

# suiteDXT

## Instructions for Use

**NeoSoft, LLC**

**NEO**SOFT

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# Revision History

Rev	Date	Description of Change	Safety Related Update (Yes/No)
1	15JULY2022	Updated for the 5.1.0 product release. Brazilian Portuguese added. This IFU replaces the previous language/revision/part numbers: suiteDXT IFU - NS-03-039-0008, EN-Rev. 7 suiteDXT IFU - NS-03-039-0009, FR-Rev. 6 suiteDXT IFU - NS-03-039-0010, DE-Rev. 6 suiteDXT IFU - NS-03-039-0011, IT-Rev. 6 suiteDXT IFU - NS-03-039-0012, EL-Rev. 6 suiteDXT IFU - NS-03-040-0009, LT - Rev. 5 suiteDXT IFU - NS-03-040-0010, ES - Rev. 5 suiteDXT IFU - NS-03-040-0011, SV - Rev. 5 suiteDXT IFU - NS-03-040-0012, TR - Rev. 5 suiteDXT IFU - NS-03-040-0013, RO - Rev. 5 suiteDXT IFU - NS-03-040-0014, NL - Rev. 5 suiteDXT IFU - NS-03-040-0029, PT-PT - Rev. 4 suiteDXT IFU - NS-03-041-0008, ZH-CN - Rev. 2 suiteDXT IFU - NS-03-041-0010, HU - Rev. 3 suiteDXT IFU - NS-03-042-0008, JA - Rev. 1 suiteDXT IFU - NS-03-042-0009, VI - Rev. 1	No
2	April 21, 2023	Updated for the 5.1.1 product release. Estonian added. Moved regulatory information to Regulatory Addendum document.	No

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To view compliance information (Authorized Representative, Importer, Registration information) after launching the application, click "Help" or "About" from the main screen. Select the "Regulatory Information" option. The document will open in a pdf viewer.

# Table of Contents

Safety	1
Introduction	1
Intended Use	1
Indications for Use	1
Supported DICOM Image Formats	1
Terminology	2
Equipment Hazards	2
Cybersecurity	3
Getting Started	5
Main Screen Functions	5
Right Mouse Click Menu in Study Pane	6
Right Mouse Click Menu in Series Pane	6
Query/Retrieve Window	7
Right Mouse Click Menu in Query/Results Pane	8
Right Mouse Click Menu in Series Pane	8
Using suiteDXT	9
Launch an Application	9
Retrieve Study or Series from Remote Host	10
Previous Study Auto Retrieval	12
Send Study to Remote Host	14
Send Series to Remote Host	14
Study Pane Indicators	15
Send NeoSoft DICOM Files	15
Import Studies	15
Export Studies	16
Perform a Search	17
Create Folders	17
Anonymize a Study	18
Delete Protection	19
Delete a Study	19
Delete a Series	20
Delete Secondary Capture Series	20
About suiteDXT	21
Study Preprocessing	22
Configure Preprocessing	22
Using Preprocessing	23
Study Pane Indicators	24
Virtual Fellow®	25
Turning Virtual Fellow® On/Off	25
Image Preview Window	26
Data Export	27
Service and Support	29
DICOM Network Failure	29
Study Launch Error	30
Contact	30

# Safety

## Introduction

To assure efficient and safe use it is essential to read this safety section and all associated topics before attempting to use the software. It is important for you to read and understand the contents of this manual before attempting to use this product. You should periodically review the procedures and safety precautions.

The software is intended for use by trained and qualified personnel only.

suiteDXT software has an expected useful service life of 7 years from its original release date.

## Intended Use

suiteDXT is intended to allow users the ability to manage DICOM network communication, storage of supported DICOM images, importing of supported DICOM images from the local file system, perform study anonymization, and launching of related imaging applications. This software is intended to be a temporary storage location.

## Indications for Use

suiteDXT is intended to allow users the ability to import, export, anonymize DICOM images, and launch related imaging applications. This product has no diagnostic medical function or purpose.

## Supported DICOM Image Formats

suiteDXT supports the following DICOM format; MR and Enhanced MR.




**NOTE:** suiteDXT supports JPEG Lossless compression, however subsets of this format are not supported.

Refer to the suiteDXT DICOM Conformance Statement manual for further detail on supported formats.

# Terminology

The terms danger, warning, and caution are used throughout this manual to point out hazards and to designate a degree or level of seriousness. Hazard is defined as a source of potential injury to a person. Familiarize yourself with the terminology descriptions listed in the following table:

Table 1: Safety Terminology

Graphic	Definition
 <b>DANGER:</b>	Danger is used to identify conditions or actions for which a specific hazard is known to exist which <u>will</u> cause severe personal injury, death, or substantial property damage if the instructions are ignored.
 <b>WARNING:</b>	Warning is used to identify conditions or actions for which a specific hazard is known to exist which <u>may</u> cause severe personal injury, death, or substantial property damage if the instructions are ignored.
 <b>CAUTION:</b>	Caution is used to identify conditions or actions for which a potential hazard is known to exist that will or <u>can</u> cause minor personal injury or property damage if the instructions are ignored.

## Equipment Hazards



**CAUTION:** Using equipment that is damaged or has been compromised can put the patient at risk by delaying diagnosis. Make sure that equipment is in proper working order.



**CAUTION:** Applications run on equipment that includes one or more hard disk drives, which may hold medical data related to patients. In some countries, such equipment may be subject to regulations concerning the processing of personal data and free circulation of such data. Release of personal data may result in legal action depending on the applicable regulatory body. It is strongly recommended that access to patient files be protected. The user is responsible for understanding the laws regulating patient information.

# Cybersecurity

NeoSoft takes the following cybersecurity precautions in the design and implementation of its software:

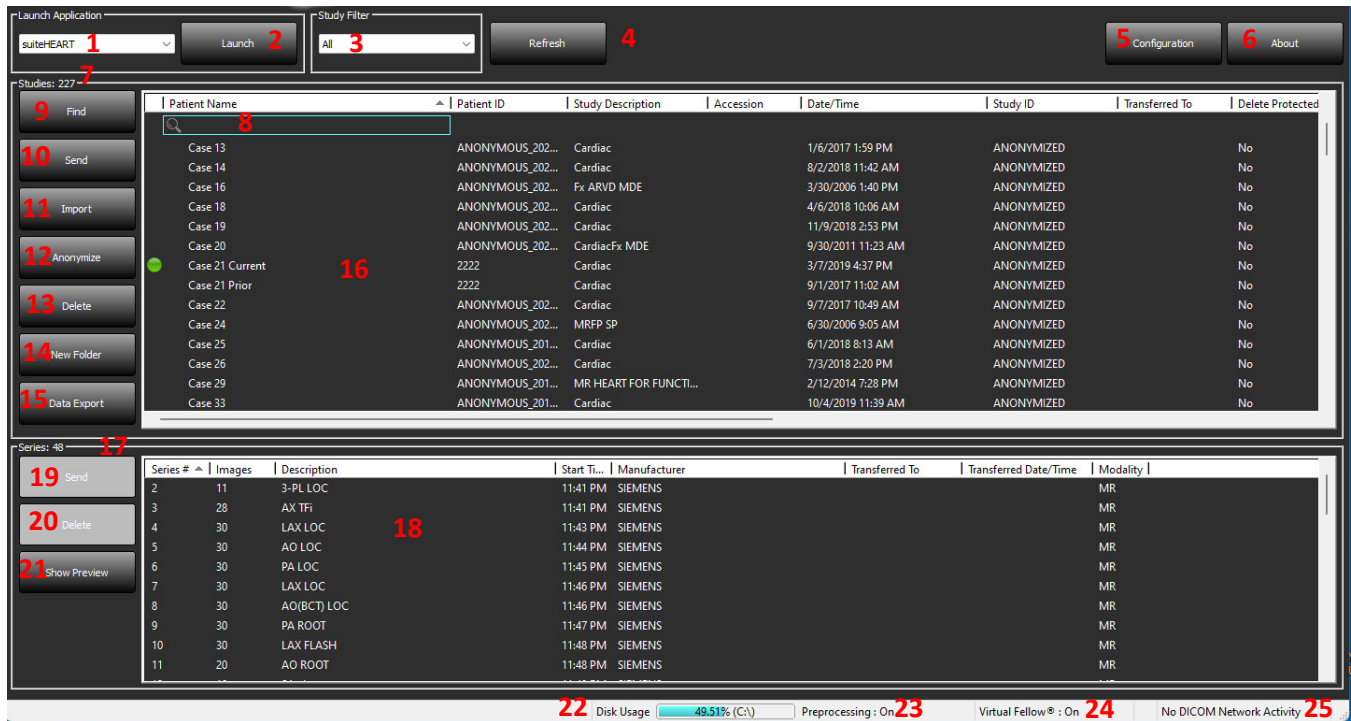
- NeoSoft software administration of certain functions, (user permissions, database rebuild, etc.) may only be performed by trained administrative users.
- NeoSoft software is regularly analyzed for known vulnerabilities listed in the NIST database and patched as needed.
- NeoSoft software uses the DICOM standard to store patient data and to communicate patient data over the network via a user configured port.
- NeoSoft software integrity prior to installation is md5 sum verified to ensure the software has been delivered fully intact.
- NeoSoft software has been verified for use on hardware with encryption enabled.
- NeoSoft mitigates cybersecurity risks by design following the ISO 14971 standard.
- NeoSoft employees receive training in Cybersecurity and Protection of Health Information.
- NeoSoft does not receive or manage protected health information unless specifically granted access by a customer for troubleshooting.
- NeoSoft software has undergone penetration testing.
- Automatic logoff (ALOF) - suiteHEART may be configured to close at a predetermined time of non-use. suiteDXT remains open until closed by a user or system is restarted.
- Audit controls (AUDT) - suiteHEART and suiteDXT produce timestamped logs which include software events and user information
- Authorization (AUTH) - In suiteDXT, an administrator may view and configure access control for other users. Depending on how access is configured, users may only view certain studies in suiteDXT and suiteHEART. For example, User A may only access study information from location A and User B may access study information from location A and B.
- Node authentication (NAUT) - suiteDXT may be configured to communicate with other DICOM devices by configuring the AE title, IP address, and DICOM port. suiteHEART does not utilize networking by default but may be configured to send data to other systems via a configuration change, identifying the other system(s) by AE Title, IP Address, and port. Both products may be used without networking by importing local study data from the filesystem, instead of sending or receiving study data via a network.
- Person authentication (PAUT) - suiteHEART and suiteDXT may be configured to allow user authentication, user password controls, and configuration of available patient data specific to logged in user. User information is logged.
- Connectivity capabilities (CONN) - suiteDXT may connect to other configured DICOM partners in order to transfer data. suiteHEART may be configured to send data to other systems via a configuration change, identifying the other system(s) by AE Title, IP Address, and port.
- Physical locks (PLOK) - N/A. NeoSoft recommends the use of Network security products to protect.
- System and application hardening (SAHD) - N/A. NeoSoft recommends the use of Network security products to protect.
- Health data de-identification (DIDT) - suiteDXT includes a "Anonymize" feature to de-identify patient studies.
- Health data integrity and authenticity (IGAUA) - suiteDXT includes status messages for import / transfer of study information resulting in confirmation of successful import or transfer and if errors have occurred. suiteHEART alerts the user via a popup if expected input data is missing or corrupted.
- Data backup and disaster recovery (DTBK) - Data generated by suiteHEART is recommended to be sent to PACS for long term storage / backup. suiteDXT includes a database rebuild tool should local software be corrupted.
- Health data storage confidentiality (STCF) - suiteHEART and suiteDXT are intended to be used by qualified personnel and may be secured by username and password at the discretion of the user.
- Transmission confidentiality (TXCF) - Any transfer of data is in the DICOM format.
- Transmission integrity (TXIG) - Any transfer of data is in the DICOM format.
- Cyber security product upgrades (CSUP) - any installs or upgrades would be in the form of a new software release allowed and applied at the discretion of the customer.
- Software bill of materials (SBoM) - The suiteHEART "About" screen lists third party software. suiteDXT 3rd party software information may be found in the suiteDXT installation directory folder "3pinfo."
- Roadmap for third-party components in device life cycle (RDMP) - NeoSoft evaluates third party software regularly and may update suiteHEART and / or suiteDXT should the need arise.
- Security guidance (SGUD) - NeoSoft recommends the use of anti-virus software.

- Network Security Feature Configuration (CNFS)- The product's ability to configure network security features based on user needs- Both suiteHEART and suiteDXT may be used without networking. However, if configured for network transfer, only AE Title, IP address, and Port information is needed. No further security is required / recommended.
- Emergency access (EMRG) - N/A. suiteHEART and suiteDXT are not used in emergent situations.
- Remote service (RMOT) - service may be performed remotely via the customer's prescribed remote access method (such as remote desktop). suiteHEART and suiteDXT do not include remote access themselves.
- Malware detection/protection (MLDP) - N/A. suiteHEART and suiteDXT do not include malware detection or protection. NeoSoft recommends the use of Network security products to protect.

# Getting Started

## Main Screen Functions

FIGURE 1. Main Screen



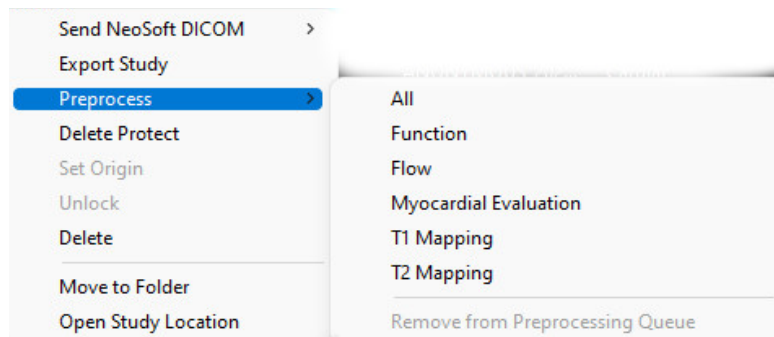
1. **Launch Application pull-down Menu** - lists configured applications.
2. **Launch** - launches configured NeoSoft, LLC applications.
3. **Study Filter** - defines the date range for which studies are displayed in the study list.
4. **Refresh** - updates the view based on the user selected criteria.
5. **Configuration** - opens Configuration Window.
6. **About** - displays suiteDXT software version/links to Instructions for Use, DICOM Conformance Statement, Regulatory Information and Archive Log Files for support.
7. **Studies Headline** - displays number of studies stored on local host.
8. **Search Field** - automatically search under any column, with or without being sorted.
9. **Find** - opens Query/Retrieve Window.
10. **Send** - pushes local study to remote host. (See the Installation manual to configure remote hosts.)
11. **Import** - allows study information to be imported from the file system, CD, DVD or USB media.
12. **Anonymize** - creates a new study with patient specific data removed.
13. **Delete** - removes study from suiteDXT study list and deletes DICOM data from local host.
14. **New Folder** - creates a folder to organize studies.
15. **Data Export** - batch export of results as an Excel spreadsheet.
16. **Study Pane** - shows study information for studies stored on local host.
  - Column titles can be reordered by clicking and dragging the title of the column and sorted by clicking the column title.



17. **Series Headline** - displays number of series in a selected study.
18. **Series Pane** - shows series information for selected study.
  - Column titles can be reordered by clicking and dragging the title of the column and sorted by clicking the column title.
19. **Send** - pushes local series to remote host. (See the Installation manual to configure remote hosts.)
20. **Delete** - removes a series from the selected study and deletes DICOM data.
21. **Show Preview** - previews suiteHEART Virtual Fellow®, CAS cine, and CAS report series.
22. **Disk Usage Indicator** - shows percentage of total local disk space used for the image data.
23. **Preprocessing Status** - indicates the current configuration status of preprocessing (On/Off).
24. **Virtual Fellow® Status Indicator** - indicates the current configuration status of Virtual Fellow® (On/Off).
25. **Network Status** - shows if suiteDXT is currently transferring DICOM data over the network.

## Right Mouse Click Menu in Study Pane

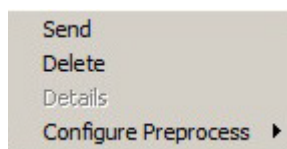
FIGURE 2. Right Mouse Click Menu



- **Send NeoSoft DICOM** - only push files created by the software from the local host to the remote host.
- **Export Study** - saves the study data, for a selected group of studies, in a compressed .zip file.
- **Preprocess** - preprocesses all configured series or only Function, Flow, Myocardial Evaluation, T1 Mapping and T2 Mapping; to remove the study from the queue, select “Remove from Preprocessing Queue.”
- **Delete Protect** - set Delete Protect for a study (Yes/No)
- **Set Origin** - used by your network administrator to set the AE title for access control.
- **Unlock** - reset the lock and open a locked study after an unexpected shutdown.
- **Delete** - removes study from suiteDXT study list and deletes DICOM data from local host.
- **Move to Folder** - move study to a created folder.
- **Open Study Location** - shows location of DICOM data on the local file system.

**NOTE:** Preprocess is not applicable to the NeoSoft CAKE™ application.

## Right Mouse Click Menu in Series Pane

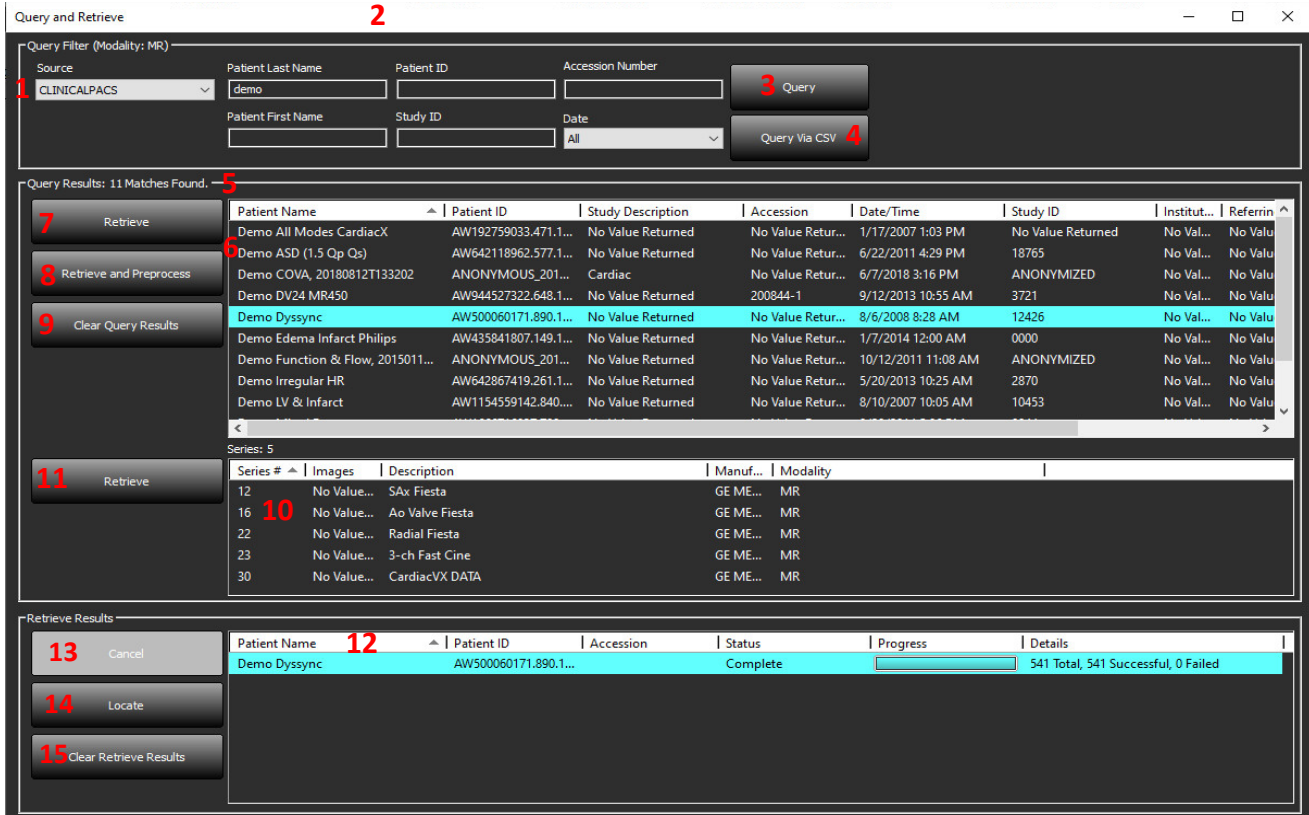


- **Send** - pushes local series to remote host.
- **Delete** - removes a series from the selected study and deletes DICOM data.
- **Details** - opens the series details window.
- **Configure Preprocess** - auto fills the series name for a Function, Flow, Myocardial Evaluation, T1 Mapping and T2 Mapping series.

**NOTE:** Configure Preprocess is not applicable to the NeoSoft CAKE™ application.

# Query/Retrieve Window

FIGURE 3. Query/Retrieve Window



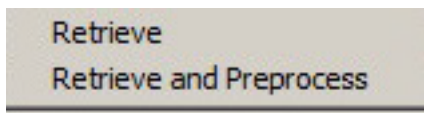
- Query Source Pull-down Menu** - displays configured remote devices available to query / retrieve.
- Query Filter** - can be used to search for specific studies by Patient First and Last Name, Patient ID, Study ID, Accession Number, and Date. The \* (asterisk) may be used as a wild card in any field (except date).
- Query** - executes query of remote device. If all fields are left blank, query will return all results.
- Query Via CSV** - executes query of remote device using a predefined CSV file.
- Query Results** - shows count of studies that match query criteria.
- Query Results Pane** - shows study information of queried remote device.
  - Column titles can be reordered by clicking and dragging the title of the column and sorted by clicking the column title.
- Retrieve** - executes retrieval of the selected study from remote device.
- Retrieve and Preprocess** - executes retrieval and preprocessing of the selected study from the remote device.
- Clear Query Results** - clears query results in study pane.
- Series Pane** - shows series information of highlighted study in study pane.
  - Column titles can be reordered by clicking and dragging the title of the column and sorted by clicking the column title.
- Retrieve** - executes retrieval of the selected series from remote device.
- Transfer Status Pane** - shows current and completed retrieve actions.
  - Column titles can be reordered by clicking and dragging the title of the column.
- Cancel** - stops the transfer activity.
- Locate** - highlight retrieved study in the main UI study pane.
- Clear Retrieve Results** - clears transfer activity in the transfer pane for studies whose transfers have been completed.



CAUTION: Images that have transferred will remain local and show in the suiteDXT Main Screen, even though not all images for the study may have transferred.

## Right Mouse Click Menu in Query/Results Pane

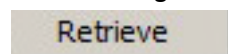
FIGURE 4. Right Mouse Click Menu



- **Retrieve** - executes retrieval of a study from a remote host.
- **Retrieve and Preprocess** - executes retrieval and preprocessing of the selected study from the remote host.

## Right Mouse Click Menu in Series Pane

FIGURE 5. Right Mouse Click Menu



- **Retrieve** - executes retrieval of series from a remote host.

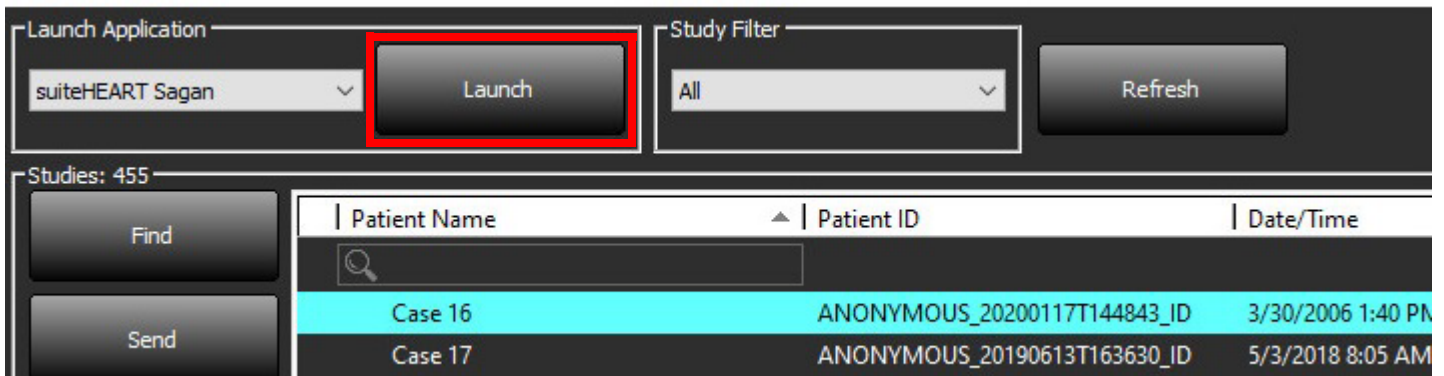
# Using suiteDXT

## Launch an Application

Applications can be added by following instructions in the Installation Manual.

1. Go to the Main Screen.
2. From the Launch Application drop-down menu, select the desired application.

**FIGURE 1. Launch Application**



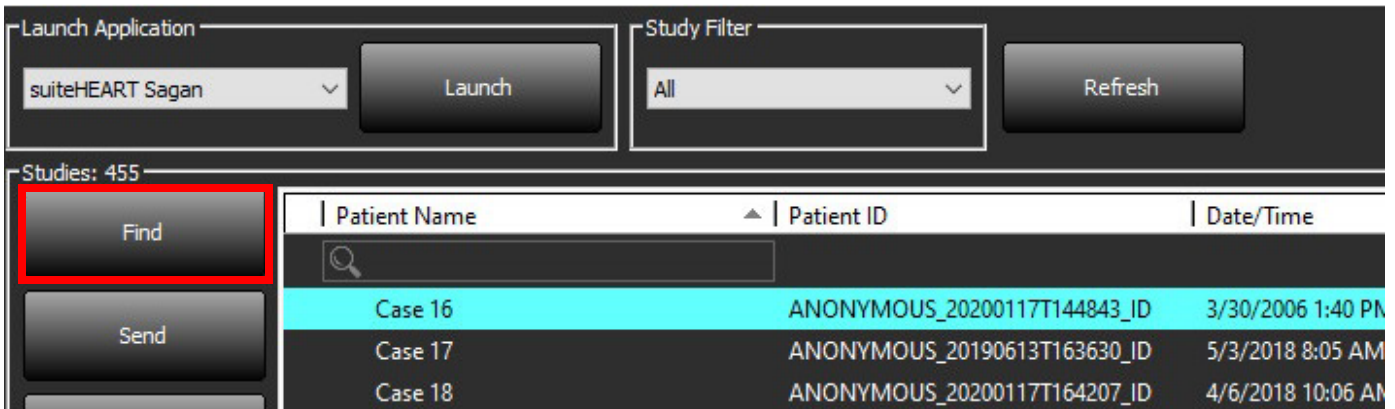
3. Select a study from the study list and do one of the following:
  - Select Launch.
  - Double click the study.

# Retrieve Study or Series from Remote Host

Remote hosts must already be configured to be accessible. For information on how to configure a remote host see the Installation Manual.

1. Select Find on the Main Screen.

**FIGURE 2. Find on Main Screen**



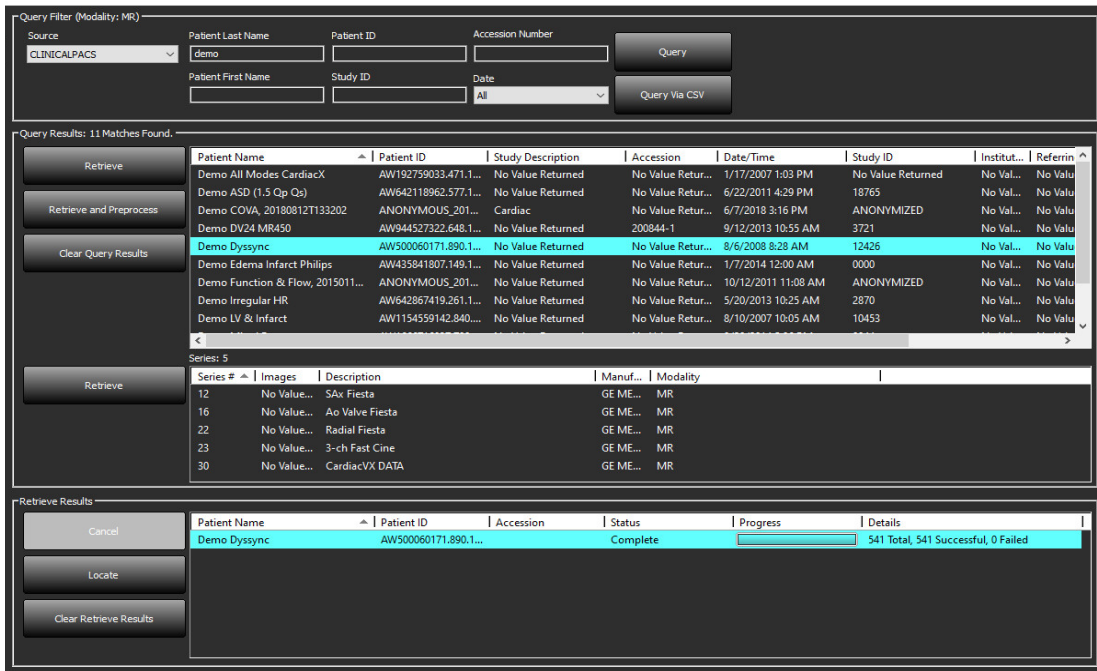
2. In the Query/Retrieve Window enter any study information criteria in the Query Filter area.

Filter options include:

- Patient Last Name
- Patient First Name
- Patient ID
- Study ID
- Accession Number
- Date Range

**NOTE:** The filter save selection is only available if requested from NeoSoft.

**FIGURE 3. Query/Retrieve Window**



3. From the Query Source pull-down menu select the remote host.
4. Select Query or Query Via CSV.
5. If performing a Query Via CSV select the CSV file.

Studies matching the criteria you entered or from the CSV file will populate the study list.

Clicking on a study will populate the series information list.

**NOTE:** To Query via CSV a CSV file must be created. The template to create a CSV file can be found at C:\Program-Data\NeoSoft, LLC\suiteDXT\Import\Import\_Template.csv

The CSV file must have the flowing fields:

Patient Last Name	Patient First Name	Patient ID	Study ID	Study Date YYYYmmdd	Accession Number
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6. Select a single or group of studies.
7. Select Retrieve below the study list or right mouse click and select Retrieve from the pop-up menu.
8. Perform preprocessing by selecting the Retrieve and Preprocess.
9. To retrieve by series, select the series and click the Retrieve below the series list.

Progress of the retrieval is shown in the Retrieve Results section at the bottom of the window. While at the bottom of the Main Screen, the status “No DICOM Network Activity” is changed to “DICOM Network Active.”

**NOTE:** In the event that the study does not transfer in its entirety, the progress indicator will turn red.

## Previous Study Auto Retrieval

Remote hosts must already be configured to be accessible. For information on how to configure a remote host see the Installation Manual. Configuring the auto retrieve will allow for prior studies to be automatically retrieved into the DXT database from a remote host such as PACS.

### To configure from where the prior studies are to be retrieved:

**NOTE:** Only one remote DICOM host can be configured.

1. On the Main Screen, select Configuration.
2. In the DICOM Destination section, highlight the PACS system and click Edit.
3. Check PACS.
4. Select the number of prior studies to be retrieved using the Max Priors pull-down. Type in terms for the Prior Study Description text field. These are terms used to identify the study to be retrieved by using the Study Description field. The default terms are CARDIAC^HEART.
5. Click Update.
6. Click Apply and Close.

DICOM Device Configuration

Description: PACS1  Enabled

AE Title: PACS1  Store to device

Address: 172.16.0.3  Query device

Port: 4006  Preprocessing

PACS  Enable SSL

Max Priors: 1  Auto Retrieve Prior Studies

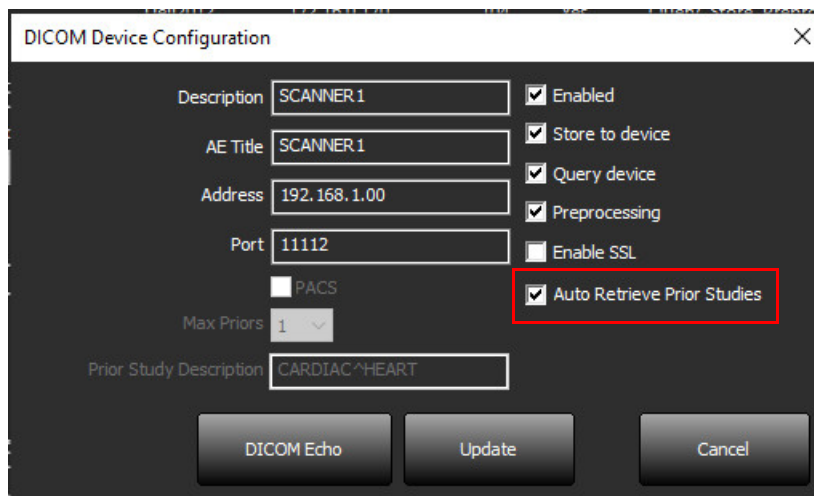
Prior Study Description: CARDIAC^HEART

DICOM Echo Update Cancel

**To configure which studies generate prior study retrievals:**

1. On the Main Screen, select Configuration.
2. In the DICOM Destinations section, select which remote hosts should automatically generate prior study retrieval(s) based on study arrivals from these destinations by highlighting the destination and clicking Edit.
3. Check Auto Retrieve Prior Studies.
4. Click Update.
5. Click Apply and Close.

**NOTE:** If the push preprocessing is enabled for that DICOM destination the study will be preprocessed if no suiteHEART data is present.



The image shows a 'DICOM Device Configuration' dialog box with the following fields and options:

- Description: SCANNER1
- AE Title: SCANNER1
- Address: 192.168.1.00
- Port: 11112
- Max Priors: 1
- Prior Study Description: CARDIAC/HEART
- Enabled:
- Store to device:
- Query device:
- Preprocessing:
- Enable SSL:
- Auto Retrieve Prior Studies:  (highlighted with a red box)

Buttons at the bottom: DICOM Echo, Update, Cancel.



## Send Study to Remote Host

Remote hosts must already be configured to be accessible. For information on how to configure a remote host see the Installation Manual.

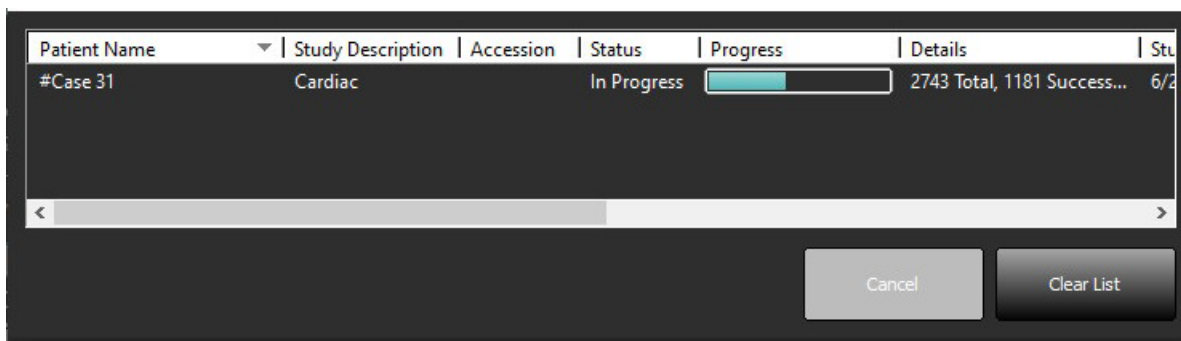
**NOTE:** suiteDXT supports JPEG Lossless compression, however subsets of this format are not supported.

1. Highlight the study to send.
2. Select Send or right mouse click and choose Send Study from the pop-up menu.
3. Select the destination to which to send.
4. Select Send on the pop-up window.

The DICOM Send window will display showing progress of the transfer. This window can be closed, using the X in the upper right corner, while the transfer runs in the background.

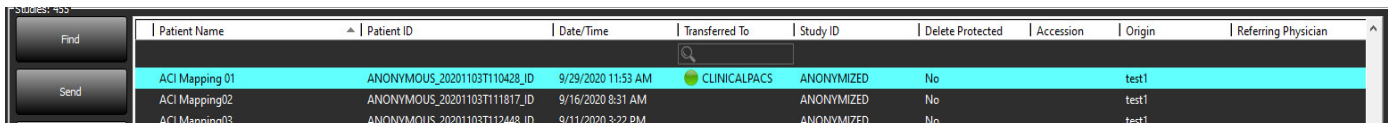
To check the progress once the DICOM Send window is closed, select Send, then select Status.

**FIGURE 4. DICOM Send Window**



5. Studies that have been transferred successfully will show the Remote Host in the Transferred To column on the main study listing.

**FIGURE 5. Transferred To**



The screenshot shows a table with columns: Patient Name, Patient ID, Date/Time, Transferred To, Study ID, Delete Protected, Accession, Origin, and Referring Physician. The first row is highlighted in blue and shows 'ACI Mapping01', 'ANONYMOUS\_20201103T110428\_ID', '9/29/2020 11:53 AM', 'CLINICALPACS', 'ANONYMIZED', 'No', and 'test1'.

Patient Name	Patient ID	Date/Time	Transferred To	Study ID	Delete Protected	Accession	Origin	Referring Physician
ACI Mapping01	ANONYMOUS_20201103T110428_ID	9/29/2020 11:53 AM	CLINICALPACS	ANONYMIZED	No		test1	
ACI Mapping02	ANONYMOUS_20201103T111817_ID	9/16/2020 8:31 AM		ANONYMIZED	No		test1	
ACI Mapping03	ANONYMOUS_20201103T112448_ID	9/11/2020 3:22 PM		ANONYMIZED	No		test1	

## Send Series to Remote Host

1. Highlight the study.
2. Highlight the required series.
3. Select Send or right mouse click and choose Send from the pop-up menu.
4. Select the destination to which to send.
5. Select Send on the pop-up window.
6. Series that have been transferred successfully will show the Remote Host in the Transferred To column in the series pane.

**FIGURE 6. Transfer Series Pane**

Series: 25		Series #	Images	Description	Modality	Manufacturer	Transferred To	Transferred Date
Send		101	50	Survey	MR	Philips Healthcare	CLINICALPACS	10/8/2020 12:52:32 PM
		201	30	SSFP_AX	MR	Philips Healthcare	CLINICALPACS	10/8/2020 12:52:32 PM
Delete		301	30	BB_SSh_BH	MR	Philips Healthcare	CLINICALPACS	10/8/2020 12:52:32 PM

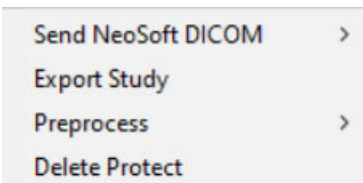
## Study Pane Indicators

Indicator	Status
Light blue circle	Incomplete transfer of images or images have been transferred to multiple remote hosts.
Green circle	All images in the study have been transferred to a single remote host.

## Send NeoSoft DICOM Files

Files that are created by the software can be networked separately.

1. Highlight the study.
2. Right mouse click and select Send NeoSoft DICOM.
3. Select the DICOM destination.



## Import Studies

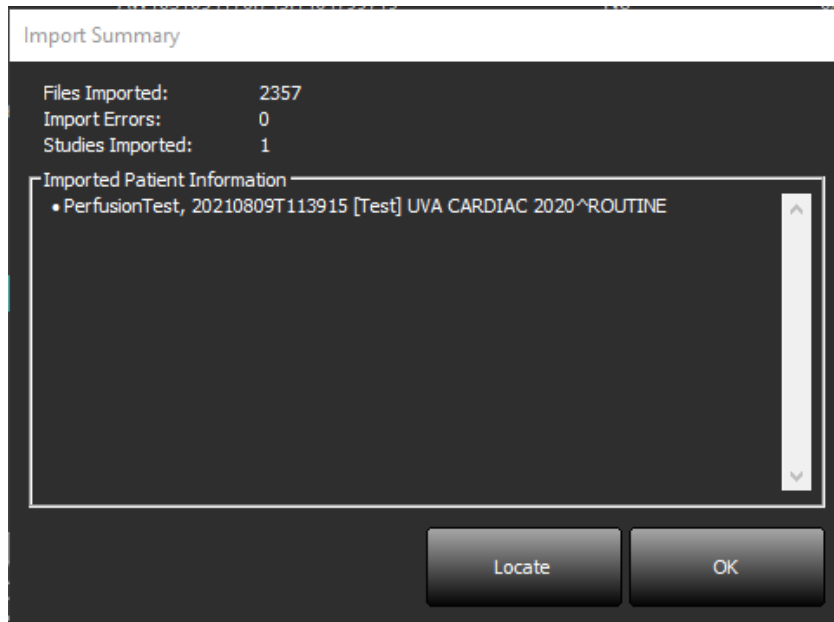
Studies containing DICOM data can be imported from the local file system, mapped drives, CD, DVD and USB; including the importing of zipped folders. After inserting one of these media containing the desired DICOM data, follow the steps below.

**NOTE:** suiteDXT supports JPEG Lossless compression, however subsets of this format are not supported.

1. On the Main Screen, select Import.
2. Navigate to the location containing the DICOM data.
3. Click Select.

The Import File Progress window displays the DICOM file import status. The Import Summary displays the total number of files found, files imported, study count, and study imported information.

The newly imported study(s) are added to the study list of suiteDXT's Main Screen. If a folder has been selected, the study will import into that folder.



Example data provided can be imported into suiteDXT.

**NOTE:** If the study does not import completely, click the Retry on the Import Summary screen.

## Export Studies

Studies that have been analyzed can be exported from the main study directory as a .zip file.

1. Customize the file name by clicking Configuration on the Main Screen.
2. In the Export File Name Patter section, select the desired file attributes as shown in Figure 7.
3. Click Apply and Close.
4. Highlight the study or select a group of studies using Ctrl +Shift.
5. Right mouse click and select Export.
6. Select the appropriate export location.
7. Select Save.


**FIGURE 7. Export Filename Pattern**



## Perform a Search

Each column can be automatically searched with or without being sorted. The search is not case sensitive and will automatically bring results to the top of the list.

Patient Name	Patient ID	Date/Time	Transferred To	Study ID	Delete Protected	Accession	Origin
SH Case 10	AW2091044406.251.1412004870	6/22/2011 4:29 PM		18765	No		tritonrc
SH Case 14, 20140929T165736	ANONYMOUS_20140929T165736_ID	8/10/2007 10:05 AM		ANONYMIZED	No		tritonrc

- After obtaining the first result, pressing the ENTER key on the keyboard or the arrow in the search field will advance to the next result.
- Simultaneously pressing ENTER and the SHIFT key on the keyboard will select the previous result.
- Pressing the ENTER key, with or without the SHIFT key, on the keyboard when the end of the results are reached will return you to the start of the search results.
- The search field will be cleared after pressing .

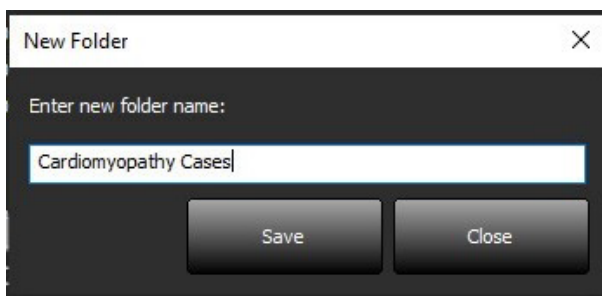
**NOTE:** For the search to include folders in the study listing the folders must be expanded. Right mouse click on the folder and select Expand All.

## Create Folders

Folders can be created to organize studies at the study listing level. They will be grouped at the top of the study list.

1. Click New Folder.
2. Type in a folder name and click Save.

The folder will now be in the study listing.



New Folder

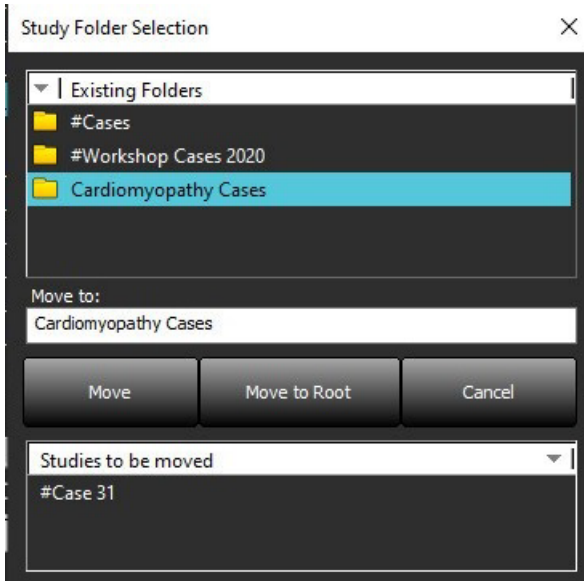
Enter new folder name:

Cardiomyopathy Cases

Save Close

3. Move a study to the folder by right mouse clicking on the study and selecting Move to Folder.
4. When the Folder dialog box opens, select the correct folder into which to move the study.

**FIGURE 8. Folder Selections**



5. Move the study back to the main directory by clicking on the study and selecting Move to Folder.
6. Click Move to Root.

## Anonymize a Study



**CAUTION:** Anonymizing a study does not remove patient data from the images that were created from other post-processing software.



**CAUTION:** The anonymized study should only be used with NeoSoft, LLC applications.

1. On the Main Screen, select the study to anonymize.
2. Select Anonymize.
3. Fill in the anonymization fields shown in Figure 9.
4. To not include the NeoSoft secondary capture series, deselect the option.
5. Click Anonymize.

**FIGURE 9. Anonymize Study**

A progress indicator will display. The newly anonymized study will appear in the study list.

6. Click “OK” on the Anonymize Study pop-up.

**NOTE:** The anonymize function is available for NeoSoft support purposes.

## Delete Protection

To set delete protection for a study, right mouse click on the study and select Delete Protect. The indicator column will display “Yes” for studies that are protected and “No” for those that are not, as shown in Figure 10. To turn off delete protection right mouse click and select Remove Delete Protection.

**FIGURE 10. Delete Protect Column Indicator**

Patient Name	Patient ID	Date/Time	Transferred To	Delete Protected	Study ID
SH Case 21	AW712995506.906.1442511336	9/12/2013 10:55 AM		Yes	3721
SH Case 22	AW1908138422.466.1442956310	12/16/2013 10:28 AM		Yes	MCARD
SH Case 23, 20150819T112311	ANONYMOUS_20150819T112311_ID	1/13/2014 12:00 AM	test1	No	ANONYMIZED
SH Case 24, 20151028T104232	ANONYMOUS_20151028T104232_ID	11/6/2014 11:20 AM		No	ANONYMIZED

## Delete a Study



**CAUTION:** Deleting data from the file system, including files for the current open study, could cause loss of analysis/image data.

From the Main Screen, select the study to be deleted and select Delete or right mouse click and select Delete from the pop-up menu. Using “Shift-Click” or “Ctrl-Click” selects multiple studies for deletion from the list.

## Delete a Series

From the Main Screen, select the study then the series and select Delete. Using “Shift-Click” or “Ctrl-Click” selects multiple series from the list.

**NOTE:** It is recommended to perform any series deletion prior to starting any analysis.

## Delete Secondary Capture Series

Secondary capture series identified as NeoSoft, LLC as the manufacturer can be deleted.



**CAUTION:** The deletion of the suiteHEART data series will remove all analysis results.

1. Select the study and locate the suiteHEART DATA series.
2. Click on the series number or + icon to open the Series Details window.

**FIGURE 11. Series Select**

Series #	Images	Description	Start Time	Manufacturer	Transferred To	Transferred Date/Time	Modality
3200	9	[Loc:-63.99] + C SMARTIMap FIESTA	10:50 AM	GE MEDICAL SYSTEMS			MR
3210	9	[Loc:-77.54] + C SMARTIMap FIESTA	10:50 AM	GE MEDICAL SYSTEMS			MR
3220	9	[Loc:-91.09] + C SMARTIMap FIESTA	10:50 AM	GE MEDICAL SYSTEMS			MR
3500	14	MAG:2D PSMDE	10:55 AM	GE MEDICAL SYSTEMS			MR
3600	3	MAG:2D PSMDE	11:02 AM	GE MEDICAL SYSTEMS			MR
3700	3	MAG:2D PSMDE	11:03 AM	GE MEDICAL SYSTEMS			MR
3701	1	CAS_SCPT_SERIES AUTO_T1_MOLLI_1		NeoSoft LLC			MR
3702	1	CAS_SCPT_SERIES AUTO_T1_SMART_1		NeoSoft LLC			MR
3703	1	CAS_SCPT_SERIES AUTO_T1_SMART_2		NeoSoft LLC			MR
+ 3713	2	suiteHEART DATA		NeoSoft LLC			MR
3716	20	SAX Fiesta		NeoSoft LLC			MR
3717	1	PSMDE		NeoSoft LLC			MR

3. Select the appropriate row, click Delete. To close, click on the X (upper right hand corner of the window) or click **Close**.

**FIGURE 12. Series Details**

Series Details ×

Series Details  
Description:[suiteHEART DATA] Number:[3713] Modality:[MR] Manufacturer:[NeoSoft LLC]

SOP Instance UID	Date/Time	Number
1.2.826.0.1.3680043.9.1400.2.1653576577.400	5/26/2022 9:49 AM	1
1.2.826.0.1.3680043.9.1400.5.1653576676.605	5/26/2022 9:51 AM	2

Delete Close

## About suiteDXT

Selecting About on the Main Screen will display the software version of suiteDXT

Click the “Instructions for Use” link to launch the Instructions for Use (IFU).

Click the “DICOM Conformance Statement” link to launch the DICOM Conformance Statement document.

Click the “Regulatory Information” link to launch Regulatory information.

**NOTE:** A PDF reader is required to open the documents.

**NOTE:** Click “Archive log files for Support” to create a file to be used for troubleshooting by Service.

**FIGURE 13. About Screen**





# Study Preprocessing

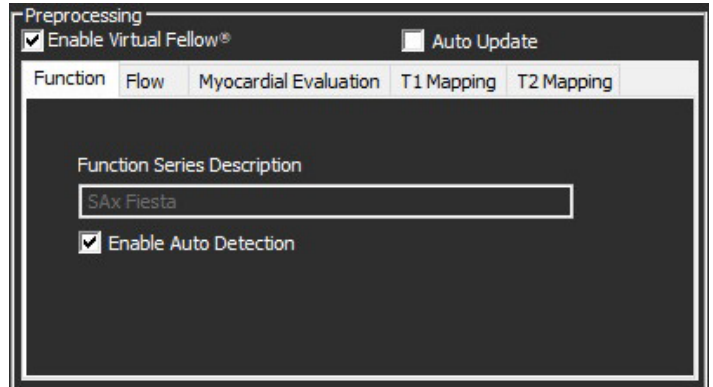
**NOTE:** This section is not applicable to the NeoSoft CAKE™ application.

The Study Preprocessing feature is only available with the suiteHEART® Software application. This feature allows for the preprocessing of Function, Flow, Myocardial Evaluation, T1 Mapping and T2 Mapping. Preprocessing can be used in conjunction with the Virtual Fellow® feature.

**NOTE:** Preprocessing will be disabled if the hardware does not meet the minimum system requirements.

## Configure Preprocessing

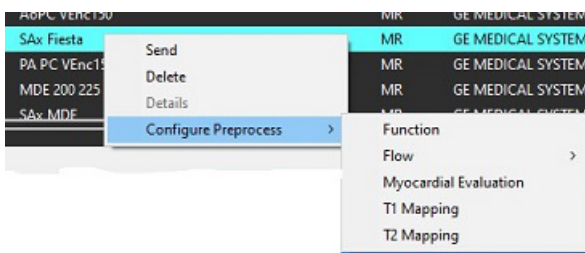
1. On the Main Screen, select Configuration.
2. In the Preprocessing section, check “Enable Auto Detection” for each application type.  
**NOTE:** Auto Detection can be disabled by defining the series name. Refer to Defining Series Descriptions below.
3. For T1 and T2 Mapping, select the series type of Time Series or Map.
4. Check “Enable Virtual Fellow®” to perform image optimization.
5. Check “Auto Update” to enable study launching with processing being performed in the background.
6. Click Apply and Close.



## Defining Series Descriptions

1. On the Main Screen, select a study from the study pane.
2. Select a series from the series pane.
3. Perform a right mouse click on the series name and select the appropriate analysis type for that series.

The series name will be automatically entered in the Preprocessing section.



4. Repeat for all other series types.

# Using Preprocessing

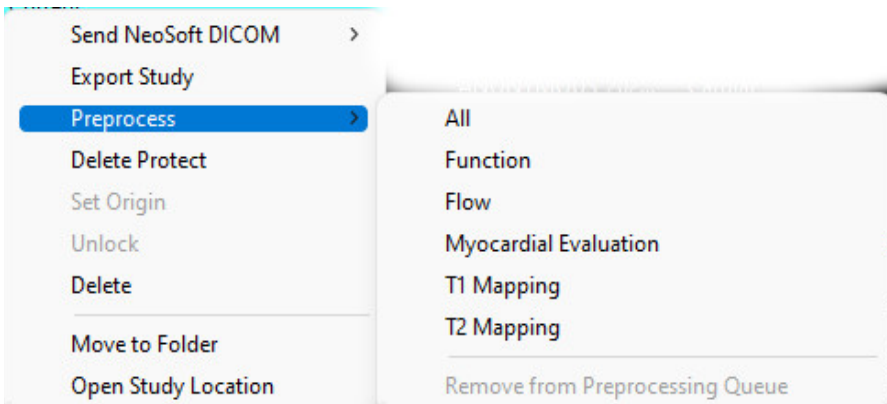
Preprocessing can be performed for cardiac MRI studies that are being sent/pushed directly to suiteDXT from another DICOM node.

**NOTE:** When Auto Update is activated, studies can be launched while processing takes place in the background.

Preprocessing can be initiated as follows:

## Study Pane

1. Select a patient from the study pane.
2. Right mouse click and choose Preprocess from the menu.

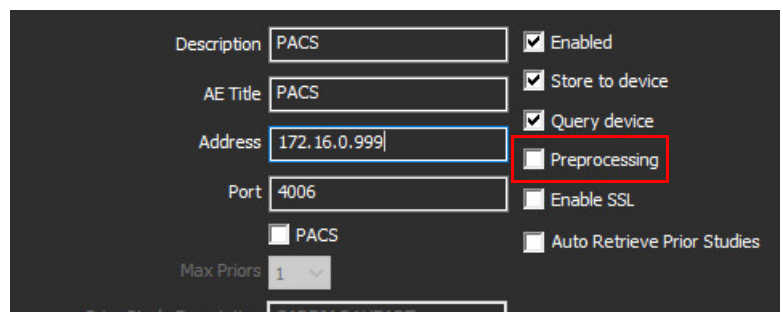


## Query/Retrieve Window

Refer to the Query/Retrieve sections in “Getting Started” and “Using suiteDXT”.

## DICOM Node Send to suiteDXT

1. On the Main Screen, select Configuration.
2. In the DICOM Destination section, select the DICOM node and click Edit.
3. Check Preprocessing.
4. Click Update.
5. Click Apply and Close.



When “Preprocessing” is checked and preprocessing is configured then a “Preprocessing: ON” indicator will be displayed in the status panel.



## Study Pane Indicators

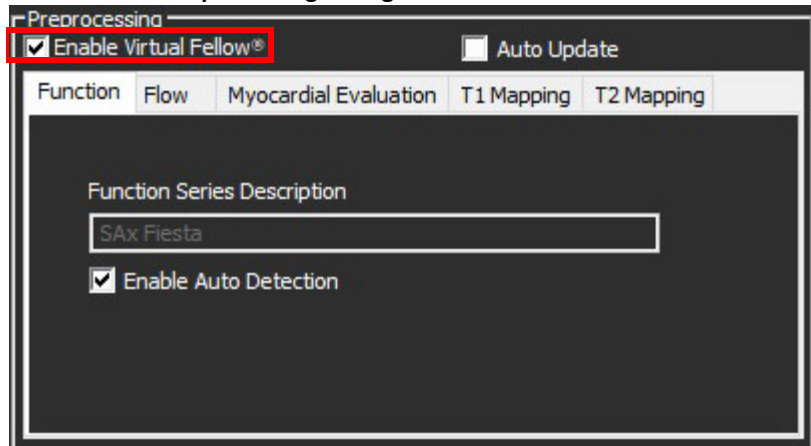
Indicator	Status
Light blue circle	Study is being preprocessed.
Dark blue circle	Study in queue.
Green circle	Preprocessing complete. Indicator will remain until the study has been opened.
Red circle	Preprocessing failed, contact NeoSoft by emailing <a href="mailto:service@neosoftmedical.com">service@neosoftmedical.com</a>

	Patient Name	Patient ID	Date/Time	Transferred To	Delete Protected	Study ID	Access
Find	SH Case 31, 20161027T111015	ANONYMOUS_20161027T111015_ID	4/5/2016 2:46 PM		No	ANONYMIZED	
Send	SH Case 33, 20171006T105644	ANONYMOUS_20171006T105644_ID	7/6/2017 10:15 AM		No	ANONYMIZED	
Import	SH Case 37, 20190518T140428	ANONYMOUS_20190518T140428_ID	6/10/2016 11:52 AM		No	ANONYMIZED	
	SH Case 38	ANONYMOUS_20210126T145814_ID	8/11/2020 8:36 AM		No	ANONYMIZED	
	SH Case 30	ANONYMOUS_20210203T144600_ID	6/21/2017 1:34 PM		No	ANONYMIZED	
	SH Case 30	ANONYMOUS_20210203T144600_ID	6/21/2017 1:34 PM		No	ANONYMIZED	

## Turning Virtual Fellow<sup>®</sup> On/Off

1. From the suiteDXT Main Screen click Configuration.
2. In the Preprocessing section, check “Enable Virtual Fellow<sup>®</sup>” to perform image optimization.
3. Click Apply and Close.

FIGURE 1. Preprocessing Configuration



# Image Preview Window



**WARNING:** Images are not suitable for diagnosis and/or treatment.

From the suiteDXT Main Screen, toggle the preview window to show or hide.

**NOTE:** If the study selected contains, suiteHEART Virtual Fellow®, CAS Cine, and/or CAS Report series, these series will automatically display in the preview window, as shown in Figure 2.

**FIGURE 2.**

The screenshot displays the suiteDXT interface. At the top, there is a 'Launch Application' section with a dropdown menu set to 'suiteHEART' and a 'Launch' button. To the right is a 'Study Filter' section with a dropdown set to 'All' and a 'Refresh' button. Below this is a 'Studies: 227' section with a search bar and a table of studies. The 'Case 21 Current' study is selected and highlighted in cyan. Below the studies table is a 'Series: 49' section with a table of series. The 'Delete' button in this section is highlighted with a red box. To the right of the series table is a 'Preview Window' displaying a grid of MRI images. Below the preview window is a 'Cine Controls' section with playback buttons and a '4/20 20 FPS' indicator. At the bottom of the interface, there is a status bar showing 'Disk Usage: 49.56% (C:)', 'Preprocessing: On', 'Virtual Fellow®: On', and 'No DICOM Network Activity'.

Patient Name	Patient ID	Study Description	Accession
Case 13	ANONYMOUS_202...	Cardiac	
Case 14	ANONYMOUS_202...	Cardiac	
Case 16	ANONYMOUS_202...	Fx ARVD MDE	
Case 18	ANONYMOUS_202...	Cardiac	
Case 19	ANONYMOUS_202...	Cardiac	
Case 20	ANONYMOUS_202...	CardiacFx MDE	
Case 21 Current	2222	Cardiac	
Case 21 Prior	2222	Cardiac	
Case 22	ANONYMOUS_202...	Cardiac	
Case 24	ANONYMOUS_202...	MRFP SP	
Case 25	ANONYMOUS_201...	Cardiac	
Case 26	ANONYMOUS_202...	Cardiac	
Case 29	ANONYMOUS_201...	MR HEART FOR FUNCTI...	
Case 33	ANONYMOUS_201...	Cardiac	

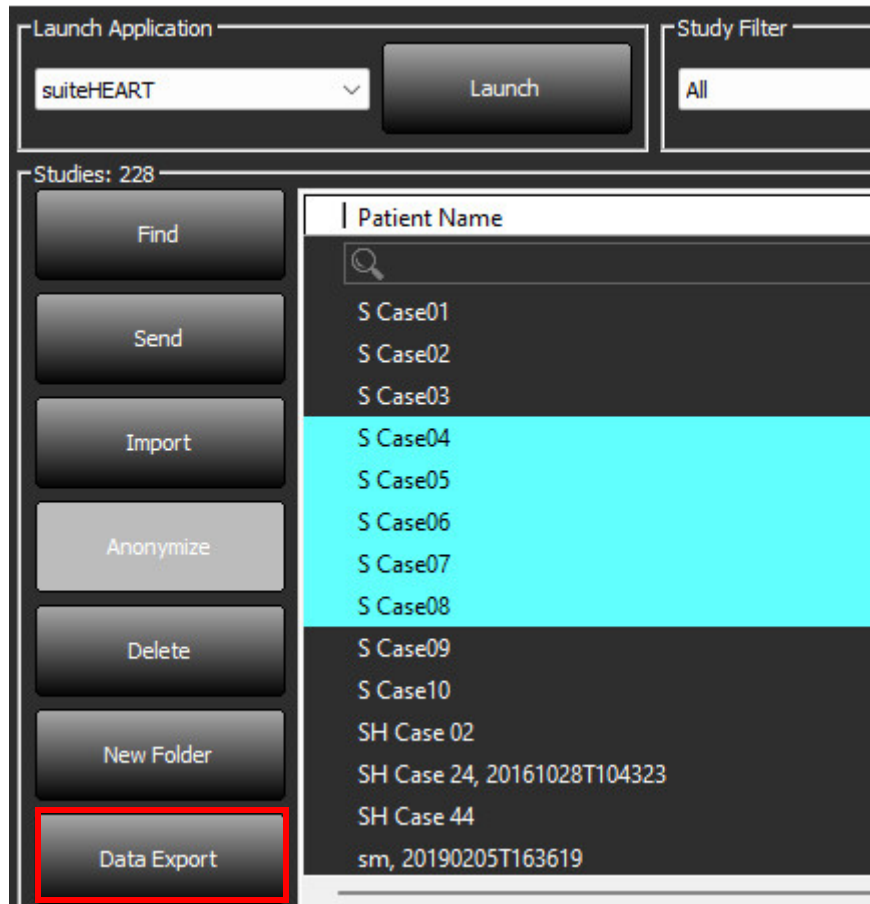
Series #	Images	Description	Start Ti...	Manufacturer
3400	3	MAG:2D PSMDE	5:15 PM	GE MEDICAL SYSTEMS
3401	1	CAS_SCPT_SERIES AUTO_T1_SMART_1		NeoSoft LLC
3402	1	CAS_SCPT_SERIES AUTO_T1_SMART_2		NeoSoft LLC
3412	2	suiteHEART DATA		NeoSoft LLC
3415	1	CAS_SCPT_SERIES AUTO_FUNCTION_LAX		NeoSoft LLC
3416	20	SAX Fiesta		NeoSoft LLC
3417	1	PS:2D PSMDE		NeoSoft LLC
3418	1	MAG:2D PSMDE		NeoSoft LLC
3419	30	MoCo FGRE Time Course + MotionCorrection		NeoSoft LLC
3420	30	FGRE Time Course + MotionCorrection		NeoSoft LLC

# Data Export

**IMPORTANT:** Prior to exporting the user is responsible for the accurate and complete placement (and correct assignment) of all regions of interest (ROIs), including those generated or modified by the auto segmentation algorithms. The quantitative values generated by the software depend on the accurate and complete placement (and correct assignment) of these regions of interest.

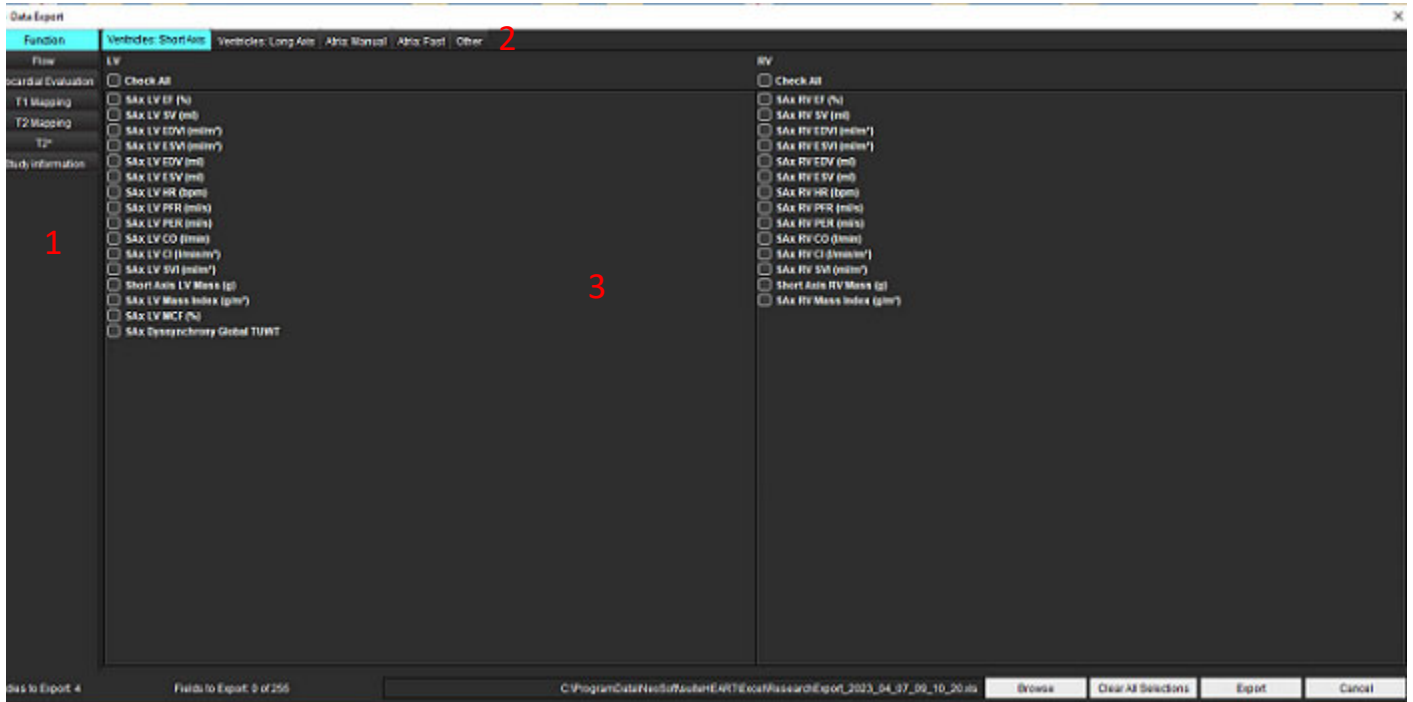
1. Select a study or a group of studies from the DXT study pane.
2. Select Data Export

**FIGURE 1. Data Export from suiteDXT interface**



3. From the Data Export interface select the desired result value for the appropriate analysis type. Selections made will be retained for the next exporting session.

FIGURE 2. Data Export



1. Analysis Modes, 2. Analysis type, 3. Result value selection

**NOTE:** Only 255 fields are supported for exporting.

4. Select **Browse** then select the destination and file name.
5. Select **Clear All Selections** to reset the results selections.
6. Select **Export** to generate an Excel spreadsheet.
7. Select **Cancel** to close the interface.

# Service and Support

## DICOM Network Failure

If a retrieval failed to transfer a study, confirm that a firewall is not preventing the transfer. If a firewall is not the issue, check that suiteDXT can DICOM echo the remote host and that the remote host can DICOM echo suiteDXT.

1. From the Main Screen, select Configuration.
2. In the DICOM Configuration section, select the remote host from which the retrieval was attempted and select Edit.
3. Select the checkboxes for: Enable, Store to device and Query device.
4. Verify that the IP address, Port, and AE title for the DICOM Destination are correct.

FIGURE 1. DICOM Configuration Window

The screenshot shows a 'DICOM Device Configuration' dialog box with the following fields and options:

- Description: PACS
- AE Title: PACS
- Address: 172.16.0.999
- Port: 4006
- Max Priors: 1
- Prior Study Description: CARDIAC^HEART
- Enabled:
- Store to device:
- Query device:
- Preprocessing:
- Enable SSL:
- Auto Retrieve Prior Studies:

Buttons at the bottom: DICOM Echo (highlighted with a red box), Update, and Cancel.

5. Click DICOM Echo.
6. Check the network settings and confirm that the selected port is open and accessible on the suiteDXT host.
7. Retrieve the study again.

If after performing the above steps the retrieval fails again, contact your network administrator.

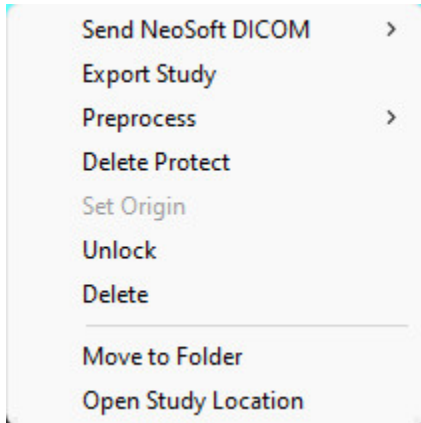


## Study Launch Error

If the message "The following studies are locked and will not be loaded in the launch" appears when trying to launch a study, do the following:

1. Navigate to the suiteDXT study directory.
2. Right-mouse click on the study that produced the error message.
3. Select "Unlock"

**FIGURE 2. Unlock Study**



## Contact

If you experience problems during installation or use of suiteDXT, please contact NeoSoft, LLC service at [service@NeoSoftmedical.com](mailto:service@NeoSoftmedical.com).