

Carotid CTA

Carotid CTA – Workflow Overview

Overview:

Carotids are easily post-processed using the Vessel Probe tool. This application tracks the centerline of the vessel and produces Curved Planar Reformations. It also creates a Cross Vessel view that displays the lumen area and vessel diameter. The views can be edited, measured, captured and exported.

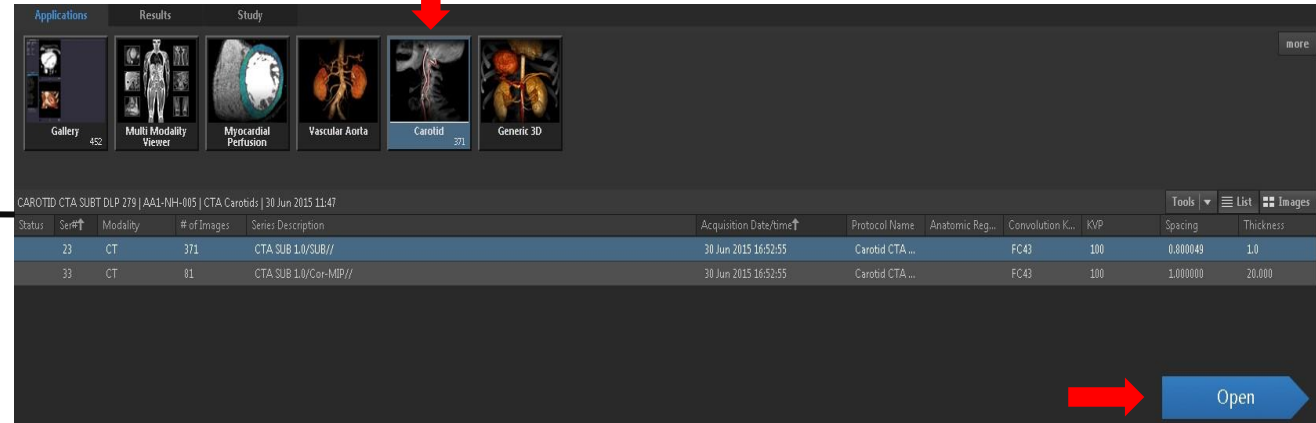
The Steps:

- **Load** the data and select the appropriate protocol **CTA Carotids**.
- **Select** the Vessel Probe tool and deposit a point inside the vessel.
- **Add** additional vessels by using the Vessel Probe tool.
- **Use** the Extend tool to extend to the Circle of Willis or Aortic Arch.
- **Name** the vessels.
- **Check** for accuracy and **Edit** Centerline.
- **Create** 3D Batch Rotation of vessels with semi-transparent bone.
- **Analyze** the vessel and Manual or Automatic Measurements.
- **Create** and **Export** snapshots and batch reformats.

Carotid CTA – Select the Application

Select Patient

Double-click to select the application or single-click on thumbnail and then choose open.

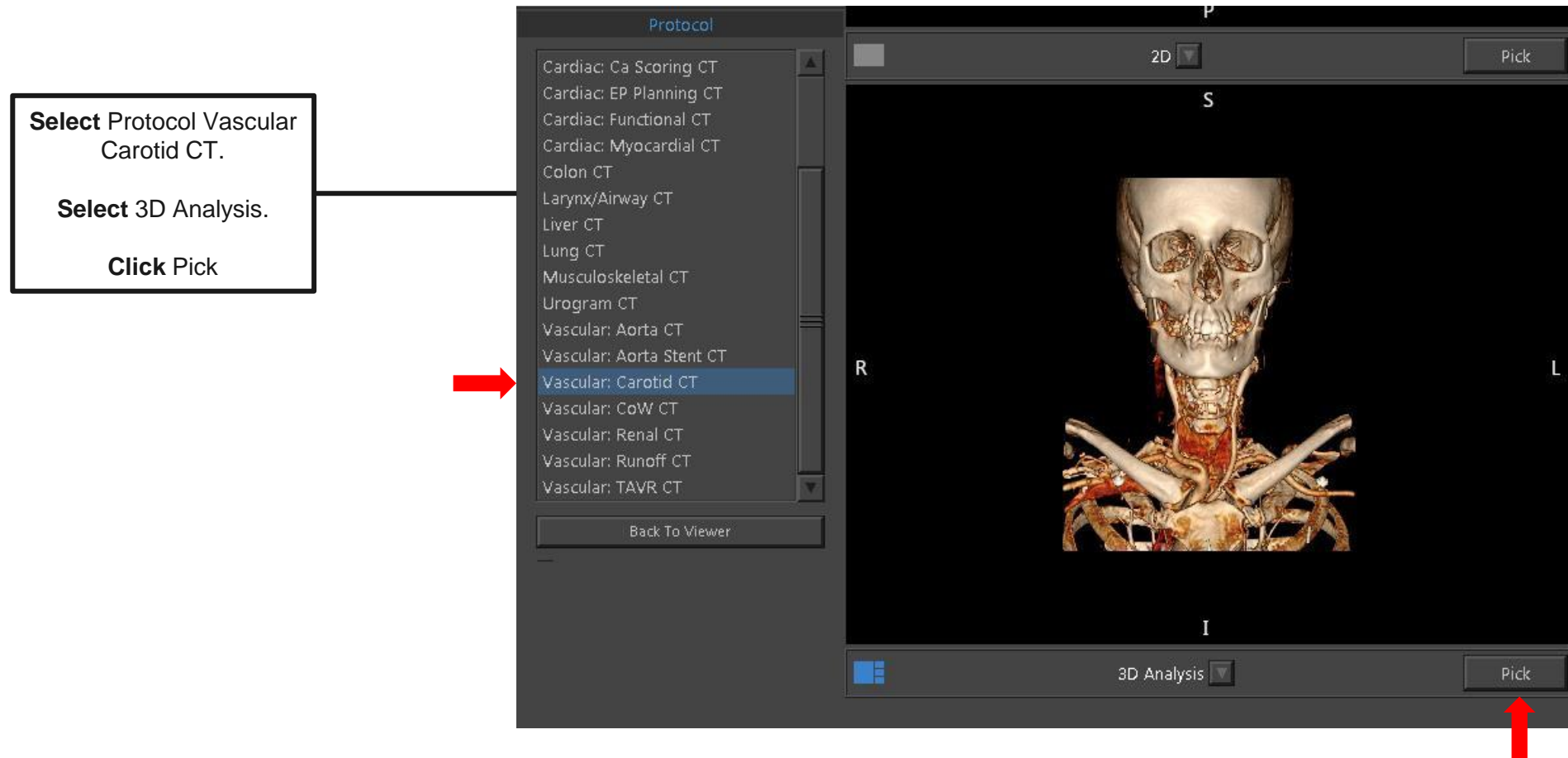


OR

The series are located below the applications. Choose the desired data set. Double-click the Carotid Application.

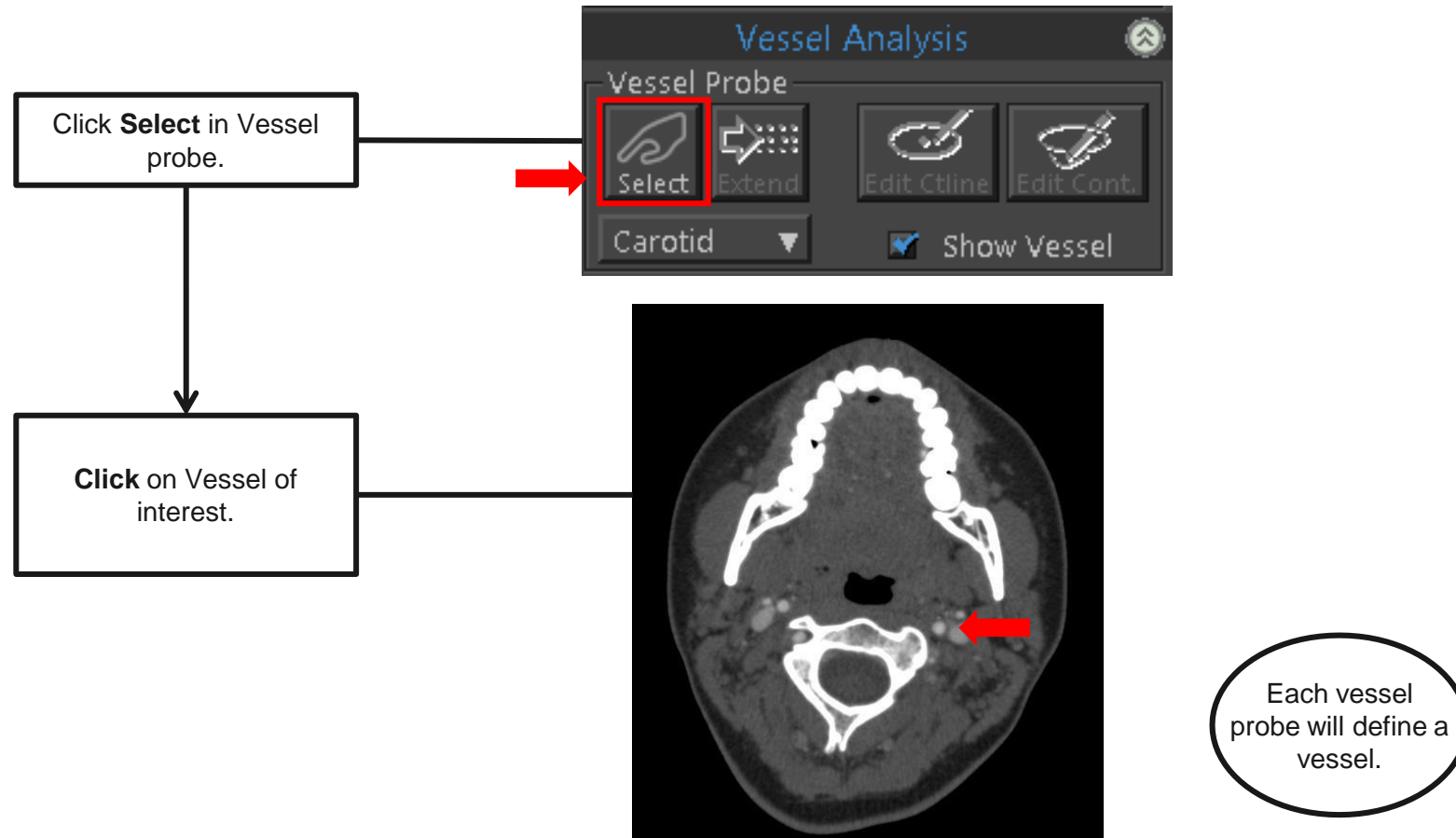


Carotid CTA – Option: Load Dataset from Gallery Application



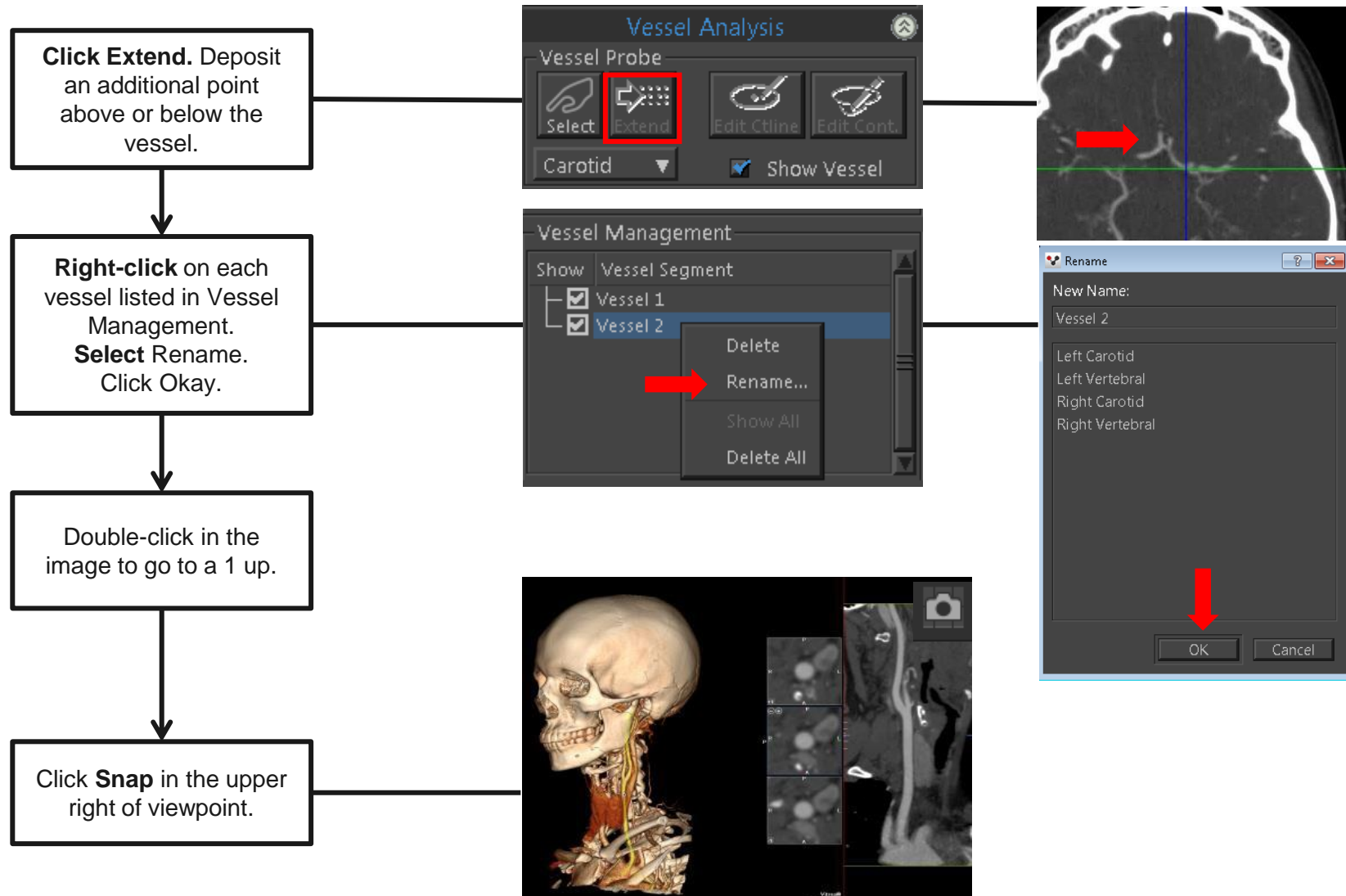
Tip: Preview image from the Gallery Tab. If the contrast is not dense enough the vessels will not display well. When this occurs clear the box next to Automatically Remove Bone to restore bone to the image.

Carotid CTA – Vessel Probe



Tip: For best results - Probe the **Internal Carotid** arteries above the bifurcation. Probe the vertebral arteries before they enter the vertebral column. You can use the 2D or 3D images to probe the vessels. For difficult vessels use the Extend tool in shorter segments.

Carotid CTA – Vessel Probe



Carotid CTA – Centerline Edits

Right-click in the CPR view. Click Edit Centerline.

Click and deposit points to adjust the center line in either CPR view.

Click Apply to save the edits. Click Close to end.

Edit Centerline
Edit Contours
Centerline
✓ Overview

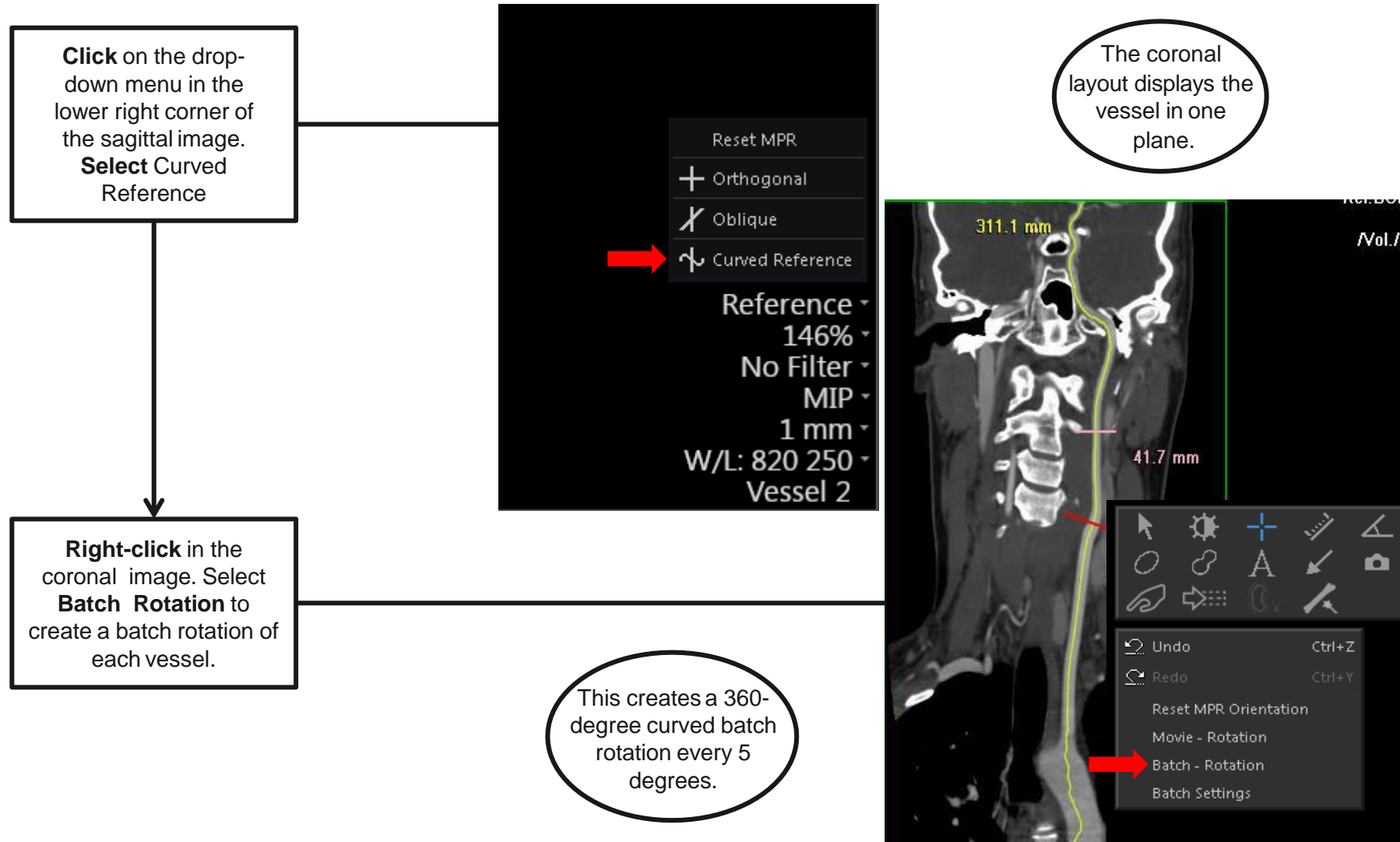
The red line is the corrected centerline.

This green line is the centerline.

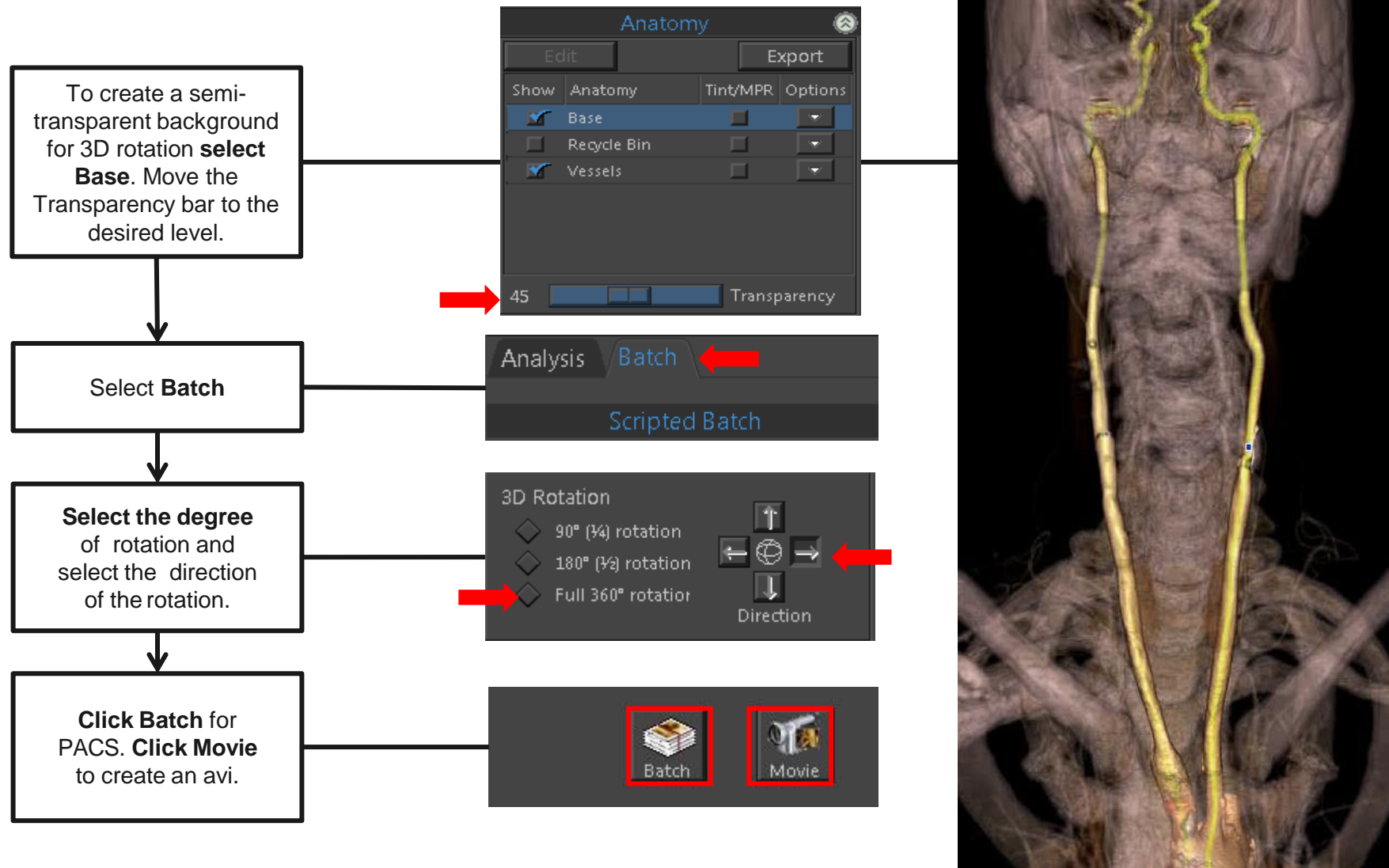
Click and drag the red line to edit.

Apply Reset Close

Carotid CTA – CPR Batch Rotation



Carotid CTA – 3D Batch Rotation



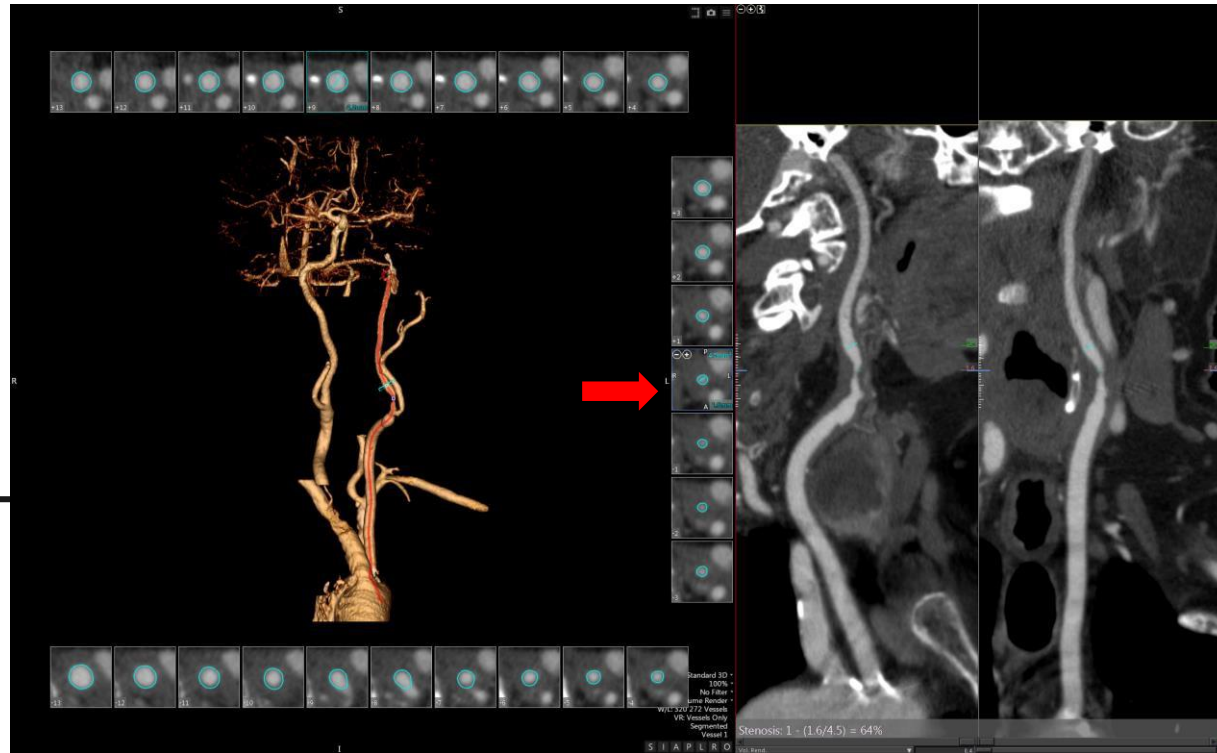
Carotid CTA – Manual Stenosis Measurement

To manually measure the lumen. **Click Ruler.**

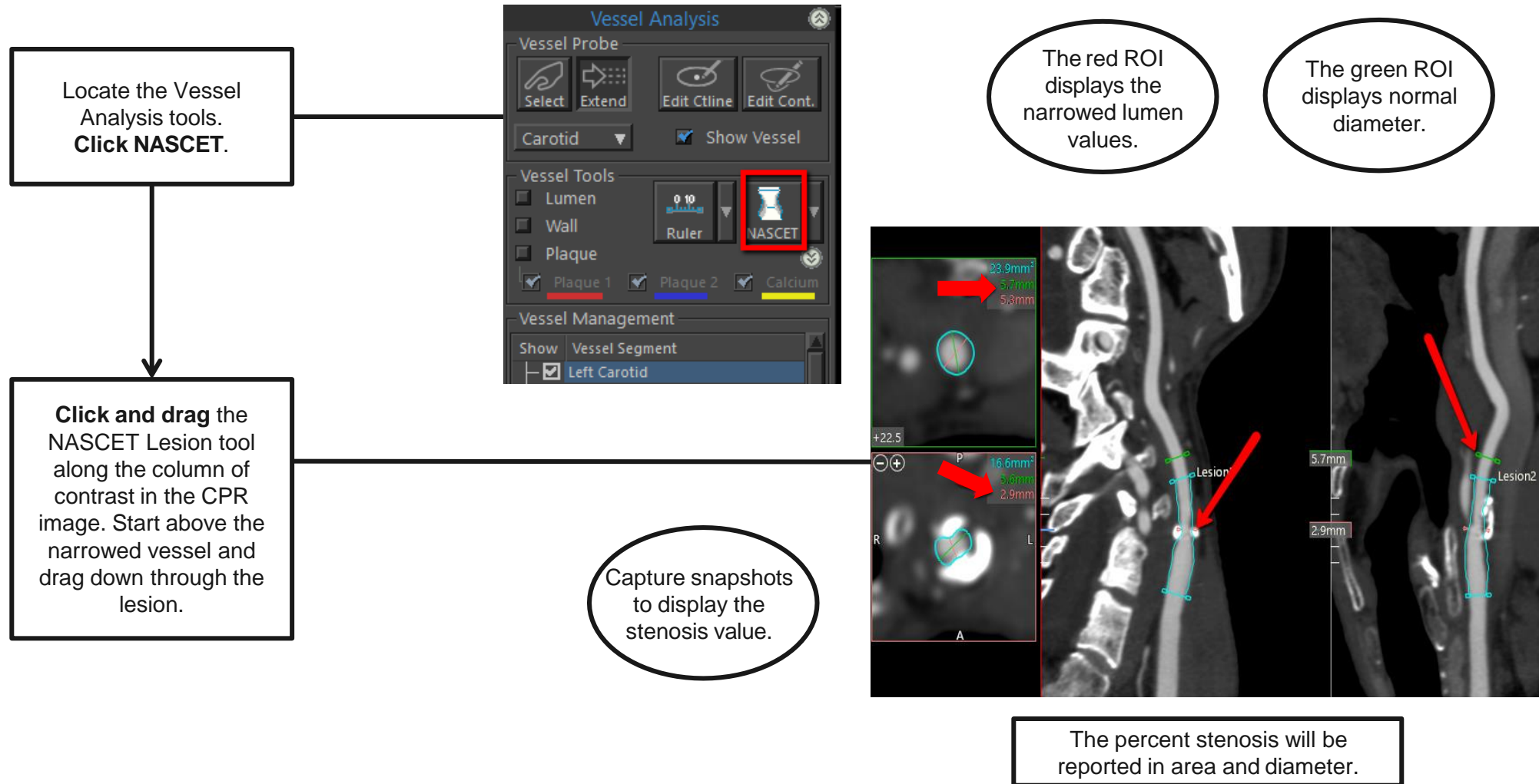
Click and drag the Ruler across the stenosis. Draw a second measurement across normal lumen.



The calculations display at the bottom of the curved view.



Carotid CTA – Automatic Vessel Analysis



Tip: **Remember to take a snapshot.** Only a snapshot can be restored at a later date to continue postprocessing.

Carotid CTA – Snapshots and Batches

Return to Study list and Click on the Results tab on bottom.

Each Snapshot and Batch displays in the Results tab. Hold CTRL and click to add additional series.

Right-click to Export to PACS.

The screenshot shows the 'Study List' application interface. On the left, there is a 'Filter By' sidebar with fields for Patient ID, Patient Name, Date of Birth, Accession Number, Study Description, Modality (set to CT), and Study Date (set to Any). The main area displays a table of study results. The 'Results' tab is active, showing a list of studies with columns for Status, Patient Name, and Patient ID. One study, 'Carotid Stenosis', is highlighted in blue. A context menu is open over this study, with the 'Export' option highlighted in red and a red arrow pointing to it. The context menu options are: Save As, Download and View, Delete, Restore, Export, Save to Media, and Preview.

Status	Patient Name↑	Patient ID
	Cardiac ncplaque lad	SurePlaque
	Cardiac 475 LT pul vein stenosis	PULM VEIN STENO
	Cardiac 4D , Lt Atria Mass	4D beating heart
	Cardiac CACS, CTA, CFA	mixed plaque
	Cardiac Myocardial Perfusion	Cardiac Infarct (70
	Cardiac SurePlaque	LAD & RCA
	Carotid	Left Plaque
	Carotid Stenosis	Left Aneurysm an
	Carotid Subtraction	Subtraction
	Case Study Knee	CT-MR-CR
	CHEST ABD DE SUBT	EA1G-WDE-009
	CHEST ABD DE SUBT	EA1G-WDE-009

Carotid CTA – Export

Export locations are listed in the Destination section. Choose desired destinations, click Export.

Content

- 1 Studies selected
- Add results and reports
- 1 Studies | 0 Results | 0 Reports will be exported

Destination

- VNA
- lungcad
- PACS

Options

- Include annotations on images
- Reduce size
- Convert to grayscale
- Remove Vitrea results flag

Edit Patient or Anonymize

- Edit Patient
- Anonymize

Export **Cancel**

Carotid CTA – Workflow Summary

Summary:

Workflow for Carotid arteries using the Carotid CTA protocol offer a variety of post processing tools for viewing and analysis.

- Use the **Vessel Probe** tool to investigate vessels.
- **Click** Extend to continue the vessel from the Circle of Willis to the Aortic Arch.
- **Name** each vessel with a right mouse click in the Vessel Management area.
- **Edit** the Centerline if necessary.
- **Create** 360-degree Batch Rotations of Vessel Probed arteries for exporting.
- **Create** a 3D Semi-Transparent Batch Rotation.
- **Analyze** vessels using manual or automatic stenosis calculations.
- **Click** Snapshot to capture images for documentation.
- **Export** to PACS or other destination

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