

PACS Training Curriculum – End User

The following curriculum is an overview limited to the features in Intellispace PACS commonly used. It will provide the foundations of knowledge about Intellispace PACS. Functionality about and beyond these topics and can be found in the Intellispace PACS Help Files within the application.

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Lookups – Exam, Patient, Exception

Each Lookup display can be customized by the user.

Right-Click on blue column headers and select the columns from the list

Some columns are defaults and cannot be removed.

Left click on column headers to sort ascending/descending.

Drop-Down Selections for Status, Modality, Organization, and Date Ranges.

Exam Lookup

Utilized to find individual exams by varied/combined search parameters

Used to find any exam any status

Check Box for 'Exams with images only'

Maximum of 200 results displayed

Search Criteria

- Name, Accession, MRN, Referring, are 'begins with'
 - Date range does not apply to Accession and MRN searches
- Perf. Resource, Exam Code, Subspecialty, are 'Exact Match' but % can be used
- Exam Status, Modality, Organization are 'Check Box'

Icons:



(From Left to Right)

STAT

Locked

Marked Read

Exam Note Present

Has Images

Exam Management Options:

(Note: Option will vary per user/role)

Show Report	• Launches Clinical Information/Report (not displayed if no report)
View Exam Notes	• Launches Clinical Information/Exam Notes
Export via DICOM	• Export images to another PACS/DICOM device
Cache Exam	• Loads exam into cache on local hard drive
Create Exam	• Creates another exam (should not be used)
Edit Exam	• Edits details about the exam
Delete Exam	• Deletes the order making the images an Exception
Link Exams	• Links the set of image to another accession (shared images)
Detach Study	• Detach images from the order to become an Exception
Edit Patient	• Edit Patient information (should not be used)
View Audit Trail	• Launches Audit Trail for the accession
Cardiology Enterprise Viewer	• Launches Cardiology viewer
Assign Exams	• Assign an exam to a radiologist/user
Assign Exams with a note	• Assign an exam with a note to the recipient

Patient Lookup

“Patient Lookup” is utilized to view a patient’s entire record for any organization.

Search by MRN or Name, with DOB as an additional criterion for common names.

Exception studies are also displayed in Patient Lookup, but they cannot be resolved.

Records from individual organization can be ‘Linked’ to combine studies into one Timeline.

Linking creates a comprehensive record of the patient’s studies regardless of organization.

Linking Patients is critical for making other organization’s studies to be available as relevant priors.

- Very important for Technologists and Image Library staff to know how to Link Patients
- See document “ISP-Linking Patients.pdf” for details on how Linking works.

Records on linked patients are arranged in ‘Trees’ that can be expanded to see each study.

Records collapsed:

TEST III, ADULT, Y				OIC
TEST III, ADULT, Y	16306	10/11/1977		OIC
TEST III, ADULT, Y	16306	10/11/1977		SEUCAK
TEST III, ADULT, Y	16306	10/11/1977		BAH

Records expanded

TEST III, ADULT, Y				OIC
TEST III, ADULT, Y	16306	10/11/1977		OIC
MR - MR Ankle Right w Contrast	Acc: 2509609	Date: 1/27/2016 6:55:00	Org: OIC	
MR - MR Ankle Left wo Contrast	Acc: 2509613	Date: 1/27/2016 6:35:00	Org: OIC	
MG - Digital mammogram additi...	Acc: 2509608	Date: 1/27/2016 6:10:00	Org: OIC	
MR - MR Ankle Left wo Contrast	Acc: 2509614	Date: 1/27/2016 6:10:00	Org: OIC	
TEST III, ADULT, Y	16306	10/11/1977		SEUCAK
CR - XR Ankle Left 3 View or more	Acc: P5277	Date: 1/15/2015 16:11:33	Org: SEUCAK	
TEST III, ADULT, Y	16306	10/11/1977		BAH
CR - XR Tibia/Fibula Left 2 View	Acc: 2530339	Date: 12/7/2015 21:08:12	Org: BAH	

TEST III, ADULT, Y				OIC
TEST III, ADULT, Y	16306	10/11/1977		EGC
TEST III, ADULT, Y	16306	10/11/1977		WVCI
TEST III, ADULT, Y	16306	10/11/1977		BFC
TEST III, ADULT, Y	16306	10/11/1977		PMCAK
TEST III, ADULT, Y	16306	10/11/1977		LVR
TEST III, ADULT, Y	16306	10/11/1977		RAPC
TEST III, ADULT, Y	16306	10/11/1977		OUI
TEST III, ADULT, Y	16306	10/11/1977		UOAT

Linked set of records – collapsed (notice the double person icon)

Unlinked Records on the same patient (notice the single person icon)

These unlinked records should be linked with the set of linked records to create a complete record

Same patient with all records linked:

TEST III, ADULT, Y				OIC
TEST III, ADULT, Y	16306	10/11/1977		OIC
TEST III, ADULT, Y	16306	10/11/1977		EGC
TEST III, ADULT, Y	16306	10/11/1977		WVCI
TEST III, ADULT, Y	16306	10/11/1977		SEUCAK
TEST III, ADULT, Y	16306	10/11/1977		UOAT
TEST III, ADULT, Y	16306	10/11/1977		OUI
TEST III, ADULT, Y	16306	10/11/1977		RAPC
TEST III, ADULT, Y	16306	10/11/1977		LVR
TEST III, ADULT, Y	16306	10/11/1977		PMCAK
TEST III, ADULT, Y	16306	10/11/1977		BFC
TEST III, ADULT, Y	16306	10/11/1977		BAH

“Exam Management Options” noted in Exam Lookup are available in Patient Lookup.

Note: Cancelled/X-Status exams are not displayed in Patient Lookup. Exam Lookup must be used to see cancelled exams.

Exception Lookup

Exception Lookup displays studies that are not attached to an order.

Exceptions are caused by missing accession or MRN or a mismatch between Accession/MRN/Org.

Exceptions can be studies from outside facilities; either from CD upload or pushed via an Image Transfer.

Exception Lookup is used to Resolve Exceptions, attaching the images to an order.

See “ISP-Resolving Exceptions.pdf” for instructions on Resolving Exceptions.

“Exception Date/Time” date range is always applicable regardless of search criteria.

“Exception Date/Time” is the date/time that the exam was sent to PACS.

Selecting “All” is helpful when searching for an exception study with an unknown ‘send date’.

Exam Management Options

Important Note: Not all options are available if the study is open in the viewer

Resolve Exception	Resolve Exception – Attach the study to an order
Delete Exception Study	Delete Exception – Removes the study from PACS entirely (No recovery option)
Export via DICOM	Export via DICOM – Push the study to another PACS or DICOM device
Cache Exam	Cache Exam – Caches the study to the local device

A Relevant Prior Exam can be created with Resolve Exception. No order needs to be created in RIS for outside relevant priors.

See “ISP-CreateExamExceptionHandler.pdf” for instructions on creating a relevant prior exam from an exception study.

Very Important Note: When a study is detached from an exam, the Exception generated will have the attributes of the exam it was just detached from. It does not revert to original details.

Example: An Exception on ‘Patient A’ is accidentally resolved to ‘Patient B’. The study is detached from ‘Patient B’ and becomes an Exception again but has details from the exam details of the ‘Patient B’ exam it was just attached to.

Sorting the Exception list by ‘Exception Date/Time’ chronologically newest to oldest, for ‘Today’, will show the most recently created Exceptions on top. This is very helpful when trying to find a recently detached study in Exceptions Lookup.

iQuery – DICOM Query/Retrieve

iQuery is used to perform DICOM Query/Retrieve against other PACS to look for and fetch relevant priors.

Only organizations that have agreements with RAPC are configured to allow DICOM Q/R.

Exams retrieved will be Exceptions and can be Resolved if necessary.

Note: iQuery is a convenience and not a guaranteed functionality as DICOM Q/R is finicky and prone to issues. It involves our PACS interacting with another PACS not in our administration. Issues and failures are not able to be immediately resolved. If issues arise, call the facility and have them push the study.

Searching

The only search criteria are MRN/PID or Name.

Date of service, DOB, and accession are not available search criteria.

Do not include a space after the comma separating the Last,First names. Even though the returned entries display a space, the search is two separate fields, adding a space will cause searches to fail.

Select one PACS/Archive to search. Do not search 'All' as any issue with any PACS/Archive will cause the entire search to fail.

Matches to your search will be returned collapsed to the patient level:

	▲ Patient Name	MRN	Archive
	test,wing		PeaceHealth iSite
+	TEST, Wingding	21005517	PeaceHealth iSite
+	TEST, Wingding, A	02229217	PeaceHealth iSite
+	TEST, Wingding, A	D0001937743	PeaceHealth iSite
+	TEST, Wingding, A	D0001982403	PeaceHealth iSite

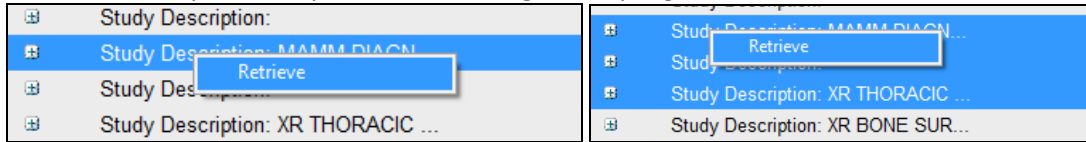
Expand a record by clicking the + icon at the beginning of the line. There will be slight pause while the query for studies within the record is performed. Studies will be listed chronologically with the oldest on top:

	▲ Patient Name	MRN	Archive	Study Date Time
	test,wing		PeaceHealth iSite	
+	TEST, Wingding	21005517	PeaceHealth iSite	
+	TEST, Wingding, A	02229217	PeaceHealth iSite	
+	Study Description: TEST MRC...			01/29/2007 14:25:32
+	Study Description:			05/04/2007 07:42:55
+	Study Description:			08/02/2007 14:35:04
+	Study Description:			08/10/2007 12:54:19
+	Study Description:			08/10/2007 12:54:49
+	Study Description: TEST			12/09/2007 19:18:07
+	Study Description:			12/27/2007 18:28:50
+	Study Description: MAMM DI...			01/24/2008 11:21:20
+	Study Description:			02/05/2008 09:01:37
+	Study Description: XR THORA...			03/27/2008 12:39:27
+	Study Description: XR BONE ...			03/27/2008 12:44:52
+	Study Description:			03/27/2008 12:48:21
+	Study Description:			10/08/2008 15:14:01
+	Study Description:			11/10/2008 12:42:29
+	Study Description:			12/09/2008 13:15:12
+	Study Description:			02/26/2009 11:48:54

Important Note: iQuery only displays 50 exams. Since the returned results are the oldest, if a patient has more than 50 exams, iQuery will not display the most recent. This issue has been reported to Philips support.

Retrieving studies

Select one study, or multiple studies holding Ctrl key, right click, and select 'Retrieve'.



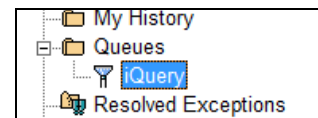
The "iQuery Confirmation" dialog appears.

You may change the 'Priority' to "Stat" in the event there are iExport jobs pending that could delay the retrieval. Click 'Ok' to execute the retrieval.

'Notification by email in case of error' does not work.

Retrieval Status

Expand the "Queues" Folder in the folder list and select 'iQuery'.



Status	Patient Name	MRN
All		
Completed	[REDACTED]	02931558
Completed	[REDACTED]	02931558
Completed	TEST, Wingding, A	02229217
Completed	[REDACTED]	4979

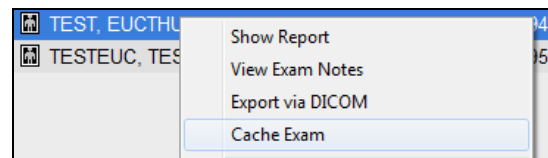
Studies retrieved will be in the Exceptions Lookup. Exams can be created with the exception to create a prior exam on a patient, please see "ISP-CreateExamExceptionHandler.pdf" for details on creating exams in Exception Handler.

Local Exam Cache

Local Exam Cache allows users on slow connections to initiate a temporary storage of the study data on the local hard drive of the user's computer. A user can initiate the caching of a study, the study is forcibly retrieved rather than 'stream the study as it is viewed', which is the standard Philips process.

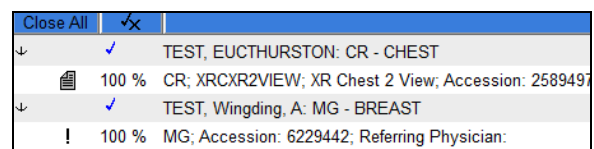
Caching

Right click on an exam on any list and select 'Cache Exam'



The exam will appear in the 'Local Exam Cache' Folder.

Exams must be launched for display from the 'Local Exam Cache' Folder.



Please reference the Intellispace Help Files for details on configuring the Local Exam Cache preferences.

Local Export – Media Creator

- Local Export is used to create copies of studies on CD/DVD or Local Hard Drives or Flash Drives.
- Studies can be made anonymous for presentations or research. Anonymous names are from a dictionary and may be perceived as ‘real patients, but they are not.
- The Intellispace viewer is included when ‘Philips Proprietary Format’ is created.
- The studies can be written as DICOM if the study will need to be uploaded to another PACS.
- Both DICOM and ‘Philips Proprietary Format’ can be written if sufficient space is available on the media.

Please see “ISP-Local Export-CD Creator.pdf” for details on creating media.

My Filters

- “My Filters” are user created filters that display exam lists per the criteria configured by the user.
- Examples of commonly used filter criteria are: Organization, Modality, Performing Resource, Referring Physician, Exam Status, and Subspecialty to name a few.
- The display of exam data columns can be controlled and sequenced per the user’s needs.
- Filters created can be placed on the ‘Shortcuts Bar’ for ease of access.
- Filters can be Exported and Imported (.xml files) to share with other users.
- Folders can be created to organize Filters.

Please see “ISP-Create User Filter.pdf” for details on creating User Filters.

My History

- “My History” displays the last 100 exams you viewed.
- Each instance of viewing a study is displayed with a ‘Viewed Date/Time’ value.
- The columns can be sequenced in a preferred order and retained session to session.
- Sorting is not retained session to session. “Exam View Date” newest to oldest is the default sort.

Queues

- Shows the iQuery Queue with the status of iQuery retrieval jobs.

Resolved Exceptions

- “Resolved Exceptions” shows a list of exceptions that were resolved.
- The list can be sorted, date range selected, user specified, and data refined to determine where an exception was resolved to.
- This is often used when troubleshooting issues with errant exception handling.

Study Lookup

- “Study Lookup” is used to search PACS for a study by the Study Unique Identifier (SUID).
- This feature is often used by PACS administrators when troubleshooting missing studies.

System Filters

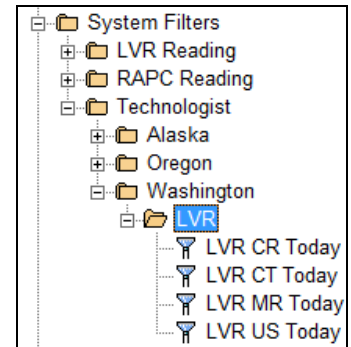
- “System Filters” are ‘Public Filters’ which are able to be viewed by any user.
- Radiologists Groups use System Filters to display the studies that need to be read.
- Technologists use System Filters to display their work for the day.
- System Filters are organized into folders

Each Radiologist group has their own folder that contains their filters.

Technologist Filters for Imaging Facilities are broken down by State and Facility.

Each Imaging Facility has a Folder to organize and create filters and folders within.

Folders can contain 25 subfolders and have four levels of folders within folders.



Personal Folders

- “Personal Folders” are user created and configured folders to store links to studies for future reference.
- A maximum of 500 study links can be in each folder.
- Folders in folders can be created four levels deep.
- A maximum of 25 folders can be created within a folder.

Creating a Folder

To create a folder, Right click on ‘Personal Folders’, select “Add new Folder”, and enter a name for the folder.

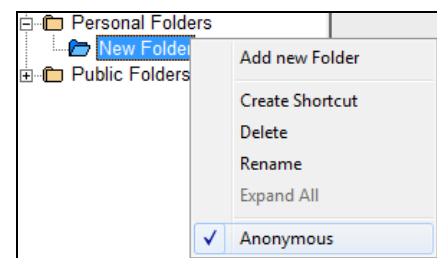
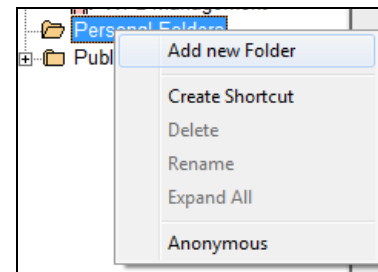
Shortcuts to folders can be placed in the ‘Shortcuts Bar’.

Contents of a folder can be made ‘Anonymous’ with a right click and selecting ‘Anonymous’.

Anonymous Names from the dictionary will be applied to the studies the folder contains.

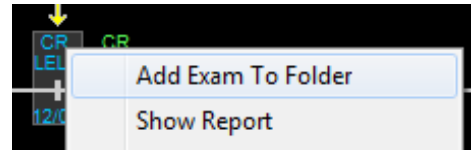
Anonymous Folders are well suited to teaching files and interesting studies as the real patient names are substituted with fictitious names.

Anonymous Folders can be reverted with a right-click and uncheck of ‘Anonymous’ and the studies will revert back to the real names.



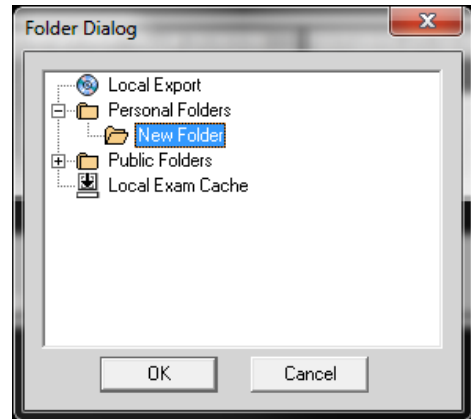
Adding Exams to Folders

Exams can be added to folders by dragging and dropping the exam into folders from any list.



Exams can be added to folders from the 'Timeline' in the viewer.

Right-click, select 'Add Exam to Folder', navigate through the folder structure to find the target folder, and click 'OK'



Exams cannot be dragged and dropped to folder shortcuts in the 'Shortcuts Bar'.

Public Folders

- All "Public Folders" are accessible to any user with Public Folder Access.
- There is no access control for specific folders.
- Each organization storing studies in the RAPC Community PACS will have a Public Folder to configure and manage to their needs.
- Public Folders are created and controlled the same as Personal Folders.
 - Maximum of 25 subfolder
 - Maximum of 4 layers of folders in folders
 - Maximum of 500 studies per folder