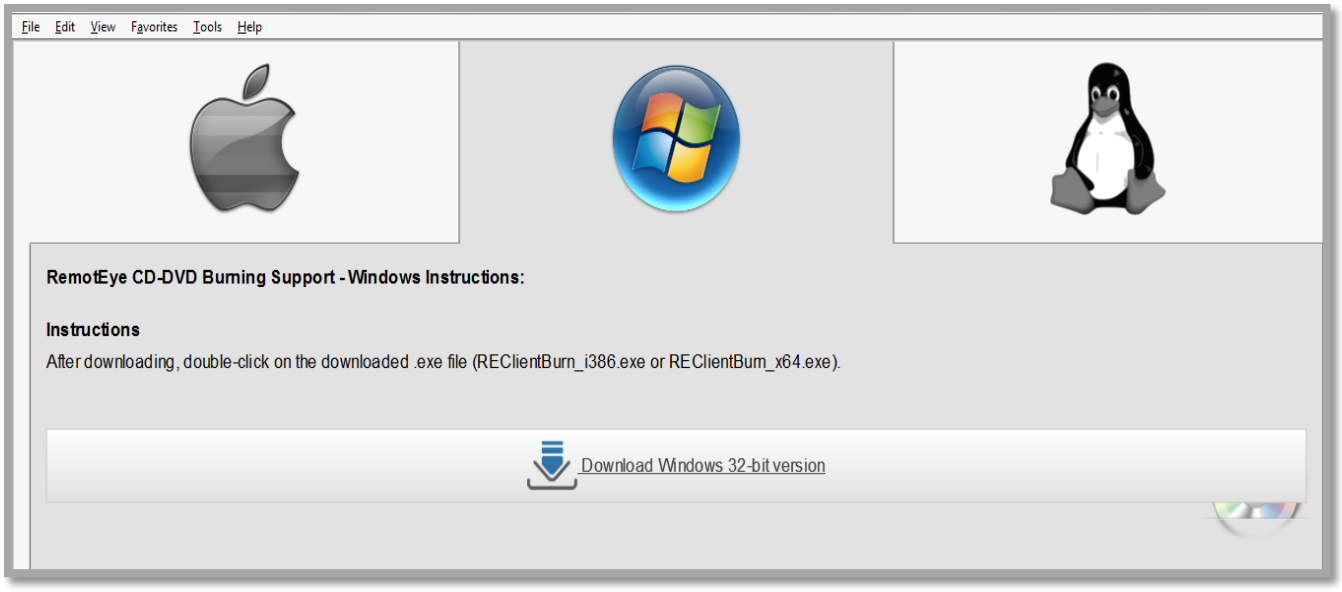
When the CD burning is complete, the CD will be ejected, and a dialog box will inform the user that the image has been written successfully.

APPENDIX A - CD BURNING SOFTWARE INSTALLATION

Before burning images to a CD, the user has to download the Burn CD software from the following address:

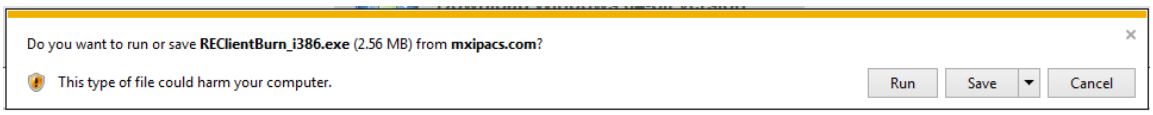
http://www.mxipacs.com/RemotEye/Installers/ClientBurn/install.htm

To download the software, double click on the given link to open up a “RemotEye ClientBurnInstaller” browser. Click on “Download Installer for windows”.



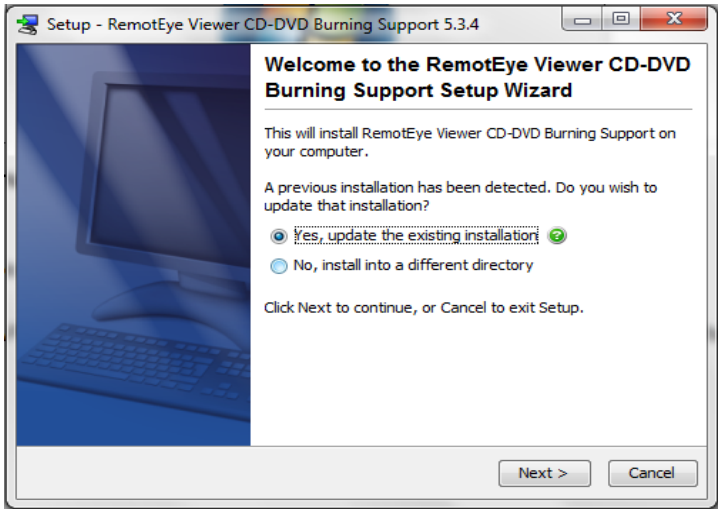
If a bar appears at the top of the browser window, click on the bar and select “Download Files”.

If the following dialog box appears, click on “Run”.

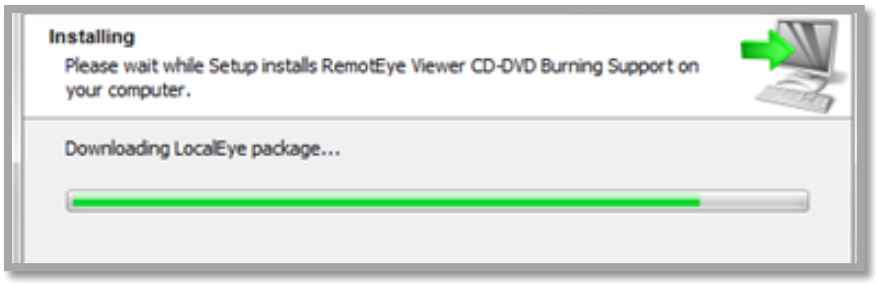


If the following dialog box appears, click on “Run”.

When the program runs, click on the button “Next”



The installation will download a copy of the viewer. This process takes approximately 20 minutes to complete (Depending on the internet speed.)


Installing
Please wait while Setup installs RemotEye Viewer CD-DVD Burning Support on your computer.
Downloading LocalEye package...