

EBM Ubiquitous Diagnosis Environment (UDE)

User Manual Guide

**Version
1.7.0.20210128**

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1. Specification & System Requirement

- UDE App is an iOS based medical imaging display solution that converts any standard iPad Pro into a standalone DICOM viewer, display, and server – providing radiologists the on the go image reading experience, both online and offline.

Supported Modalities	
CT	Computer Tomography modality for diagnostic use.
MR	Magnetic Resonance modality for diagnostic use.
XA	X-Ray Angiography modality for diagnostic use.
CR/DX	Computed Radiography/Digital Radiography modality for diagnostic use.
US	Ultrasound modality for diagnostic use.
OP	Ophthalmic Photography modality for diagnostic use.
RF	Radio Fluoroscopy modality for diagnostic use.
ES	Endoscopy modality for diagnostic use.
IO	Intra-Oral Radiography modality for diagnostic use.
RG	Radiographic imaging modality for diagnostic use.
SC	Secondary Capture modality for diagnostic use.
MG	Mammography modality for VIEW only.
OT	Other modalities for diagnostic use.
Regular Features	
Window Width/Level	Window level and width manipulation, including pre-set value for CT. (p1)
Pan	Moving the image within the image viewer.
Zoom In/Out	Increase/decrease the image. Be able to partially magnify the images. (p3)
Rotate/Flip	Rotate the image right/left, flip it horizontal/vertical.
Revert	Reset the image to original orientation.
Multi-frame	Support multi-frame image and stack image display/playback with an individual slice number labeled on each slice.
Annotation	Text and markers to be able to save and delete.
Measurements	
Line	Distance between two points.
Area and Perimeter	Area and perimeter for a specific region.
Density	Density of the part of the image.
Angle	Angle between two lines.
Layout	
Multi-Monitor	Pair two UDE APPs together through Wi-Fi or wired network.
Layout	Select from different types of layouts (1*1, 2*1, 1*2, 2*2, 2*3) and switch in between to view up to 8 DICOM instances at the same time.
Full Screen	Ability to switch image to full screen view.
Thumbnails	Position a set of SERIES preview on the top of the screen.
Hanging Protocols	Describe how to layout a set of mammography images.

Special Features	
Filter	Provide filters for Query/Retrieve and Local Storage.
Remote Consultation	Ability to share image, PDF file, and annotation with multiple connected UDE APPs simultaneously.
Artificial Intelligence	Artificial Intelligence (AI) Integration Ready.
Presentation State	Support displaying DICOM PR object and Presentation State applied images.
Print	Support connected printers (p1). Be able to reverse uncovered background into white. (p3)
Patient/Physician Portal	Use QR code to share PDF image/report to patient or physician. (p1)
Server Support	
First In First Out (FIFO)	Manage local storage space by removing the earliest image date to make room for receiving new ones.
DICOM Query/Retrieve	Support DICOM Verification SCU/SCP, STORE SCU/SCP, FIND SCU/SCP and MOVE SCU/SCP.
Customization Features	
DICOM Tag	User-configurable DICOM Tag information and position.
Integration Features	
Basic Report System	Integration with a report system on personal computer that generates a report worklist following the data on UDE App and displays the corresponding image. Be able to do the basic reporting
Virtual Mouse	Enable a virtual mouse on UDE app for easy navigation.
System Requirements	
Hardware	12.9" iPad Pro Gen 1, 2 or later
Internet	Wi-Fi or 4G network
OS	Requires iOS 11.0 or later
Storage	Up to 1TB storage
Regulatory	
USA FDA	K162285
CE	In Progress(p3)
Taiwan TFDA	DOH-MD-No. 001292

*The specification and system requirements described above are for ver.117

2. Setup

6:45 PM Tue Dec 29 8%

Settings Query/Retrieve Query/Retrieve Local Meeting Mode Viewer Scan Select Search Filter

Exam Date	Sr	Im	Mdl	Patient ID	Patient Name	Sex	Age
2014-03-12	5	5	MG	Mammo_Demo_04	Mammo_Demo_04	F	54Y
2014-03-11	4	4	MG	Mammo_Demo_03	Mammo_Demo_03	F	64Y
2013-11-28	13	13	MG	Mammo_Demo_06	Mammo_Demo_06	F	48Y
2013-08-13	13	13	MG	Mammo_Demo_07	Mammo_Demo_07	F	63Y
2012-11-05	5	5	MG	Mammo_Demo_02	Mammo_Demo_02	F	59Y
2011-10-14	1	1	CR	CASE1	CASE1	F	28Y
2008-07-12	1	336	CT	CVAI_Demo_Test	CVAI_Demo_Test		
2003-10-27	2	312	CT	Pancreas_Demo_02	Pancreas_Demo_02	F	
2003-09-28	2	376	CT	Pancreas_Demo_01	Pancreas_Demo_01	F	
2003-09-28	1	188	CT	Pancreas_Demo_Test	Pancreas_Demo_Test	F	
2003-08-27	2	2	CR	Chest_Demo_04	Chest_Demo_04	F	
2003-01-01	1	1	CR	Chest_Demo_Test	Chest_Demo_Test	M	

Related Studies

CR
20111014

Total Studies: 1 Date Range: 2011-10-14 ~ 2011-10-14

Exam Date	Sr	Im	Mdl	Accession #	Study Description	Birth Date
2011-10-14	1	1	CR	CASE1	Chest X-ray, P-A view	1983-09-03

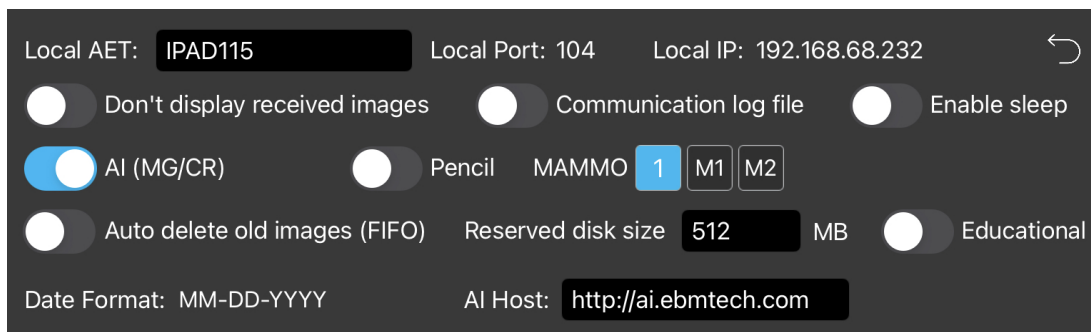
FR



-  : Settings
-  : Query/Retrieve
-  : Query/Retrieve Local
-  : Meeting Mode
-  : Viewer
-  : Scan
-  : Selection Mode for Extended Functions

-  : Apply Filter Conditions
-  : Clear Filter Conditions

2-1 Settings



Local AET: IPAD115 Local Port: 104 Local IP: 192.168.68.232

☐ Don't display received images
 ☐ Communication log file
 ☐ Enable sleep

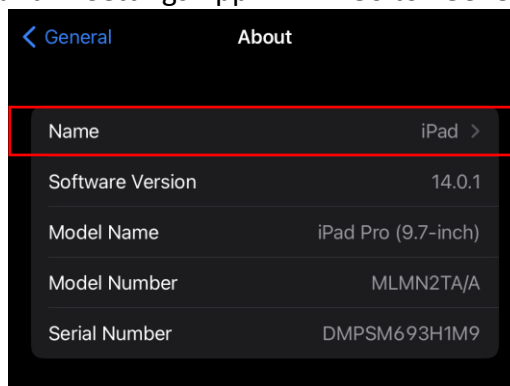
☒ AI (MG/CR)
 ☐ Pencil
 MAMMO **1** M1 M2

☐ Auto delete old images (FIFO)
 Reserved disk size **512** MB
 ☐ Educational

Date Format: MM-DD-YYYY AI Host: <http://ai.ebmtech.com>

- Local AET: The AE Title for DICOM communication.
- Local Port: The listening port number for DICOM communication. It's 104, cannot be modified.
- Local IP: This device's IP address.
- Don't display received images: Turn on for not showing incoming images when acting as a DICOM server.
- Communication log file: Save log files of DICOM communications.
- Enable Sleep: Enable iPad Pro to lock and turn off the display following iOS settings.
- Pencil: Turn on to set iPad's screen to accurately react and respond to where Apple Pencil's tip is while navigating.
- MAMMO: To view Mammo hanging protocol only on one iPad Pro, select 1. To use two iPad Pros, select M1 on the main iPad Pro; for another iPad Pro, select M2, and then input the *device name of the main iPad Pro.

*Device name can be found in Settings App . Go to "General" -> "About".



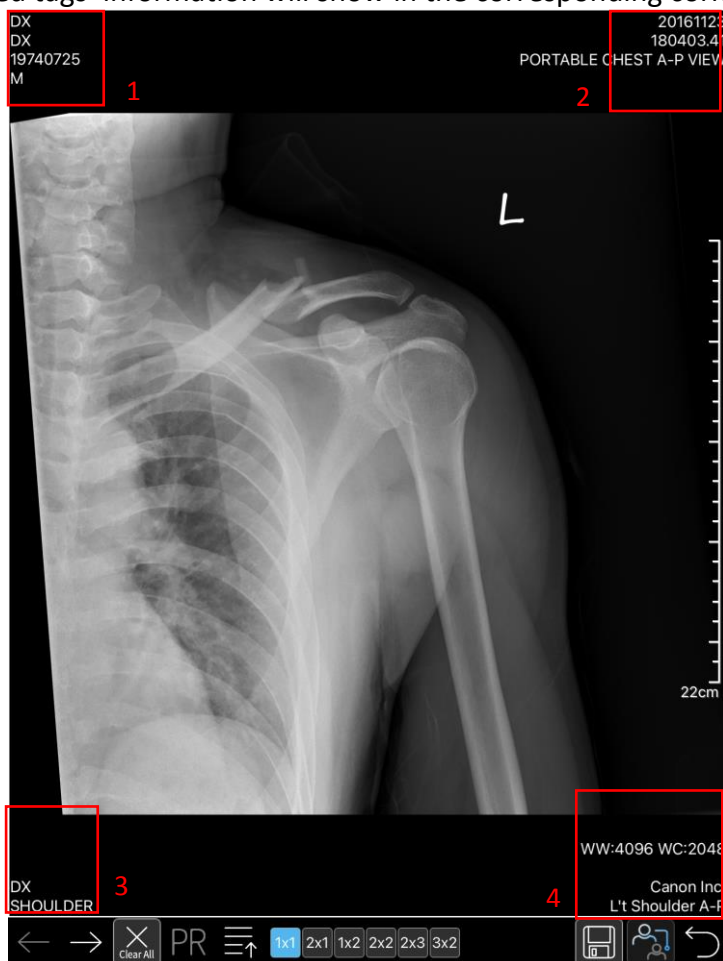
- Auto delete old images (FIFO): Turn on to set the storage of the UDE. Input the "Reserved disk size" and UDE will start to remove the old study automatically when the reserved disk size is reached.
- Educational: Turn on to view mammography hanging protocol for 2D and Tomosynthesis image (3D) comparison.
- Date Format: Tap on to switch date format that reflects on study list and filter condition.

2-2 Overlay Labels

- Select a modality type or all first, then tap on any "end" in below.

Img.1

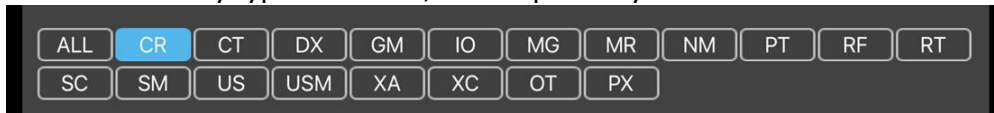
- Double tap on DICOM tag from the center list and add it into the box where the "end" is selected.
- Each box represents a corner on the image. See Img.1 and Img.2
- The selected tags' information will show in the corresponding corners on the images.



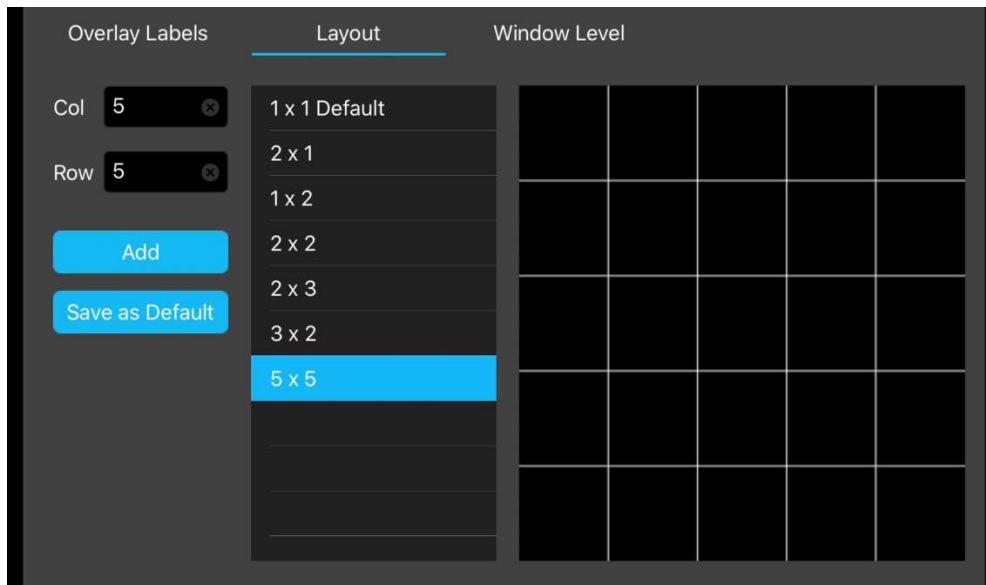
Img.2

2-3 Layout

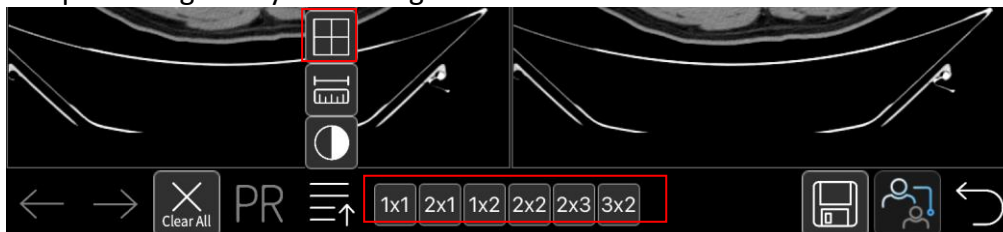
- Select a modality type or all first, then tap on any "end" in below.



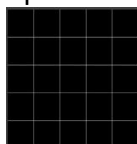
- Enter a number for "Col" and "Row" (Maximum up to 9X9). Click "Add" to save it to the list.



- The pre-configure layout settings can be found under  in viewer's tool bar.



- Click "Save as Default" to automatically apply the layout to images when viewer is opened.



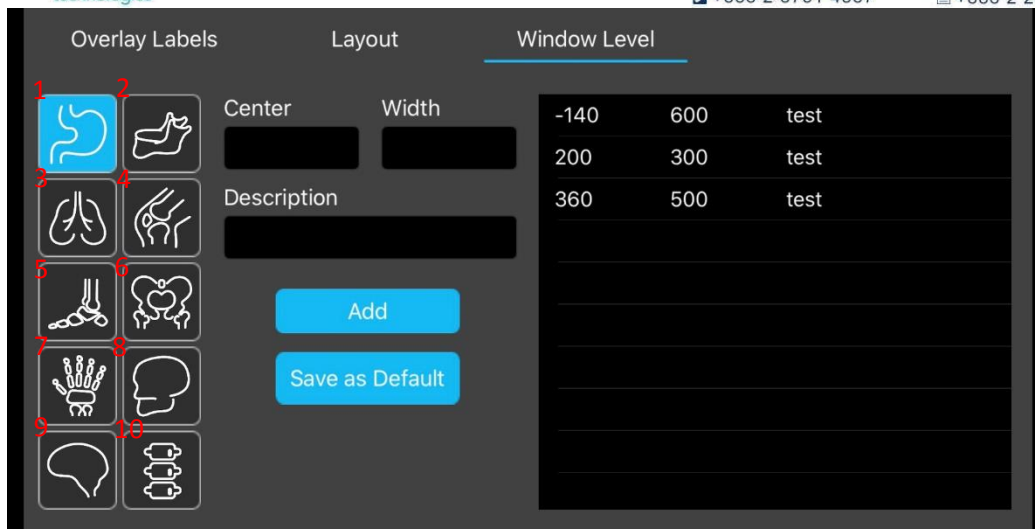
*The grid reflects the layout that's been selected from the list.

2-4 Window Level

- Select a modality type or all first, then tap on any "end" in below.

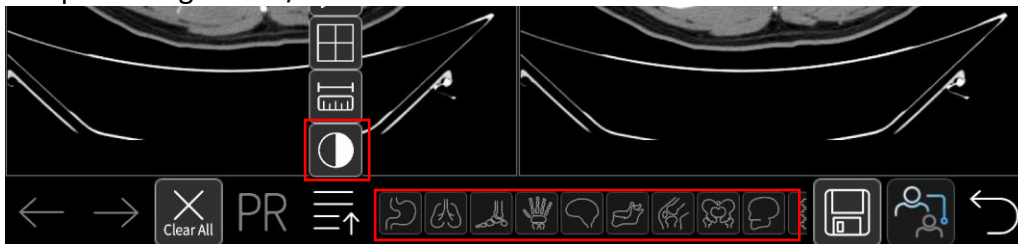


- Select overlay label first, choose a body part, input values for "Center", "Width", and "description", and click 'Add' to save.



Img.1

- The pre-configure WL/WC can be found under  in viewer's tool bar.



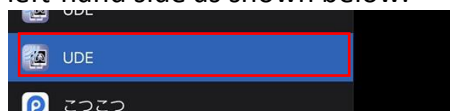
- Once finished, tap on  to return to study list.

*The name of each Body Part icon on img.1 is as follows,

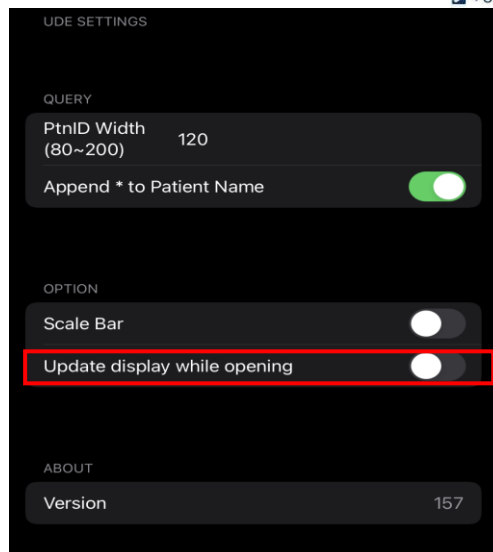
1: Abdomen	2: Jaw
3: Chest	4: Knee
5: Foot	6: Pelvis
7: Hand	8: Skull
9: Head	10: Spine

2-5 iOS Settings

- Go to iOS Settings app 
- Find UDE app on the left-hand side as shown below.



- The view shown as below will appear on the right-hand side.



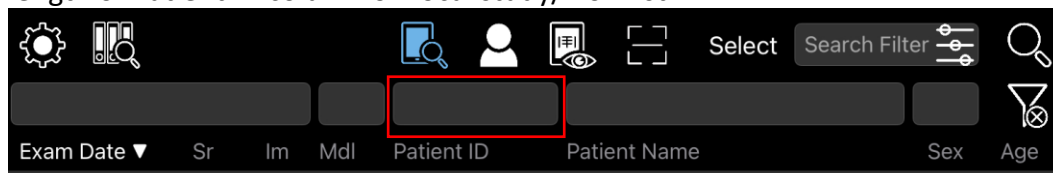
* Update display while opening (Off)

All multi-frame/stacked series of images for modalities such as CT and MR on the viewer will display without motion in succession.

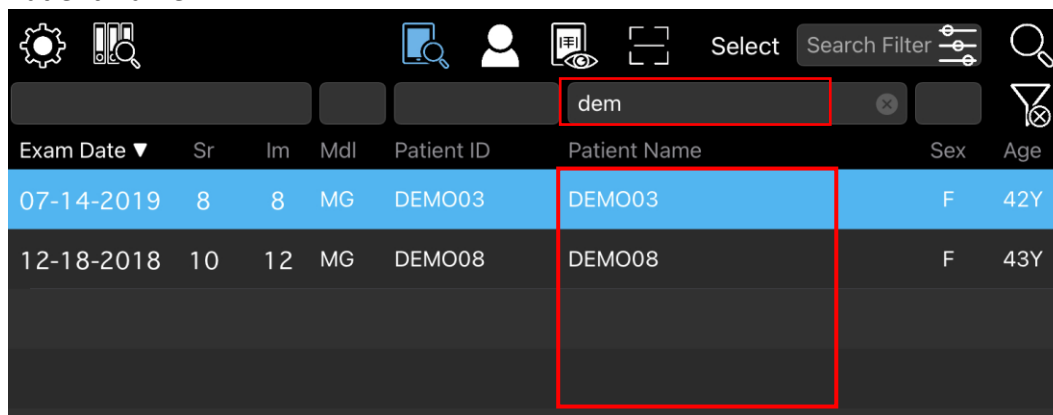
* Update display while opening (On)

All multi-frame/stacked series of images for modalities such as CT and MR on the viewer will display with motion in succession.

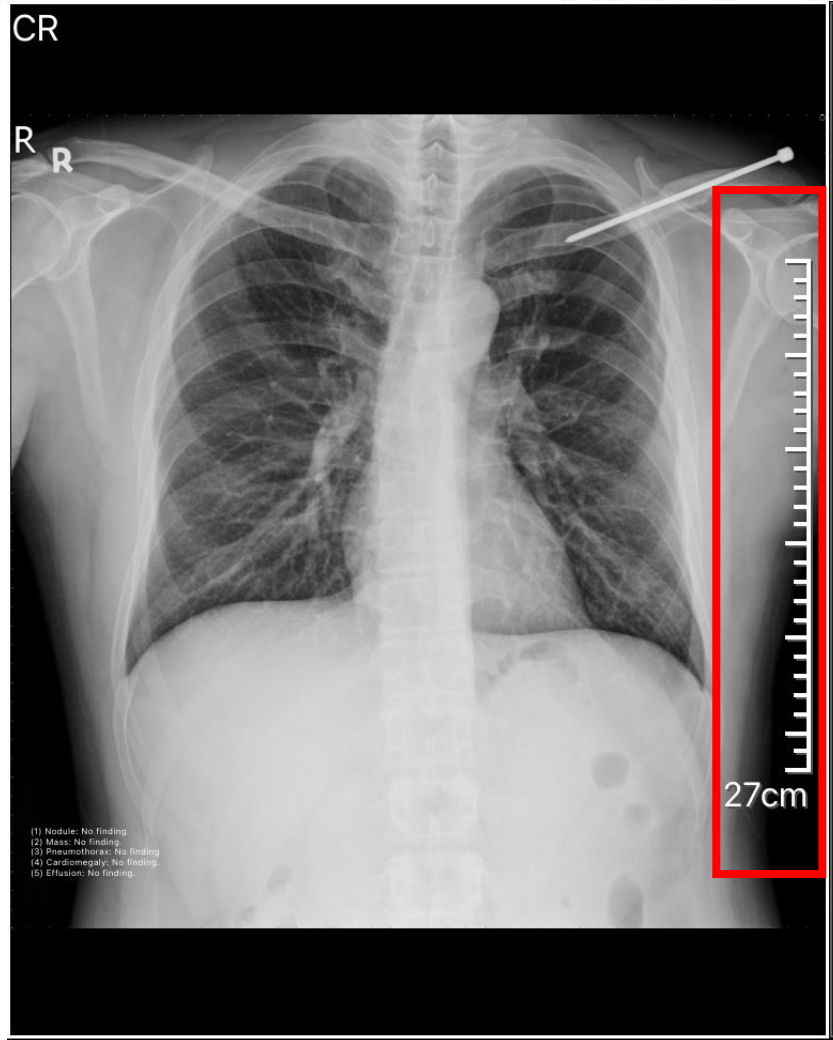
- PtnID Width (80~200): Enter number between 80 and 200 to adjust the length of Patient ID column on local study/worklist.



- Append * to Patient Name: Turn on to enable keyword related search for Patient Name.



- Scale Bar: Turn on to enable scale bar in viewer.



3. Local Study/Worklist

- Tap on  to retrieve studies from iPad Pro's storage database.

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Settings Local Study Search Filter Select Search Filter

Exam Date	Sr	Im	Mdl	Patient ID	Patient Name	Sex	Age
2014-03-12	5	5	MG	Mammo_Demo_04	Mammo_Demo_04	F	54Y
2014-03-11	4	4	MG	Mammo_Demo_03	Mammo_Demo_03	F	64Y
2013-11-28	13	13	MG	Mammo_Demo_06	Mammo_Demo_06	F	48Y
2013-08-13	13	13	MG	Mammo_Demo_07	Mammo_Demo_07	F	63Y
2012-11-05	5	5	MG	Mammo_Demo_02	Mammo_Demo_02	F	59Y
2011-10-14	1	1	CR	CASE1	CASE1	F	28Y
2008-07-12	1	336	CT	CVAI_Demo_Test	CVAI_Demo_Test		
2003-10-27	2	312	CT	Pancreas_Demo_02	Pancreas_Demo_02	F	
2003-09-28	2	376	CT	Pancreas_Demo_01	Pancreas_Demo_01	F	
2003-09-28	1	188	CT	Pancreas_Demo_Test	Pancreas_Demo_Test	F	
2003-08-27	2	2	CR	Chest_Demo_04	Chest_Demo_04	F	
2003-01-01	1	1	CR	Chest_Demo_Test	Chest_Demo_Test	M	

Related Studies

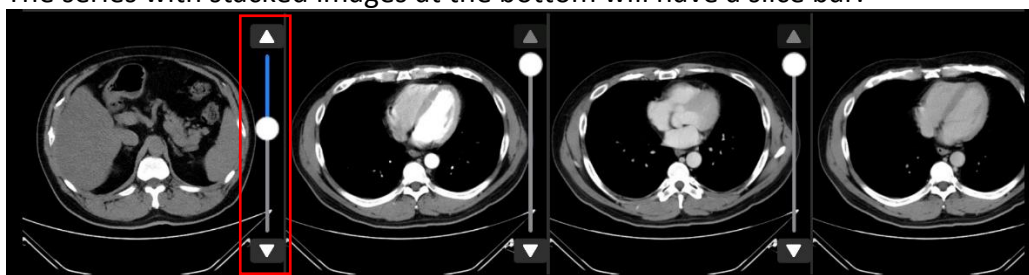
CR
20111014

Total Studies: 1 Date Range: 2011-10-14 ~ 2011-10-14

Exam Date	Sr	Im	Mdl	Accession #	Study Description	Birth Date
2011-10-14	1	1	CR	CASE1	Chest X-ray, P-A view	1983-09-03

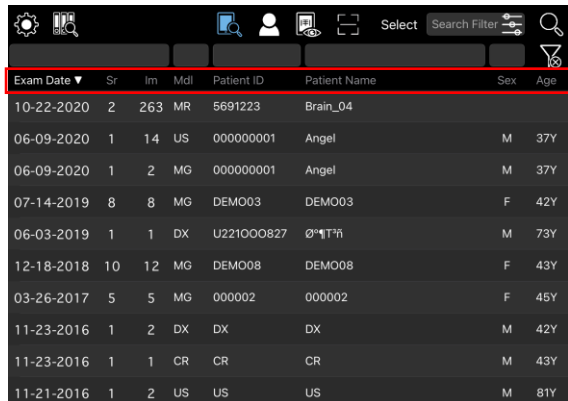


- The series with stacked images at the bottom will have a slice bar.



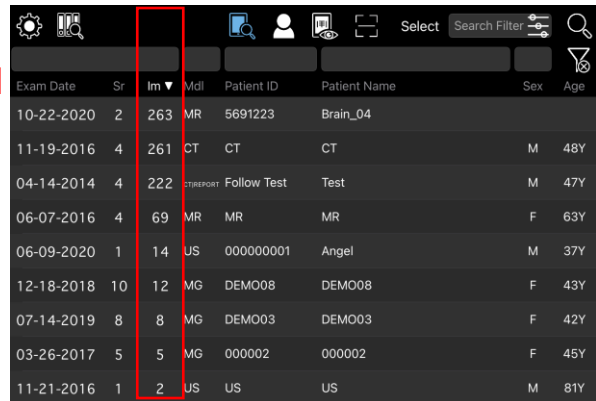
3-1 Sort

- To sort the study list, simply tap on the titles of each column. See Img.1
- As the images shown below, the list is sorted by image number in descending order.



Exam Date	Sr	Im	Mdl	Patient ID	Patient Name	Sex	Age
10-22-2020	2	263	MR	5691223	Brain_04		
06-09-2020	1	14	US	000000001	Angel	M	37Y
06-09-2020	1	2	MG	000000001	Angel	M	37Y
07-14-2019	8	8	MG	DEMO03	DEMO03	F	42Y
06-03-2019	1	1	DX	U221000827	0*1T*H	M	73Y
12-18-2018	10	12	MG	DEMO08	DEMO08	F	43Y
03-26-2017	5	5	MG	000002	000002	F	45Y
11-23-2016	1	2	DX	DX	DX	M	42Y
11-23-2016	1	1	CR	CR	CR	M	43Y
11-21-2016	1	2	US	US	US	M	81Y

Img.1 Before

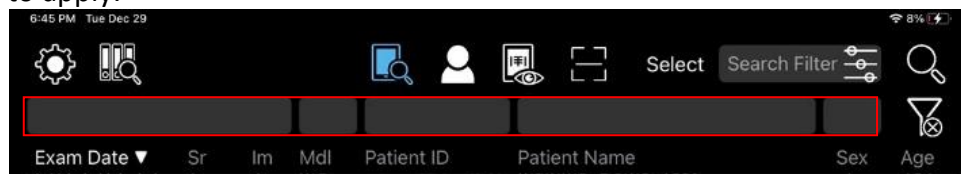


Exam Date	Sr	Im	Mdl	Patient ID	Patient Name	Sex	Age
10-22-2020	2	263	MR	5691223	Brain_04		
11-19-2016	4	261	CT	CT	CT	M	48Y
04-14-2014	4	222	CT	Follow Test	Test	M	47Y
06-07-2016	4	69	MR	MR	MR	F	63Y
06-09-2020	1	14	US	000000001	Angel	M	37Y
12-18-2018	10	12	MG	DEMO08	DEMO08	F	43Y
07-14-2019	8	8	MG	DEMO03	DEMO03	F	42Y
03-26-2017	5	5	MG	000002	000002	F	45Y
11-21-2016	1	2	US	US	US	M	81Y

Img.2 After

3-2 Search Filter

- To filter study list, select filter columns at the top section, enter condition(s), and tap on  to apply.



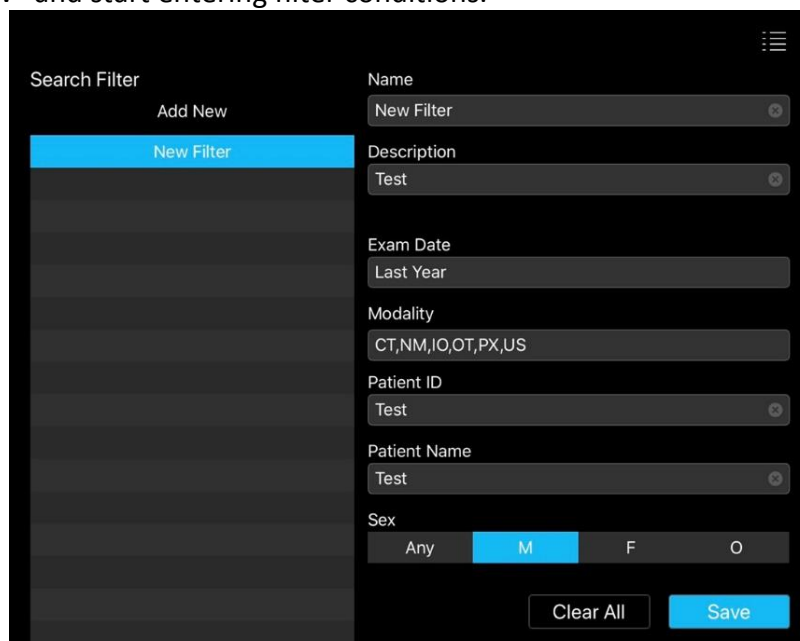
- To clear filter condition(s), simply tap on .

3-3 Custom Filters

- To create custom filter, click "Search Filter", and select "Config".



- Click "Add New" and start entering filter conditions.



Search Filter

Add New

New Filter

Description

Test

Exam Date

Last Year

Modality

CT,NM,IQ,OT,PX,US

Patient ID

Test

Patient Name

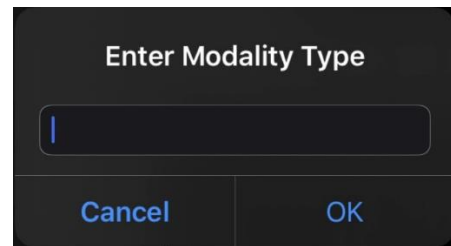
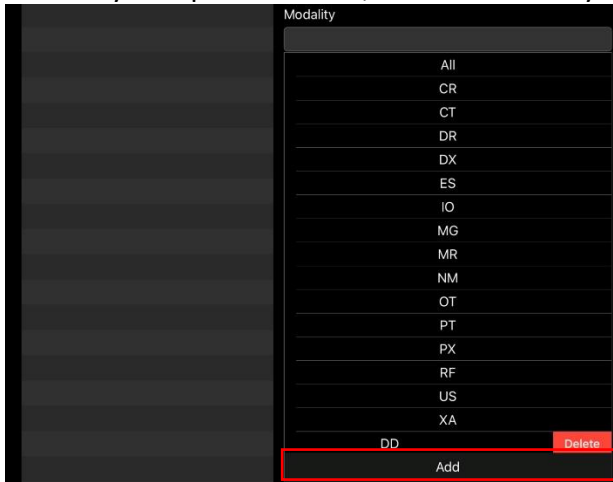
Test

Sex

Any M F O

Clear All Save

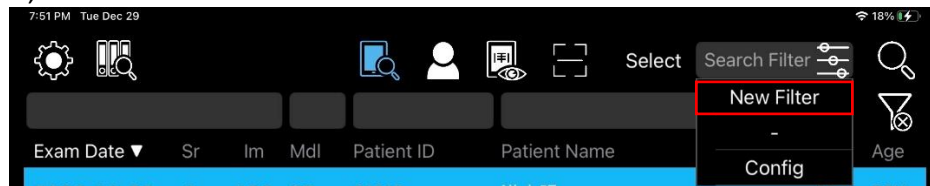
- **Save** : Save filter settings when finished.
- **Clear All** : Clear all filter conditions.
-  : Return to local study/worklist.
- On "Modality" dropdown menu, user can add any modality type by clicking "Add".



- To delete a modality type, tap on one and swipe left.



- Once saved, find the filter's name from the menu.



- Click the saved filter's name to apply its conditions.



- To reset filter conditions, click on .

3-4 Selection Mode

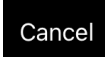
- Click on **Select** to select single or multiple studies.



2013-08-13	13	13	MG	Mammo_Demo_07	Mammo_Demo_07	F	63Y
2012-11-05	5	5	MG	Mammo_Demo_02	Mammo_Demo_02	F	59Y
2011-10-14	1	1	CR	CASE1	CASE1	F	28Y
2008-07-12	1	336	CT	CVAI_Demo_Test	CVAI_Demo_Test		
2003-10-27	2	312	CT	Pancreas_Demo_02	Pancreas_Demo_02	F	

- Once the selection has been completed, the extended functions below will be enabled.



-  : Exit the Selection Mode

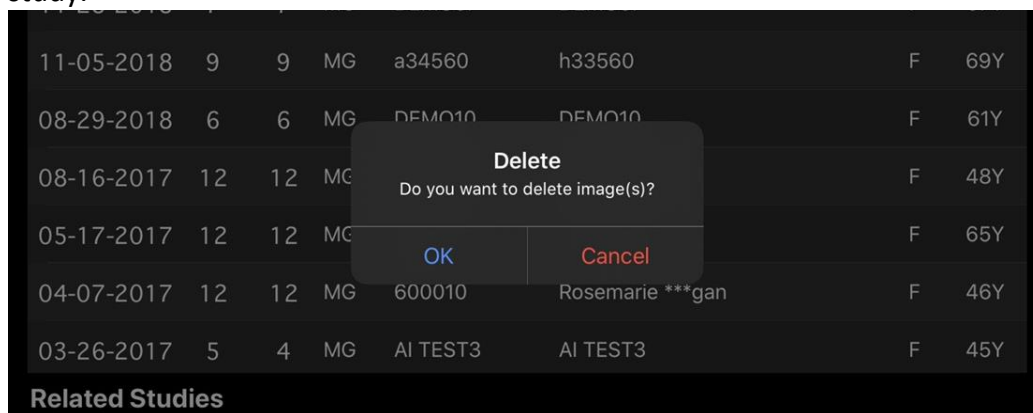
-  : AI. Please refer to 4-3 for details.

-  : DICOM Communications (ECHO SCU/SCP). Please refer to 5 for details.

-  : Export. Please refer to 6 for details.

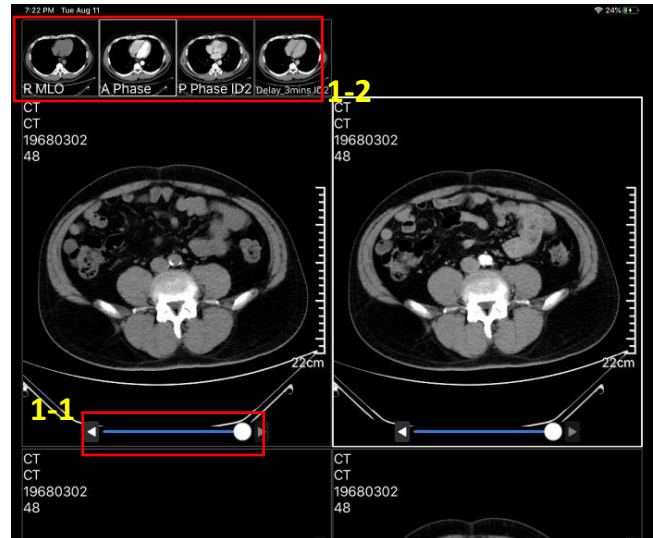
-  : Delete.

- Click on , and the window below will appear. Tap on “OK” to remove the selected study.



4. Viewer

- To adjust image's WL/WW, use one finger to tap on the screen and swipe in any direction.
- To adjust image's size, put two fingers on the screen and spread them for zooming out and vice versa.
- To view a specific image, double tap on and turn it into 1X1 view. Double tap it again to turn it back to previous layout.
- To view multi-frame images, drag the slice bar to either left or right. See Img.1-1
- Img.1-2 shows series preview and series description.



Img.1

- : Previous/Next page/Mammo hanging protocol.
- : Reset annotations/measurements, zooming, panning, WL and WW.
- : Show PR (if applicable)
- : Save annotations/measurements
- : Return to local study/worklist
- : Viewing tools

4-1 Viewing Tools

- : Secondary Capture. * To start "secondary capture" feature, refer to 4-2 for details.
- : Print current view.
- : Rotate.

Rotate 90 degrees clockwise/counter-clockwise, flip vertically/horizontally.
- : Multi-frame images.

Play/Pause, previous/next frame and playing speed up/down.
- : Synchronization for multiple stacked images by position (default) or frame number.

1/50

: Image/frame number.



: Display layout.



*To add custom layout options, refer to 2-3 for details.



: Annotations/Measurements.



Distance between two points, angle measurement between two lines, area measurement (square, polygon, circle), annotations, return to last step and delete all.



: Pre-configured WL/WW.



*To pre-set window level options, refer to 2-4 for details.



: Mammography Hanging Protocol (Exclusive to MG).

Set1: Previous/Current study comparison.

Set2: C-View/Tomo comparison.



Educational

The switch by turning "Educational" on under Settings.

4-2 Secondary Capture

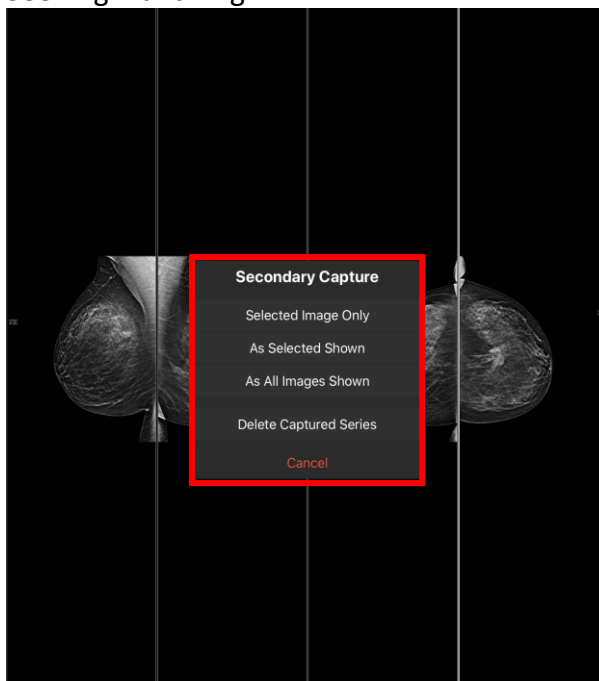


Click

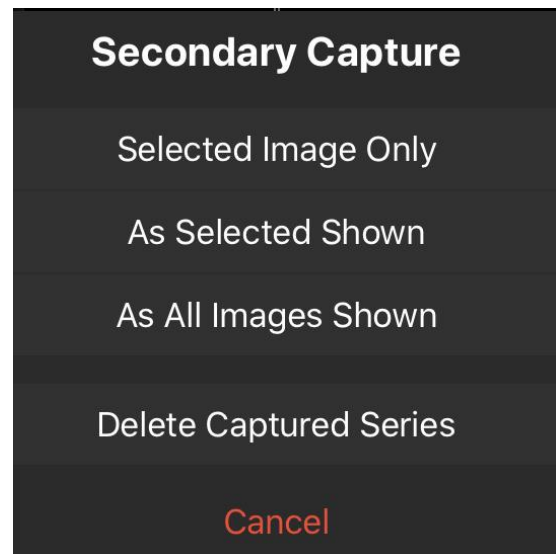


to start the feature of "Secondary Capture".

See Img.1 and Img.2.

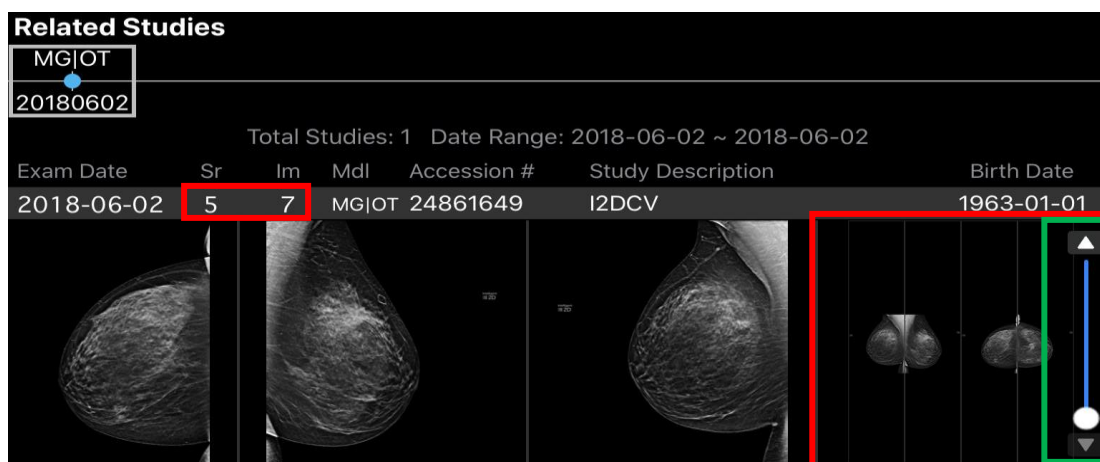


Img.1



Img.2

- **Selected Image Only**: Capture the selected image only.
- **As Selected Shown**: Capture the selected image with annotation/measurement, window level and overlay labels.
- **As All Images Shown**: Capture all images on the screen with annotation/measurement, window level and overlay labels.
- Click  to go back to the study list and tap on  to refresh the study to see if the captured image is saved.
- The captured image will be shown at the end of the browsing series; also, the series thumbnail with a slice bar at the bottom will show multiple captured images. See Img.3



Img.3

- Go back to the selected study, the captured series/image(s) will become additional ones to the original series/image(s). Refer to Img.4 and Img.5.

With captured series/images

Exam Date ▼	Sr	Im	Mdl	Patient ID	Patient Name	Sex	Age
2018-06-02	5	7	MG OT	2018_CHDI2D_110_BTO...	2018_CHDI2D_110_BTOJPEGLossless	F	55Y
2016-11-23	25	26	CR DX	ER001	ER001	M	42Y
2016-11-19	4	261	CT	005	CT dynamic 1	M	48Y

Img.4

Original

Exam Date ▼	Sr	Im	Mdl	Patient ID	Patient Name	Sex	Age
2018-06-02	4	4	MG	2018_CHDI2D_110_BTO...	2018_CHDI2D_110_BTOJPEGLossless	F	55Y
2016-11-23	25	26	CR DX	ER001	ER001	M	42Y
2016-11-19	4	261	CT	005	CT dynamic 1	M	48Y

Img.5

- **Delete Captured Series**: Delete all images from the captured series.

- Click  to go back to the study list and tap on the  to refresh the study, then all images from the captured series will be eliminated.

4-3 AI

- Tap on  to go to Settings page, input the designated URL in AI Host column.

AI Host: **http://ai.ebmtech.com**

- Go back to home page where local studies are listed. Click on  to choose single or multiple studies of MG, CR, or CT. (AI Web service currently supports MG, CR, and CT only).

        							
2013-08-13	13	13	MG	Mammo_Demo_07	Mammo_Demo_07	F	63Y
2012-11-05	5	5	MG	Mammo_Demo_02	Mammo_Demo_02	F	59Y
2011-10-14	1	1	CR	CASE1	CASE1	F	28Y
2008-07-12	1	336	CT	CVAI_Demo_Test	CVAI_Demo_Test		
2003-10-27	2	312	CT	Pancreas_Demo_02	Pancreas_Demo_02	F	

- Click on , and the studies will be delivered to the designated AI Server for computing.

Cancel					Select All
--------	---	---	---	---	------------

- Confirm if the results have been received by checking whether the check mark shows on the AI column of the selected studies. (Scroll left to see AI column). See Img.4.

*Notice that there are 4 different status shown in AI column:

-  indicates the selected studies have been sent to the AI cloud server.
-  indicates the result from the AI server has returned.
-  indicates there is no result returned from the AI server.
-  indicates an error occurs when sending the studies to the AI server.

4:14 PM Mon Nov 16

Search Filter

Sr	Im	Mdl	Patient ID	Patient Name	Sex	Age	RS	AI
2	257	CT	6503928	6503928	M	65Y	1	
2	200	ES	00026547	Bjla	M		1	
1	1	CR	ChestXray02	ChestXray02	M	82Y	1	
5	5	MG	000002	000002	F	45Y	1	✓
1	1	CR	CR	CR	M	43Y	1	✗
4	261	CT	005	CT dynamic 1	M	48Y	1	✗
1	478	CT	NA	NA	M	53Y	1	
1	596	CT	LDCT00	LDCT00	M	53Y	1	
5	5	MG	000003	000003	F	47Y	1	✓
5	243	CTIREPORT	Follow Test	Test	M	48Y	2	
4	222	CTIREPORT	Follow Test	Test	M	47Y	2	
3	3	MG	000005	000005	F	44Y	1	✓

Related Studies

MG
01262013

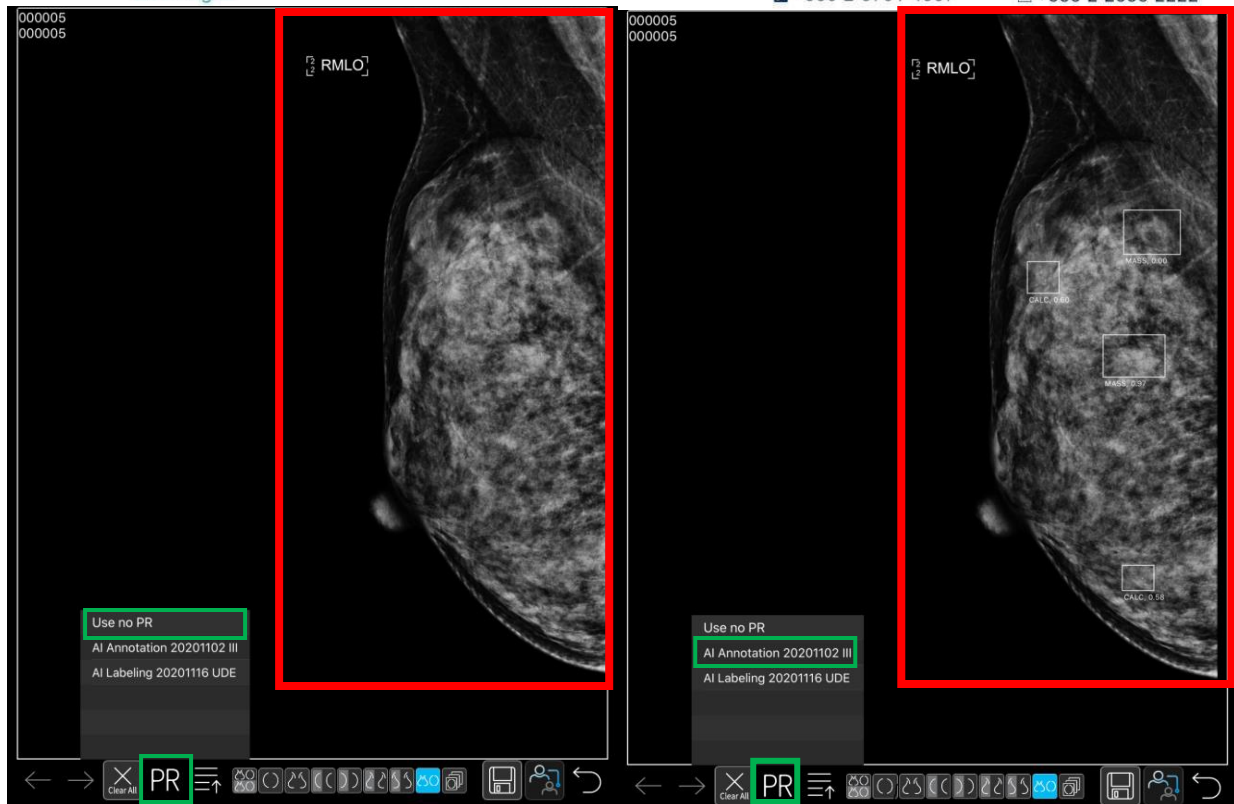
Total Studies: 1 Date Range: 01-26-2013 ~ 01-26-2013

Exam Date	Sr	Im	Mdl	Accession #	Study Description	Birth Date
01-26-2013	3	3	MG	60559058	Mammography, BIL	09-20-1968



Img.4

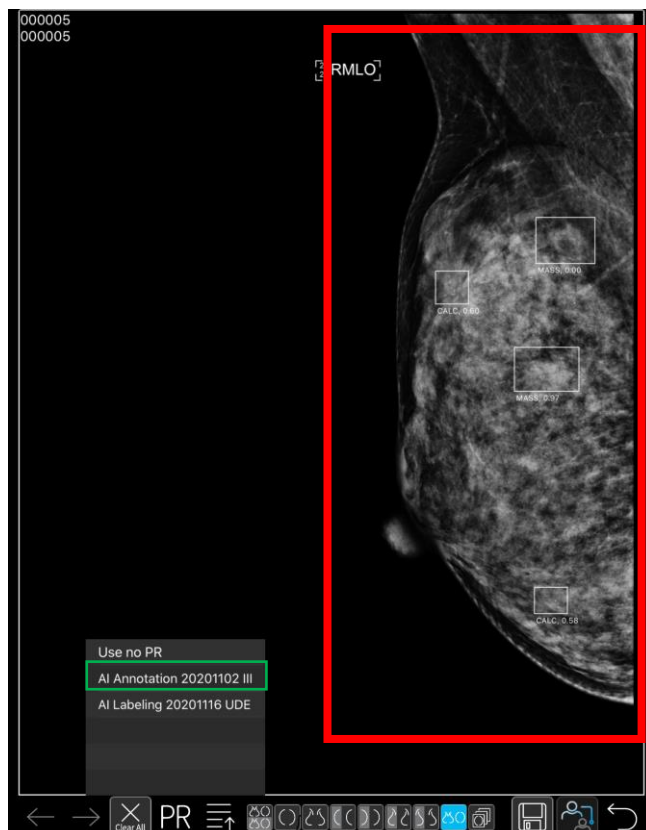
- You can view the results from the AI Cloud server for **MG**, **CR** or **CT** on viewer, and toggle it on/off by double tapping the bottom left corner.
- You can also toggle it **OFF** by clicking on **"PR"/ "Use no PR"** or click on **"PR"/ "AI Annotation"** and **"PR"/ "AI Labeling"** to view the results. See Img.5 & 6.



Img.5

Img.6

- AI inference results for MG include **calcification** and **mass** (Refer to Img.7); AI inference results for CT encompass **rib fracture** (Refer to Img.8) and **nodule** (Refer to Img.9); AI inference result for CR contains **nodule**, **mass**, **effusion**, **cardiomegaly**, and **pneumothorax** (Refer to Img.10).

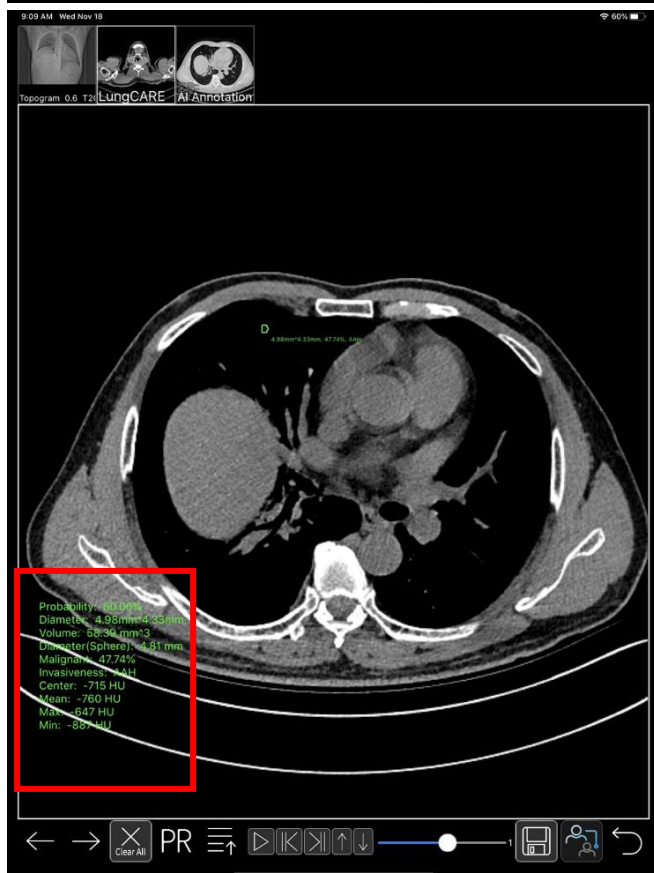


Img.7 (AI results for MG)

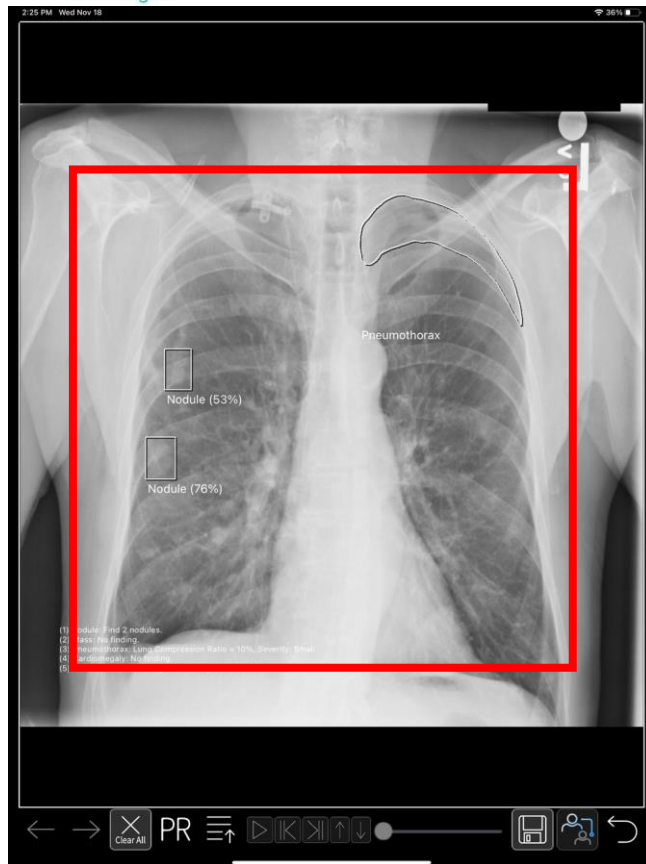
- Notice that for CT images, you can quickly switch to the ones with AI result by tapping on the  .



Img.8 (AI results for CT Rib Fracture)



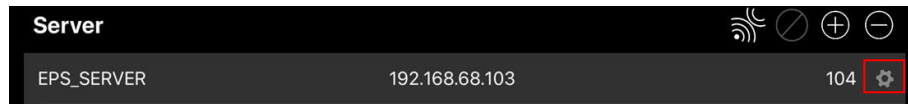
Img.9 (AI results for CT Nodule)



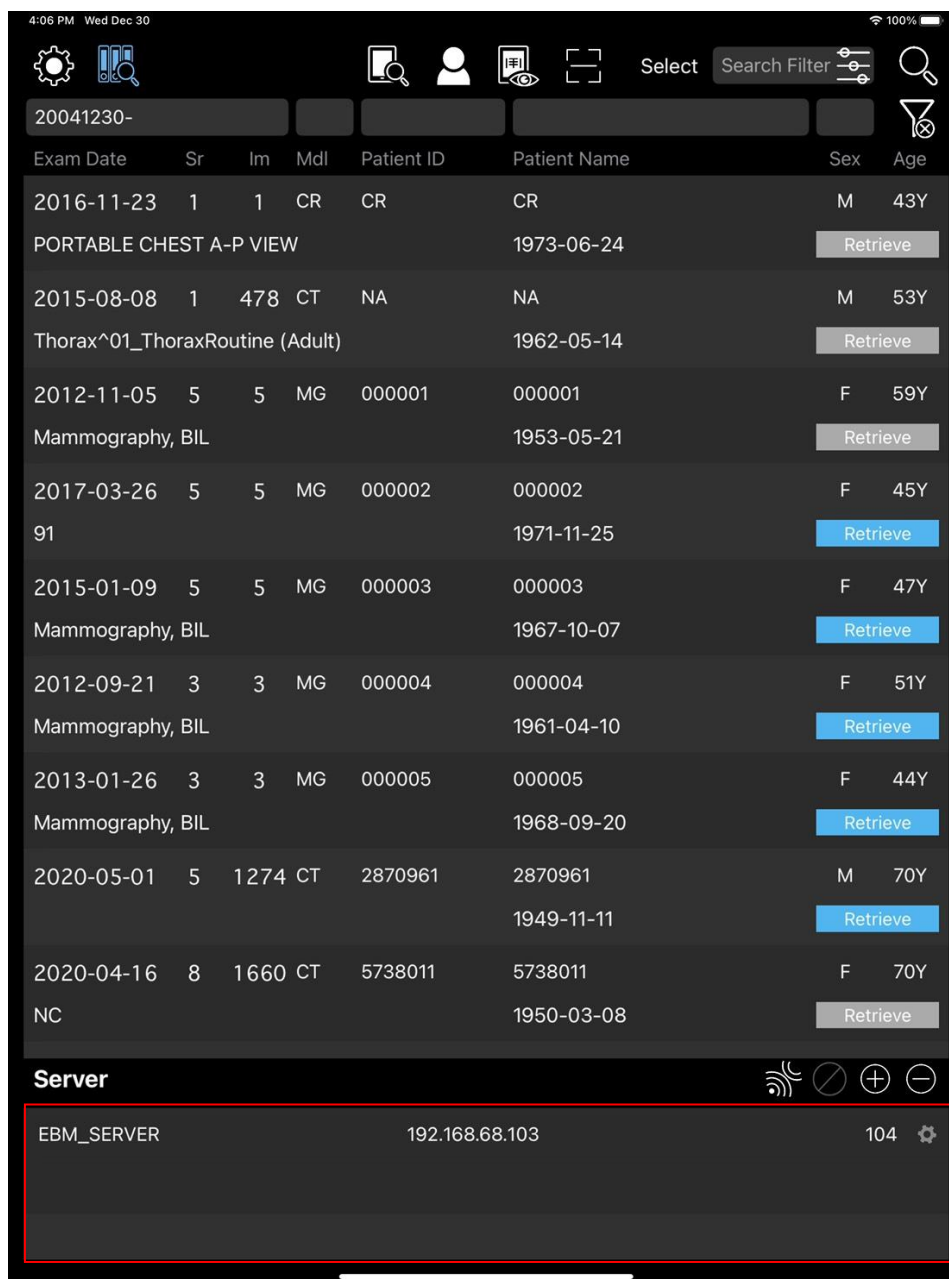
Img.10 (AI results for CR)

-  : Send C-ECHO to peer. When succeeded, the message will pop up. See img.2

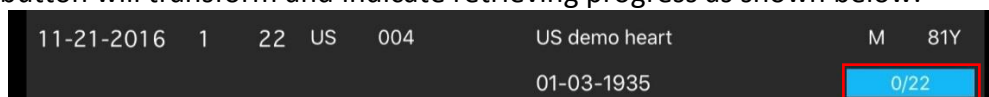
-  : Save new server settings.
-  : Modify server information.



5-2 Start Retrieving Process



- Tap on a device from server list, then tap on  again to query.
- *1: To narrow down the query results, input filter conditions in advance.
- Tap on “Retrieve” button to start retrieving a study.
- The button will transform and indicate retrieving progress as shown below.



Status 1. **Retrieve** indicates the exact study is not found in the local database.

Status 2. **Retrieve** indicates the exact study is found in the local database.

- To view images, simply double tap on to open a study.

Under status 1, there is a window at the bottom right corner indicating the study is being retrieved from the server. See Img.1

Under status 2, the study is retrieved directly from the local study/worklist.



Img.1

- 14/261 indicates 14 images have been retrieved, and 261 is the number of total images of the study.
- Failure: Indicate the number of images failed to retrieve.
- Abort: Tap on to stop retrieving images.

5-3 Store SCP

- To receive images from other devices (STORE SCP), provide the information of UDE below to let the peer send C-ECHO to UDE.
 - Local AET
 - Local Port
 - IP of iPad Pro device

*The information below can be found under Settings

- Once succeeded, other devices can send image files to UDE via C-STORE.
- The image files will be stored in the UDE local database. Tap on  to view the results.

5-4 Query/Retrieve SCP (Act as a DICOM Server)

- Provide UDE information and let other devices query/retrieve from UDE.
 - Local AET
 - Local Port
 - IP of iPad Pro device

*The information below can be found under Settings.

- When other devices retrieve images from UDE, UDE assumes the peer is listening TCP port 104.

5-5 C-STORE SCU (Store out image)

- Click on **Select** to select single or multiple studies.

						Select	Search Filter		
2013-08-13	13	13	MG	Mammo_Demo_07	Mammo_Demo_07		F	63Y	
2012-11-05	5	5	MG	Mammo_Demo_02	Mammo_Demo_02		F	59Y	
2011-10-14	1	1	CR	CASE1	CASE1		F	28Y	
2008-07-12	1	336	CT	CVAI_Demo_Test	CVAI_Demo_Test				
2003-10-27	2	312	CT	Pancreas_Demo_02	Pancreas_Demo_02		F		

- Once the selection has been completed, tap on to enter the store out page.

Server			
EPS_SERVER	192.168.68.103		104
iPad20	192.168.68.34		104
M1A (2)	192.168.68.100		104
Images			
5691223	Brain_04	20201022	MR 1 1
5691223	Brain_04	20201022	MR 1 2
5691223	Brain_04	20201022	MR 1 3
5691223	Brain_04	20201022	MR 1 4
5691223	Brain_04	20201022	MR 1 5
5691223	Brain_04	20201022	MR 1 6
5691223	Brain_04	20201022	MR 1 7
5691223	Brain_04	20201022	MR 1 8
5691223	Brain_04	20201022	MR 1 9
5691223	Brain_04	20201022	MR 1 10
Result			

Img.1 (Before storing out images)

Server			
EPS_SERVER	192.168.68.103		104
iPad20	192.168.68.34		104
M1A	192.168.68.94		104
Images			
Result			
5691223	Brain_04	20201022	MR 1 1
5691223	Brain_04	20201022	MR 1 2
5691223	Brain_04	20201022	MR 1 3
5691223	Brain_04	20201022	MR 1 4
5691223	Brain_04	20201022	MR 1 5
5691223	Brain_04	20201022	MR 1 6
5691223	Brain_04	20201022	MR 1 7
5691223	Brain_04	20201022	MR 1 8
5691223	Brain_04	20201022	MR 1 9
5691223	Brain_04	20201022	MR 1 10

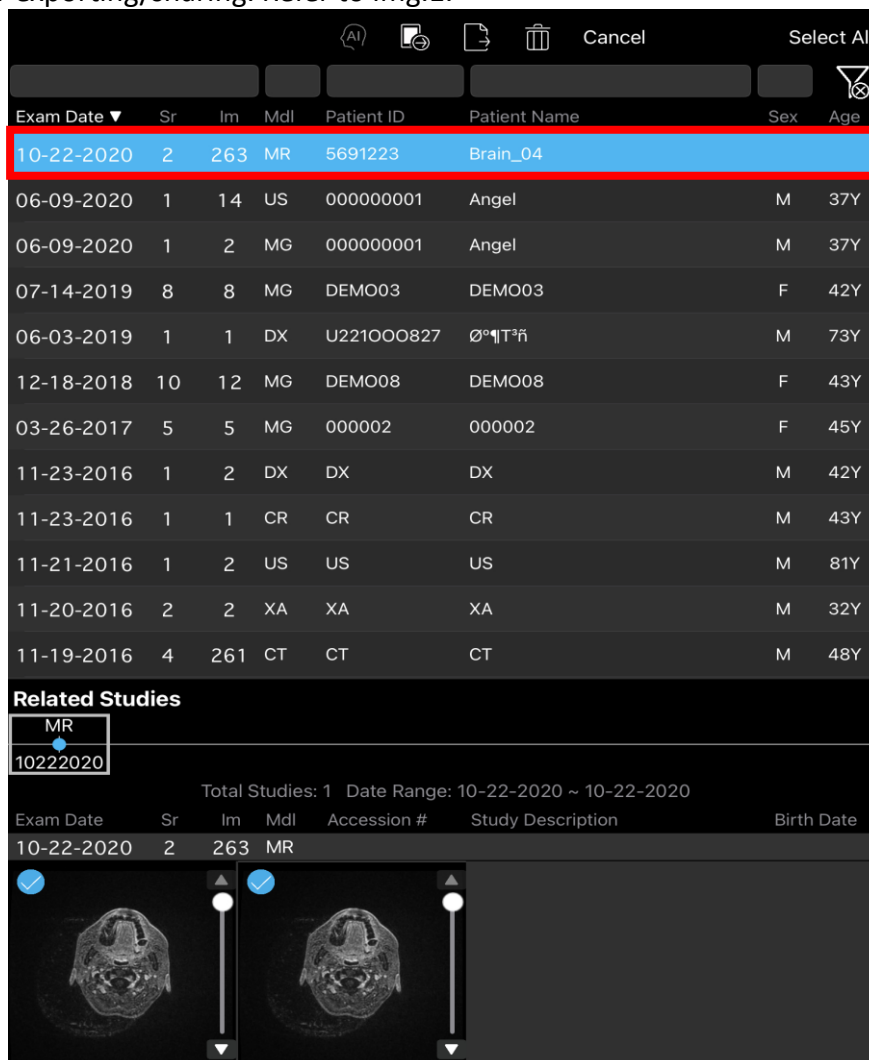
Img.2 (After images are stored out to the server [being highlighted in blue])

- Select a server from "Server", then tap on to store out all the selected studies' images to the server.
- Image(s) that has been stored out successfully will be moved to "Result" column.
- : Pause c-storing process.
- : Restart c-storing process.
- : Clear selected images.
- : Return to local study/worklist. Notice that C-STORE process will continue unless the internet connection is disabled.

6. Export

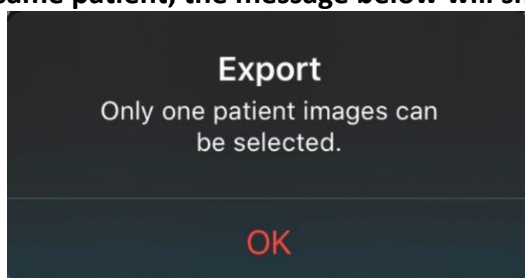
6-1 File Sharing for Selected Studies/Series

- On local worklist page, click on **Select** to choose one or multiple studies/series with **same Patient ID** for exporting/sharing. Refer to Img.1.



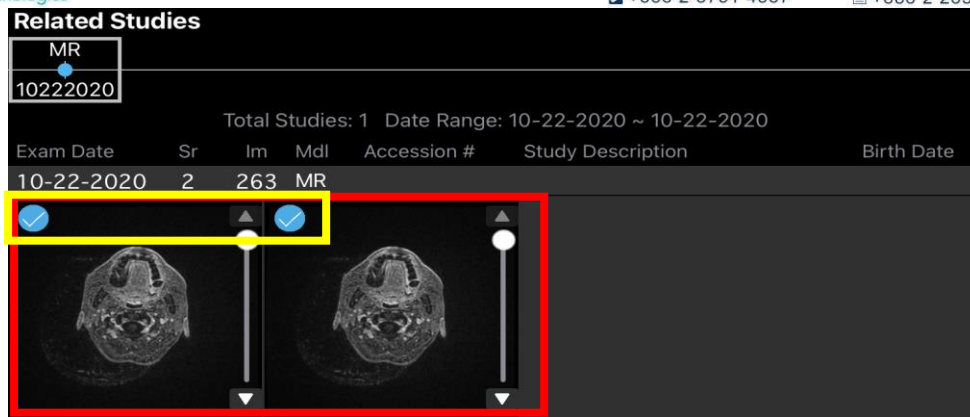
Img.1

*Notice that only the studies/series with same Patient ID can be selected; if the selected studies are not from the same patient, the message below will show up. See Img.2.



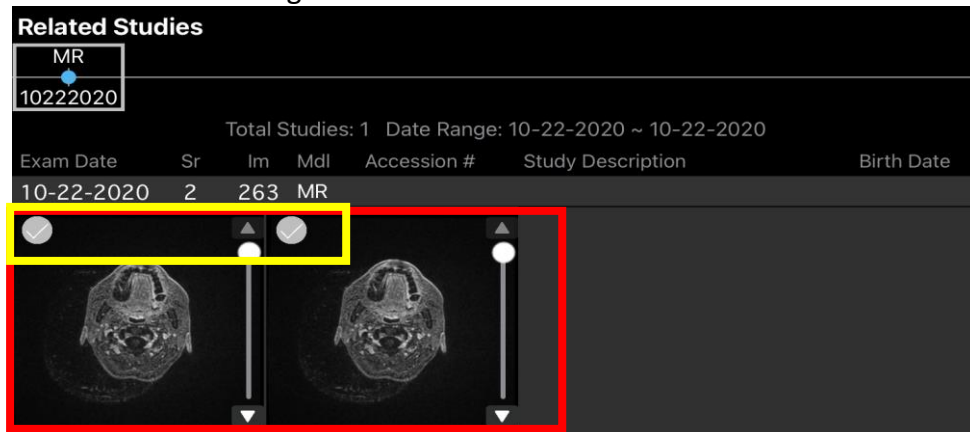
Img.2

- The selected series will be circled in blue with white check mark. Refer to Img.3.



Img.3

- Besides, you can manually deselect the series and the unselected series will be circled in gray with white check mark. See Img.4

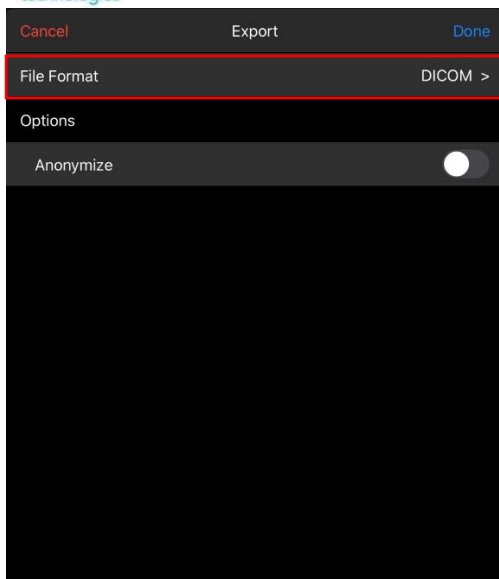


Img.4

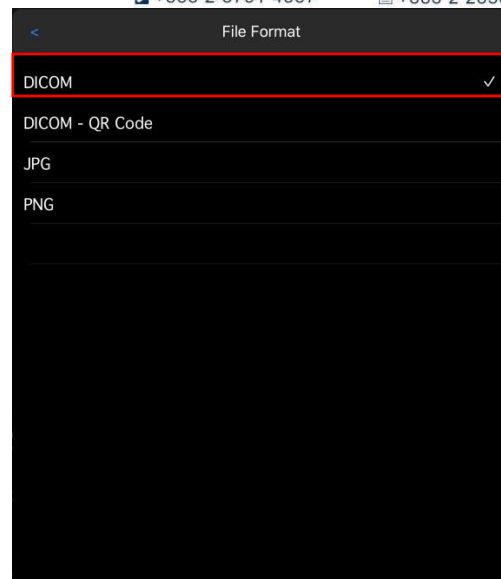
- Once the selection has been completed, tap on the  to start configuring export settings.

6-2 Export in DICOM Format

- Tap on "File Format". See Img.1
- Select "DICOM". See Img.2
- Once finished, tap on  to return. See Img.2

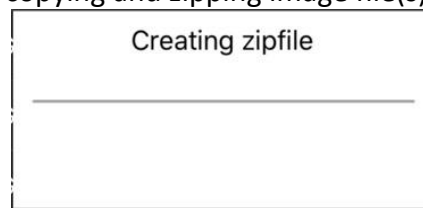
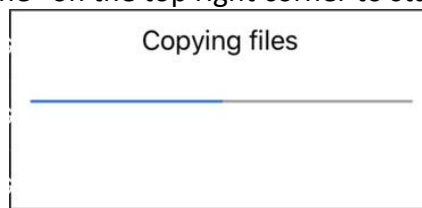


Img.1

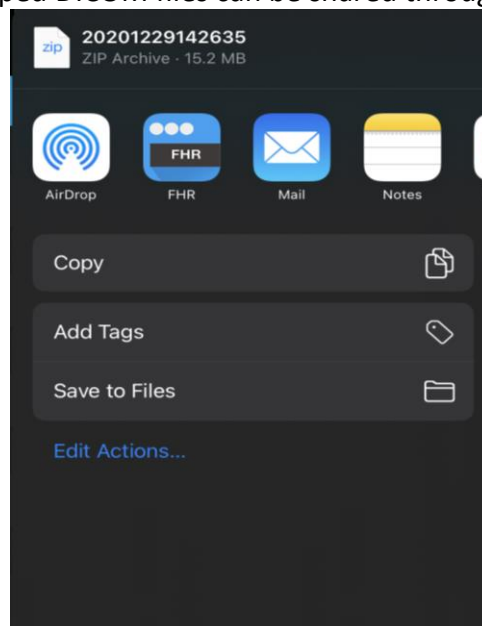


Img.2

- Turn on “Anonymize” option to anonymize the information of the following DICOM tags: Patient ID, Patient Name, Birth Date, Institution Name, Performing Physician, Operator Name, Referring Physician Name and Station Name.
- Click “Done” on the top right corner to start copying and zipping image file(s).



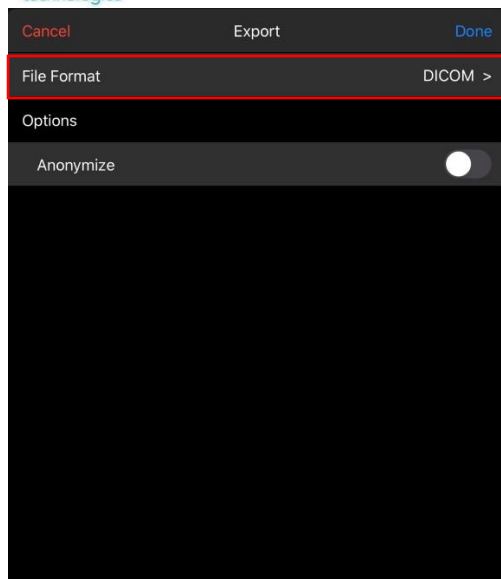
- Once finished, the zipped DICOM files can be shared through the options in img.3.



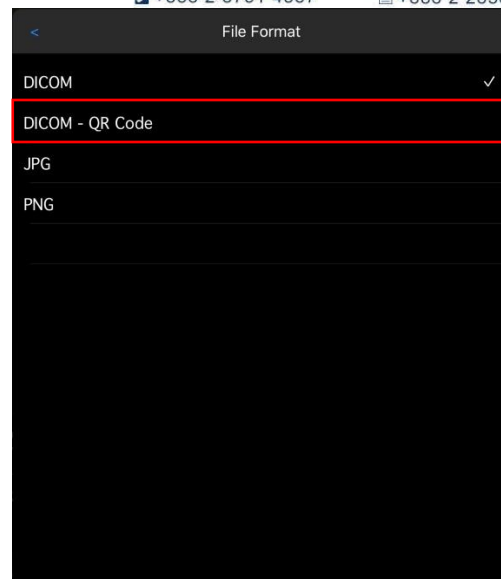
Img.3

6-3 Export in DICOM Format - QR Code

- Tap on “File Format”. See Img.1
- Select “DICOM-QR Code”. See Img.2
- Once finished, tap  to return. See Img.2

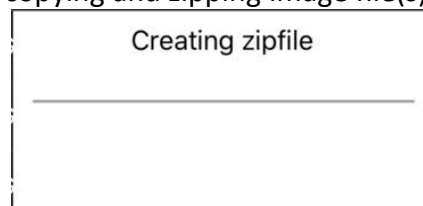
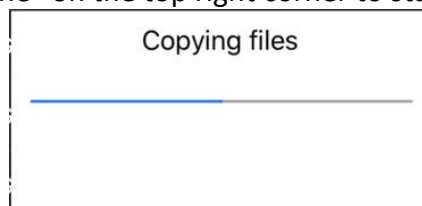


Img.1

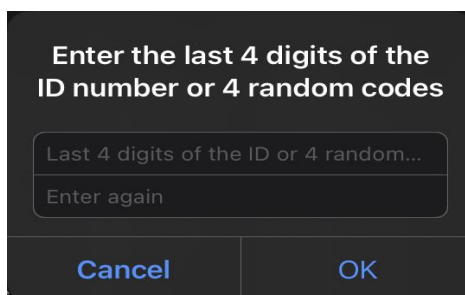


Img.2

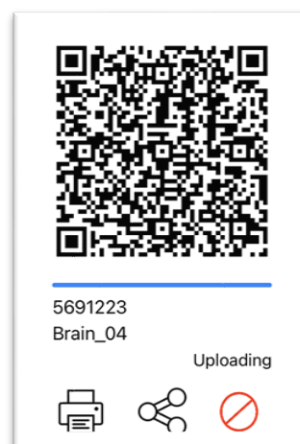
- Turn on “Anonymize” option to anonymize information of the following DICOM tags: Patient ID, Patient Name, Birth Date, Institution Name, Performing Physician, Operator Name, Referring Physician Name and Station Name.
- Click “Done” on the top right corner to start copying and zipping image file(s).



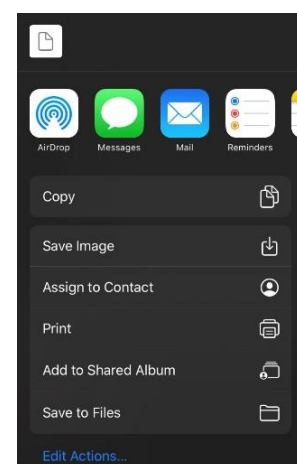
- Once finished, enter the last 4 digits of the ID number twice for security purposes. See Img.3
- A QR code will be generated and can be printed, shared, or scanned by *FHR App. See Img.4



Img.3



Img.4



Img.5

-  : Print QR Code
-  : Share QR Code through options in Img.5

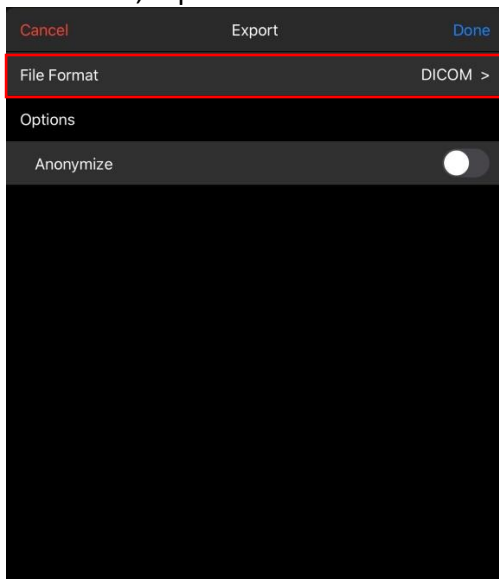


- : Pause and exit.

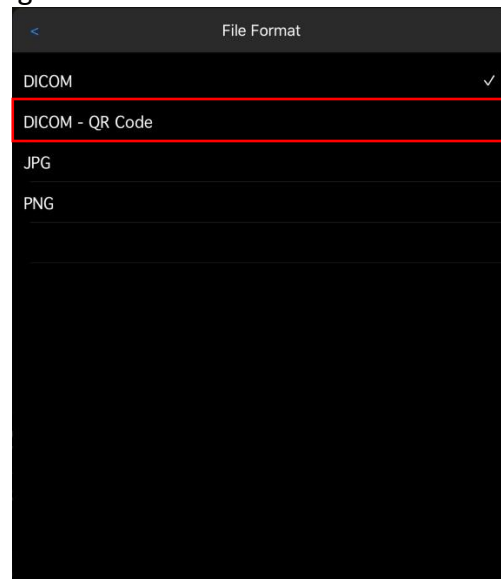
*Please refer to FHR App manual for instructions

6-4 Export in JPG Format

- Tap on “File Format”. See Img.1
- Select “JPG”. See Img.2
- Once finished, tap on  to return. See Img.2

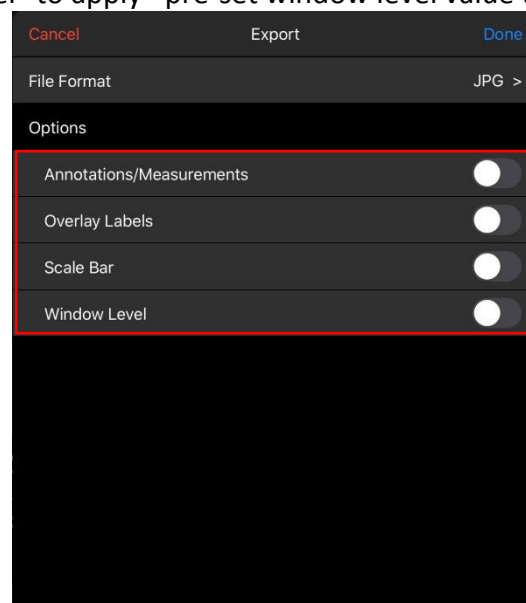


Img.1



Img.2

- Turn on “Annotations/Measurements” to include it on image(s) when exporting.
- Turn on “Overlay Labels” to include *pre-set DICOM tag information on image(s) when exporting.
- Turn on “Scale Bar” to include it on image(s) when exporting.
- Turn on “Window Level” to apply *pre-set window level value to image(s) when exporting.

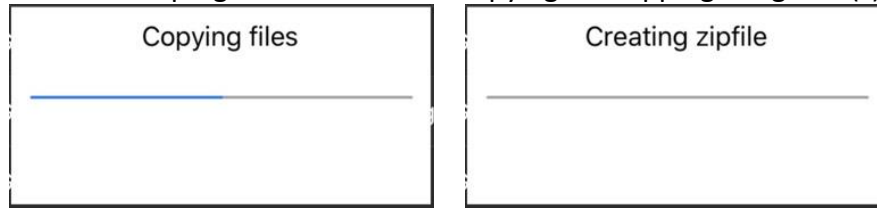


Img.3

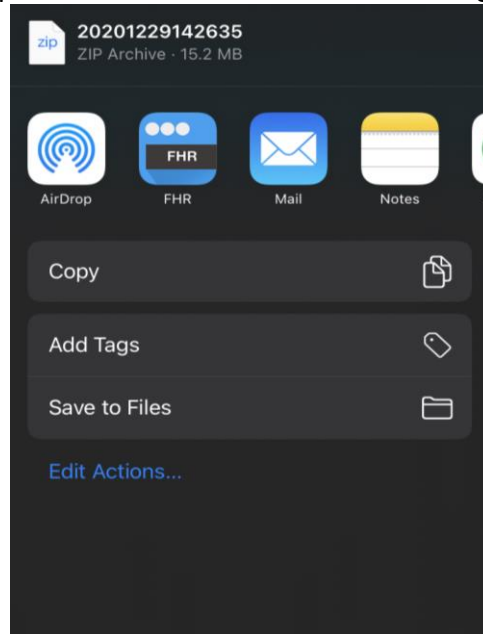
*To configure pre-set DICOM tag information, refer to 2-2 for details.

*To configure pre-set window level value, refer to 2-4 for details.

- Click “Done” on the top right corner to start copying and zipping image file(s).



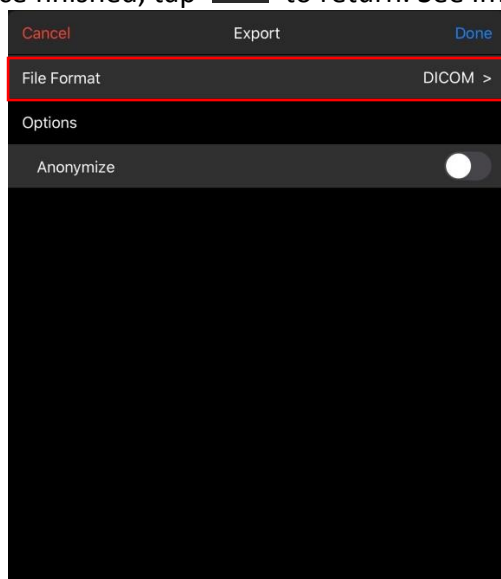
- Once finished, the zipped DICOM files can be shared through the options in Img.4.



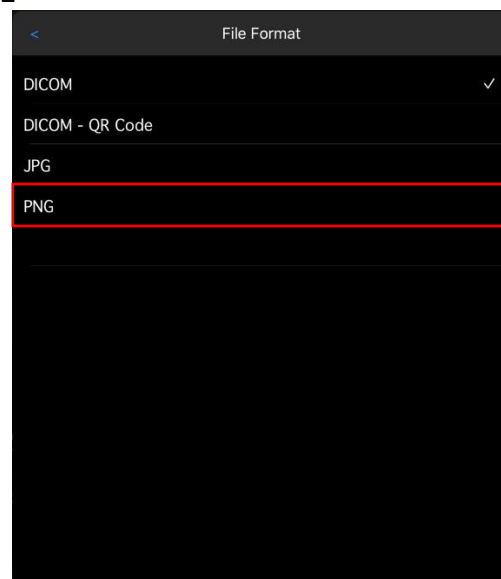
Img.4

6-5 Export in PNG Format

- Tap on “File Format”. See Img.1
- Select “PNG”. See Img.2
- Once finished, tap  to return. See Img.2



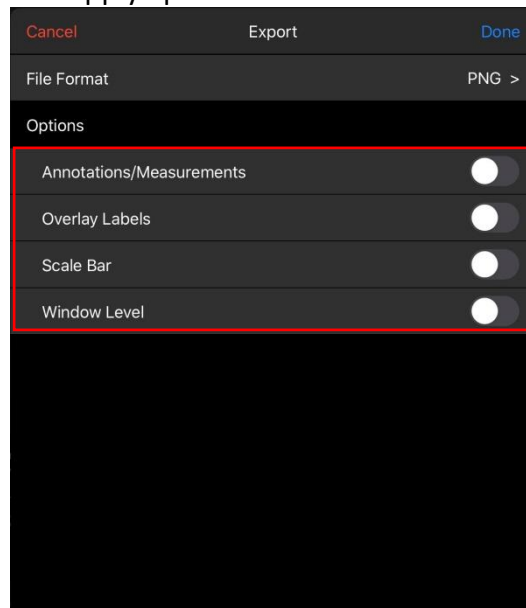
Img.1



Img.2

- Turn on “Annotations/Measurements” to include it on image(s) when exporting.
- Turn on “Overlay Labels” to include *pre-set DICOM tag information on image(s) when exporting.
- Turn on “Scale Bar” to include it on image(s) when exporting.

- Turn on “Window Level” to apply *pre-set window level value to image(s) when exporting.

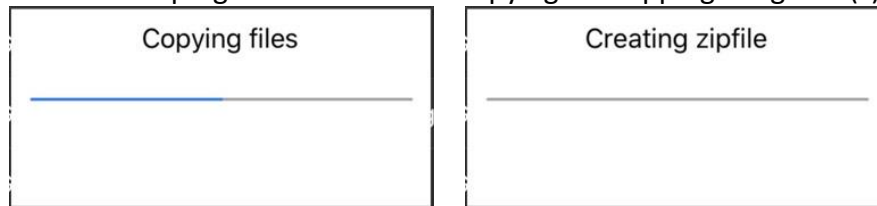


Img.3

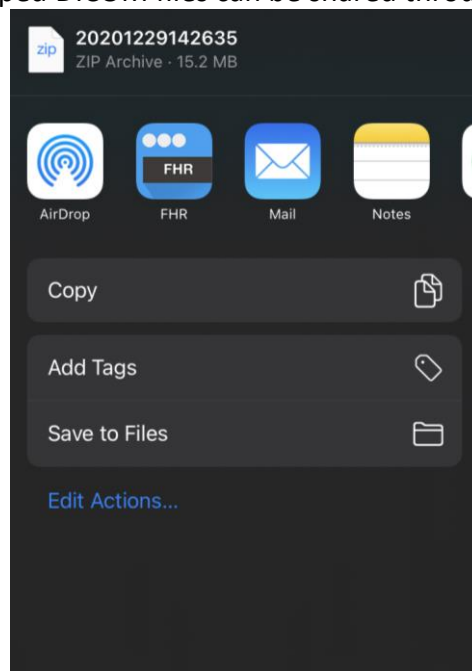
*To configure pre-set DICOM tag information, refer to 2-2 for details.

*To configure pre-set window level value, refer to 2-4 for details.

- Click “Done” on the top right corner to start copying and zipping image file(s).



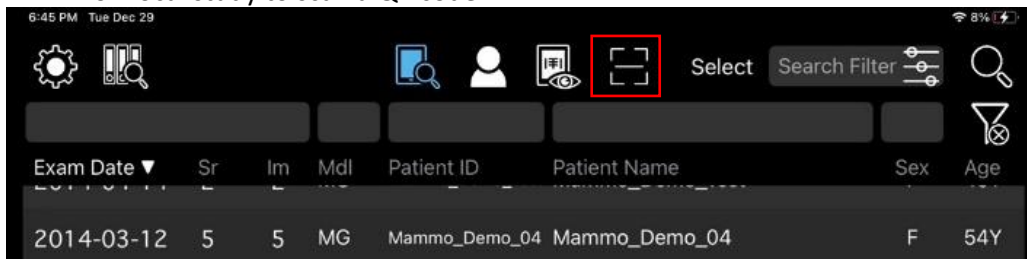
- Once finished, the zipped DICOM files can be shared through the options in Img.4.



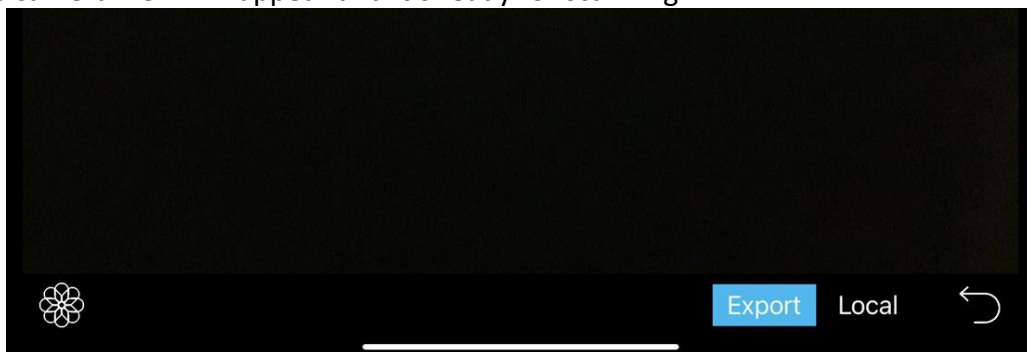
Img.4

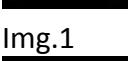
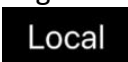
7. Scan

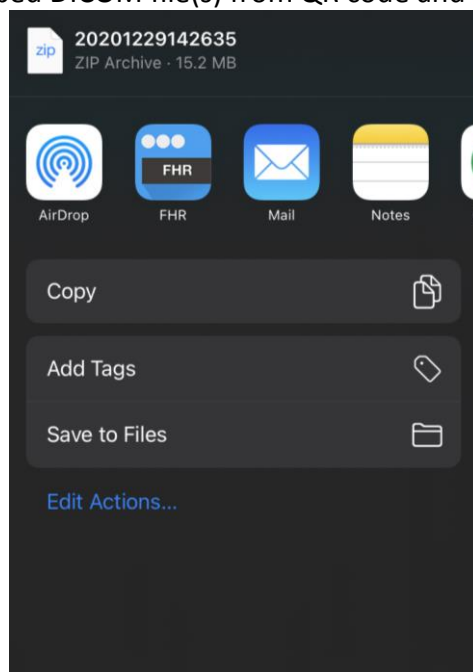
- Tap  on local study to scan a QR code.



- The camera view will appear and it's ready for scanning.



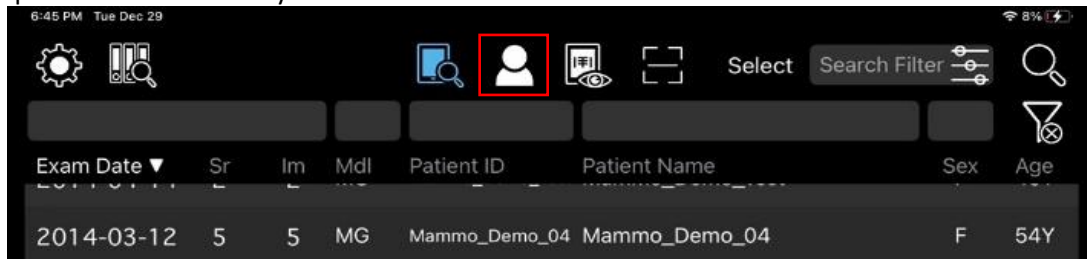
-  : Tap on to import an image of QR code from Album.
-  : Return to local study/worklist.
-  : Retrieve zipped DICOM file(s) from QR code and export it through options in .
-  : Retrieve zipped DICOM file(s) from QR code and save it in local study/worklist.



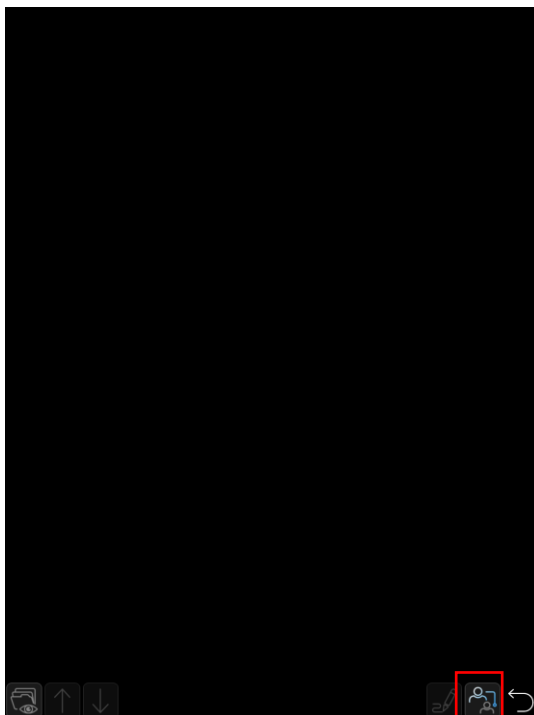
Img.1

8. Meeting Mode

- Tap  on local study to start.

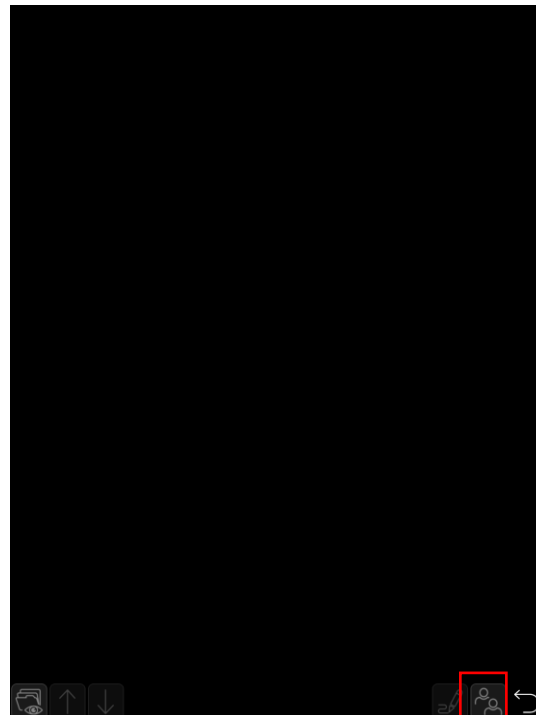


Host Device



Img.1

Client Device



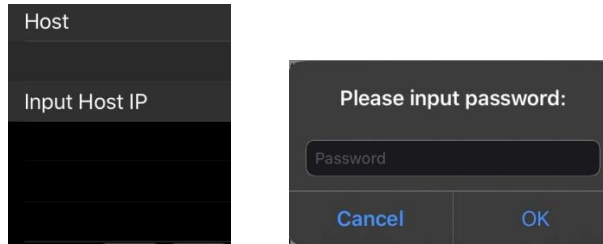
Img.2

-  : Return to study list.
-  : Select available PDF file to share.
-  : Switch next/previous page.
-  : Annotation.
-  : Host device connection status ON. See Img.1
-  : Client device connection status ON. See Img.2

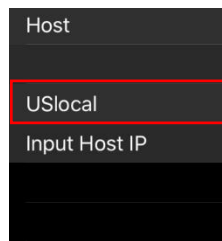
8-1 Set Up

- For host device, tap on  and select "Host" to create a room named by this device name.

- Input password for the access to authorization.



- Once the password is set up, the connection status on the host device will show as .
- On client's device(s), tap on the host name from the list, and input password set by the host.



- Client's device(s) will be synchronized with what displays on the host device.

- The connection status on client device will show as .

- On host device, tap on  to annotate on the image, then the annotations will be shown on both host and client devices. Image adjustment such as zoom in/out, or window center/width will also be synchronized to the connected devices.

9. Contact

- If you have any question or feedback regarding to the application, please email us at info@ebmtech.com