ASCEND
HEALTH INFORMATION TECHNOLOGY

Knowledge Base 8.0

Service update 2

Release Notes

Date	2021-08-05
KB version	8.0
Document version	1.0

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Knowledge Bases 8.0 Service update 2 - Summary

Knowledge Bases 8.0 Service update 2 (SU2) consists of this document and the files described below.

- Cath.Diagrams.8.0.SU2.cpPatch (Cath KB)
- Cath.Implant.Diagrams.8.0.SU2.CPPatch (Cath Implant KB)
- Vascular.Diagrams.8.0.SU2.CPPatch (Vascular KB)
- Echo.Adult.IACPlaceholder.8.0.cpPatch (Adult Echo KB)
- Echo.Peds.Curves.8.0.cpPatch (Peds Echo KB)
- Import.ReferenceRanges.Boston_2015_8.0.29.0.cpkbReferenceRanges (Peds Echo KB)
- Import.ReferenceRanges.PHN_2017_8.0.24.0.cpkbReferenceRanges (Peds Echo KB)
- CriticalAS.8.0.cpPatch (Cath, Cath Implant, CCT, CMR, Adult Echo, and Peds Echo KBs)

Introduction

This document describes the changes included in the **final** release of the ASCEND knowledge base version 8.0 service update 2 (SU2).

The changes described in this document are categorized as “features,” “enhancements” or “resolved issues.”

- **Features** - new capabilities that have been added which required changes to functional requirements of a knowledge base.
- **Enhancements** - incremental improvements that were made to the knowledge base, but which still fit within the existing requirements for a feature or function.
- **Resolved Issues** - repairs to defects that resulted in the failure to meet existing stated or implied requirements.

Tables that provide the following information are included for each modality:

- **ID** – a number that is assigned by ASCEND’s internal tracking system, Helix ALM, which can be used to trace the item through its development history.
- **Description** – a description of the change that was made within the knowledge base to either add, enhance, or repair a respective feature, enhancement or issue.
- **CP Codes** – where applicable, the CP code of the affected node(s) within the knowledge base is provided so that users with administrative and/or configuration privileges can quickly locate them when using a configuration tool such as SRCT.

Cath and Cath Implant Knowledge Bases

The following information applies to both the Cath and Cath.Implant KBs for version 8.0 SU2.

Released Files

- Cath.Diagrams.8.0.SU2.CPPatch
- Cath.Implant.Diagrams.8.0.SU2.CPPatch
- CriticalAS.8.0.cpPatch (applies to Cath and Cath Implant KBs)

The diagrams patches listed above address an issue between the venous diagrams and a vein table which is not used in either of the Cath knowledge bases. These patches have been released here to maintain consistency in the venous diagrams across all knowledge bases that use them. Installation of these patches is optional but recommended.

New Features

No new features were added to the Cath and Cath Implant knowledge bases for version 8.0 SU2.

Enhancements

No enhancements were added to the Cath and Cath Implant knowledge bases for version 8.0 SU2.

Resolved Issues

The following known issues for the Cath and Cath Implant knowledge bases have been resolved for the 8.0 SU2 release.

ID	Resolution Description	CP Codes
19050	The sentence template for aortic stenosis severity has been updated to include the finding for critical aortic stenosis, which had inadvertently been omitted.	225590

Remaining Open Issues

The Cath/Cath Implant knowledge base exhibits the following, yet unresolved, known open defects at this time:

ID	Open Issue Description/Workaround
13911	Aortic Arch Diagram: Aneurysms placed in the aortic arch may have an odd appearance. Workaround/Resolution: This is due to the curvature of the aortic arch. Currently, there is no workaround. This appearance will be reviewed with end users to determine if a change is required.
16578	Some of the date format options that are expected to be in the knowledge base may be missing. Workaround/Resolution: A different date format may be selected.
17154	Lower Extremity Arterial Diagram: The diagram fails to load in rare circumstances when initially accessing the Diagrams tab. Workaround/Resolution: Navigating to another tab, then navigating back to the Diagrams tab will result in the display of the diagram.
18247	Venous Diagrams: When adding multiple lesions to a vein from the lesion form, each is placed in a default spot in the vessel to avoid overlapping. If the most proximal lesion is moved or changed, the remaining lesions get repositioned. Workaround/Resolution: Should lesions be moved spontaneously in this situation they may be repositioned back to their starting locations manually.
18539	Venous Diagrams: Thrombus lesions in the distal SVC and IVC appear to cut off abruptly on the diagram. Workaround/Resolution: Position the distal extent of the lesion slightly above the end of the vessel.
18545	Coronary Diagram: The graphic representation of a sequential graft may break up and not appear contiguous if multiple manipulations are made in rapid succession. Workaround/Resolution: This occurs when the diagram is edited in a non-standard way. Each manipulation of the vessels on the diagram should be completed prior to attempting another.
18727	Peripheral arterial diagrams: If a peripheral graft has the “bifurcated” qualifier but only one target vessel is recorded, its endpoints cannot be moved. Workaround/Resolution: Recreate the peripheral graft without the bifurcated qualifier or enter the second target vessel.

ID	Open Issue Description/Workaround
18728	Coronary diagram: A bifurcated peripheral graft that has a target vessel in the coronary tree cannot be edited. Workaround/Resolution: Ensure that the bifurcated graft being created is a coronary graft. Peripheral grafts should not be placed in the coronary tree.

Compatibility

The 8.0 SU2 Cath and Cath.Implant KBs are compatible with Report Wizard 8.0 and SRCT 8.0 or later and will not work with earlier versions.

Cardiovascular CT (CCT) Knowledge Base

Released Files

- CriticalAS.8.0.cpPatch

New Features

No new features have been added to the CCT knowledge base for 8.0 SU2.

Enhancements

No enhancements were added to the CCT knowledge base for version 8.0 SU2.

Resolved Issues

The following issue has been resolved in the CCT knowledge base in this release:

ID	Resolved Issue Description	CP Codes
19050	The sentence template for aortic stenosis severity has been updated to include the finding for critical aortic stenosis, which had inadvertently been omitted.	225590

Remaining Open Issues

The CCT knowledge base exhibits the following, yet unresolved, known open defects at this time:

ID	Open Issue Description/Workaround
13911	Aortic Arch Diagram: Aneurysms placed in the aortic arch may have an odd appearance. Workaround/Resolution: This is due to the curvature of the aortic arch. Currently, there is no workaround. This appearance will be reviewed with end users to determine if a change is required.
16578	Some of the date format options that are expected to be in the knowledge base may be missing. Workaround/Resolution: A different date format may be selected.

ID	Open Issue Description/Workaround
17154	Lower Extremity Arterial Diagram: The diagram fails to load in rare circumstances when initially accessing the Diagrams tab. Workaround/Resolution: Navigating to another tab, then navigating back to the Diagrams tab will result in the display of the diagram.
18545	Coronary Diagram: The graphic representation of a sequential graft may break up and not appear contiguous if multiple manipulations are made in rapid succession. Workaround/Resolution: This occurs when the diagram is edited in a non-standard way. Each manipulation of the vessels on the diagram should be completed prior to attempting another.
18727	Peripheral arterial diagrams: If a peripheral graft has the “bifurcated” qualifier but only one target vessel is recorded, its endpoints cannot be moved. Workaround/Resolution: Recreate the peripheral graft without the bifurcated qualifier or enter the second target vessel.
18728	Coronary diagram: A bifurcated peripheral graft that has a target vessel in the coronary tree cannot be edited. Workaround/Resolution: Ensure that the bifurcated graft being created is a coronary graft. Peripheral grafts should not be placed in the coronary tree.

Compatibility

The Cardiovascular CT KB 8.0 SU2 is compatible with Report Wizard 8.0 and SRCT 8.0 or later and will not work with earlier versions.

Cardiovascular Magnetic Resonance (CMR) Knowledge Base

Released Files

- CriticalAS.8.0.cpPatch

New Features

No new features have been added to the CMR knowledge base for 8.0 SU2.

Enhancements

No enhancements were added to the CMR knowledge base for version 8.0 SU2.

Resolved Issues

The following issue has been resolved in the CMR knowledge base in this release:

ID	Resolved Issue Description	CP Codes
19050	The sentence template for aortic stenosis severity has been updated to include the finding for critical aortic stenosis, which had inadvertently been omitted.	225590

Remaining Open Issues

The CMR knowledge base exhibits the following, yet unresolved, known open defects at this time:

ID	Open Issue Description/Workaround
13911	Aortic Arch Diagram: Aneurysms placed in the aortic arch may have an odd appearance. Workaround/Resolution: This is due to the curvature of the aortic arch. Currently, there is no workaround. This appearance will be reviewed with end users to determine if a change is required.
16578	Some of the date format options that are expected to be in the knowledge base may be missing. Workaround/Resolution: A different date format may be selected.

ID	Open Issue Description/Workaround
17154	Lower Extremity Arterial Diagram: The diagram fails to load in rare circumstances when initially accessing the Diagrams tab. Workaround/Resolution: Navigating to another tab, then navigating back to the Diagrams tab will result in the display of the diagram.
18545	Coronary Diagram: The graphic representation of a sequential graft may break up and not appear contiguous if multiple manipulations are made in rapid succession. Workaround/Resolution: This occurs when the diagram is edited in a non-standard way. Each manipulation of the vessels on the diagram should be completed prior to attempting another.
18727	Peripheral arterial diagrams: If a peripheral graft has the “bifurcated” qualifier but only one target vessel is recorded, its endpoints cannot be moved. Workaround/Resolution: Recreate the peripheral graft without the bifurcated qualifier or enter the second target vessel.
18728	Coronary diagram: A bifurcated peripheral graft that has a target vessel in the coronary tree cannot be edited. Workaround/Resolution: Ensure that the bifurcated graft being created is a coronary graft. Peripheral grafts should not be placed in the coronary tree.

Compatibility

The CMR KB 8.0 SU2 is compatible with Report Wizard 8.0 and SRCT 8.0 or later and will not work with earlier versions.

Adult & Pediatric Echocardiography Knowledge Bases

Released Files

- Adult Echo
  - Echo.Adult.IACPlaceholder.8.0.cpPatch
- Pediatric Echo
  - Echo.Peds.Curves.8.0.cpPatch
  - Import.ReferenceRanges.Boston_2015_8.0.29.0.cpkbReferenceRanges
  - Import.ReferenceRanges.PHN_2017_8.0.24.0.cpkbReferenceRanges
- Adult and Pediatric Echo
  - CriticalAS.8.0.cpPatch

New Features

No new features have been added to the Adult and Pediatric Echocardiography knowledge bases for 8.0 SU2.

Enhancements

The following enhancements have been added to the Adult and/or Pediatric Echo knowledge bases in this release:

ID	Enhancement Description	CP Codes
18803	**Echo Adult Only** - Previously, imported (or manually entered) measurements would satisfy IAC required placeholders for applicable cardiac structures when imported/entered prior to other findings. The patch, **Echo.Adult.IACPlaceholder.8.0.cpPatch**, marks these placeholders as being insensitive to measurements so that they will not be satisfied when measurements are imported or entered manually prior to the entry of findings for applicable cardiac structures.	NA
18890	**Echo Peds Only** - The Boston and Pediatric Heart Network (PHN) normal reference range modules have been modified to allow changes to reported measurement units and precision.	NA

As a supplement to enhancement 18890 listed above, this service update includes a patch, **Echo.Peds.Curves.80.cpPatch** which does the following:

- Adjusts the script **Logic.CalculatePriorNormalCurves**, allowing trend plot isopleths to be rendered in display units, thereby permitting unit changes. (Does not apply to ACV.)

- Removes incorrect "unitCode" from two fetal volumes, which generated confusing error messages, but no incorrect behavior, during mass unit change implementation.

Resolved Issues

The following known issues for the Echo Adult and Echo Peds knowledge bases have been resolved for the 8.0 SU2 release.

ID	Resolution Description	CP Codes
19050	**Adult and Pediatric Echo** - The sentence template for aortic stenosis severity has been updated to include the finding for critical aortic stenosis, which had inadvertently been omitted.	225590

Remaining Open Issues

The Echo knowledge bases exhibit the following, yet unresolved, known open defects at this time:

ID	Open Issue Description/Workaround
16578	Some of the date format options that are expected to be in the knowledge base may be missing. Workaround/Resolution: A different date format may be selected.

Compatibility

The Adult and Pediatric Echo 8.0 SU2 knowledge bases are compatible with Report Wizard 8.0 and SRCT 8.0 or later and will not work with earlier versions. **NOTE: The enhancement to the IAC placeholders in the Adult Echo KB requires Report Wizard 8.0.49 or greater. Additionally, the ability to change the status of the IAC placeholders to ignore/not ignore measurements on a patched KB requires SRCT 8.0.126 or greater.**

Vascular Knowledge Base

Released Files

- Vascular.Diagrams.8.0.SU2.CPPatch

New Features

No new features have been added to the Vascular KB for the 8.0 SU2 release.

Enhancements

No new enhancements have been added to the Vascular KB for the 8.0 SU2 release.

Resolved Issues

The following known issues for the Vascular knowledge base have been resolved for the 8.0 SU2 release.

ID	Resolution Description	CP Codes
18966	Previously, if a lesion was recorded in a vessel on the venous diagram and then properties were added to that vessel through the Vein table, the lesion was removed from the diagram and could not be added back. Now additional properties can be added to the vessel through the vein table without affecting the lesion on the diagram.	NA

Remaining Open Issues

The Vascular knowledge base exhibits the following, yet unresolved, known open defects at this time:

ID	Open Issue Description/Workaround
13911	Aortic Arch diagram: Aneurysms placed in the aortic arch may have an odd appearance. Workaround/Resolution: This is due to the curvature of the aortic arch. Currently, there is no workaround. This appearance will be reviewed with end users to determine if a change is required.
16578	Some of the date format options that are expected to be in the knowledge base may be missing. Workaround/Resolution: A different date format may be selected.
17154	Lower Extremity Arterial Diagram: The diagram fails to load in rare circumstances when initially accessing the Diagrams tab. Workaround/Resolution: Navigating to another tab, then navigating back to the Diagrams tab will result in the display of the diagram.
18247	Venous Diagrams: When adding multiple lesions to a vein from the lesion form, each is placed in a default spot in the vessel in order to avoid overlapping. If the most proximal lesion is moved or changed, the remaining lesions get repositioned. Workaround/Resolution: Should lesions be moved spontaneously in this situation; they may be repositioned back to their starting locations manually.
18539	Venous Diagrams: Thrombus lesions in the distal SVC and IVC appear to but off abruptly on the diagram. Workaround/Resolution: Position the distal extent of the lesion slightly above the end of the vessel.
18727	Peripheral arterial diagrams: If a peripheral graft has the “bifurcated” qualifier but only one target vessel is recorded, its endpoints cannot be moved. Workaround/Resolution: Recreate the peripheral graft without the bifurcated qualifier or enter the second target vessel.
18981	If a stenosis is added to a vessel in the artery table and is then deleted, the sentence indicating the presence of the lesion persists in the report. Workaround/Resolution: Right-click on the sentence in the report and select Delete Finding to remove the finding from the report.

ID	Open Issue Description/Workaround
18984	When recording impressions for Lower Extremity PAD vascular results by using the Overall Interpretation picklist, the sentence displayed for “Incompressible arteries” represents a sentence used for a screening study. Workaround/Resolution: Right-click on the sentence in the report and select Edit Sentence to activate the sentence editor. Edit the sentence as needed.

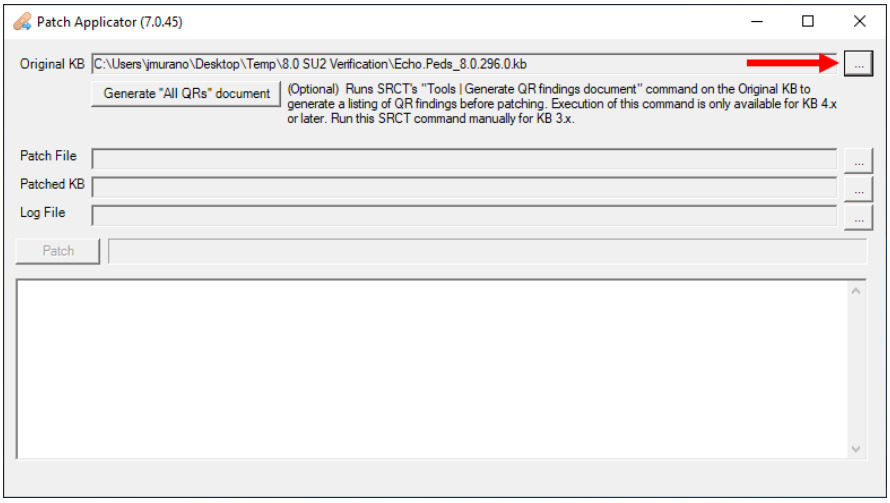
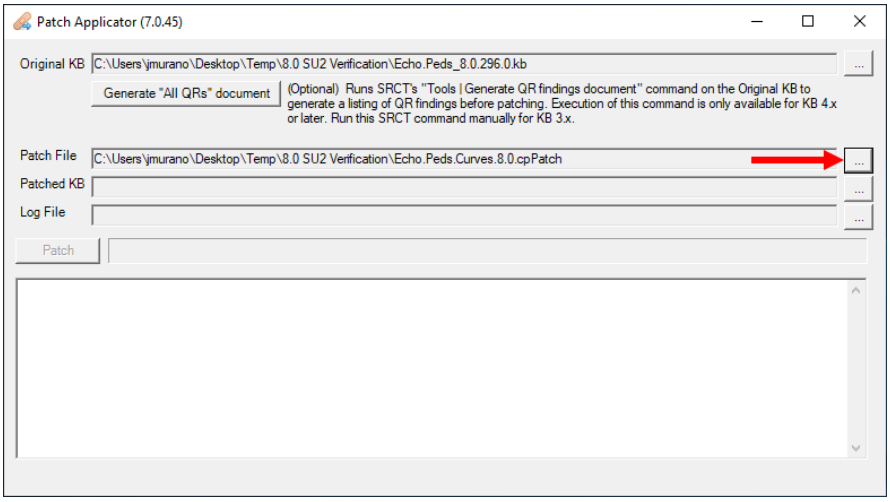
Compatibility

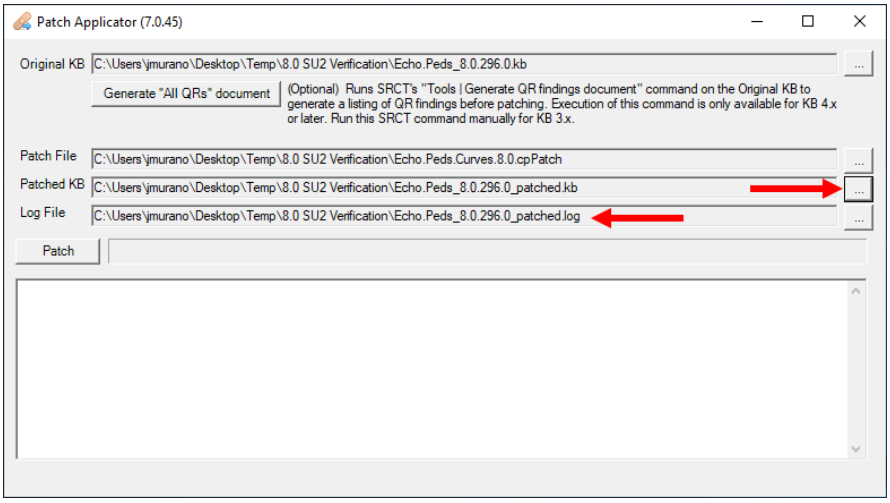
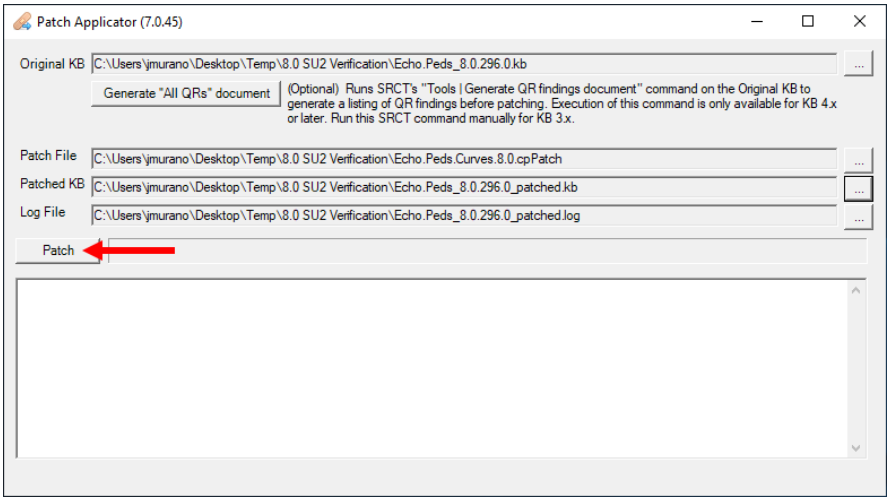
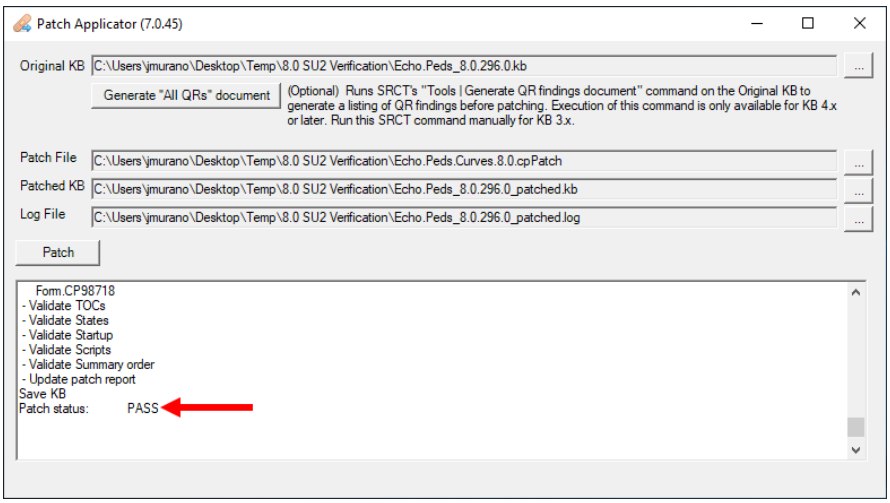
The Vascular KB 8.0 SU2 is compatible with Report Wizard 8.0 and SRCT 8.0 or later and will not work with earlier versions.

Patching Instructions

General Patch Application Instructions

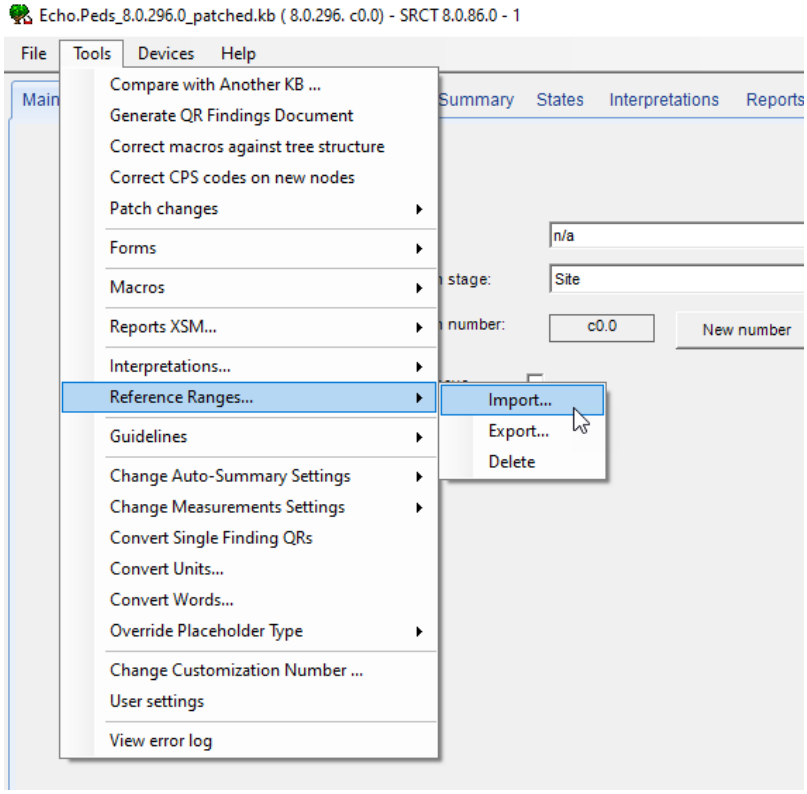
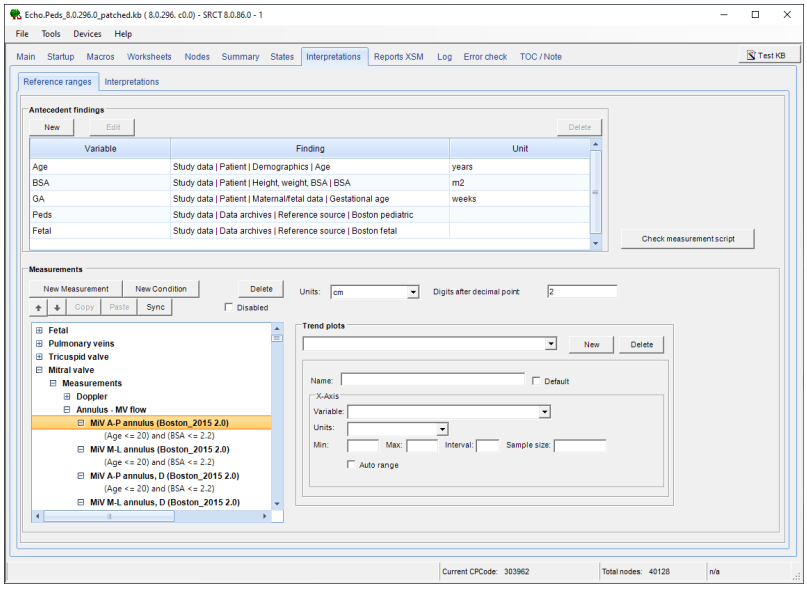
The present service update includes patches that should be applied to multiple knowledge bases using patch applicator. Instructions on the use of patch applicator are provided below. **NOTE: The patches provided in 8.0 SU2 must be applied using Patch Applicator 8.0 or later.**

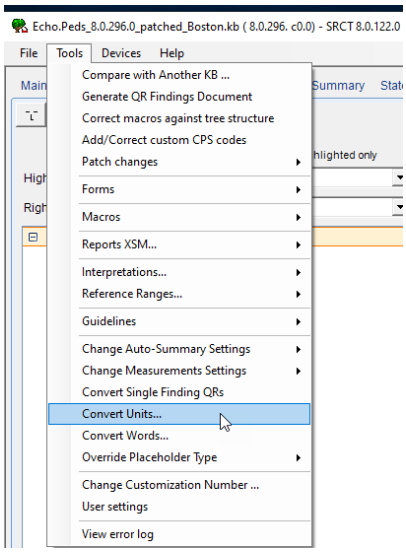
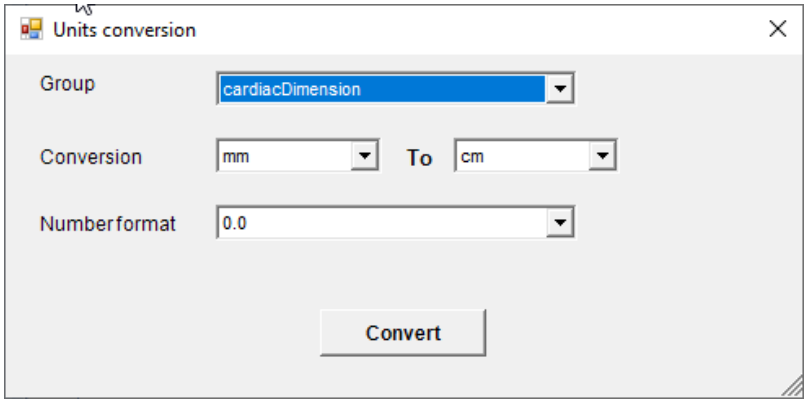
	Action	Explanation/Data
1	Download the KB to be patched through KBE.	This patch is applicable to the Peds Echo version 8.0 KB only.
2	Using Patch Applicator 8.0 or greater, select the ellipsis next to the **Original KB** field and navigate to and select the KB to be patched.	
3	Select the ellipsis next to the **Patch File** field and navigate to and select the patch that is to be applied.	

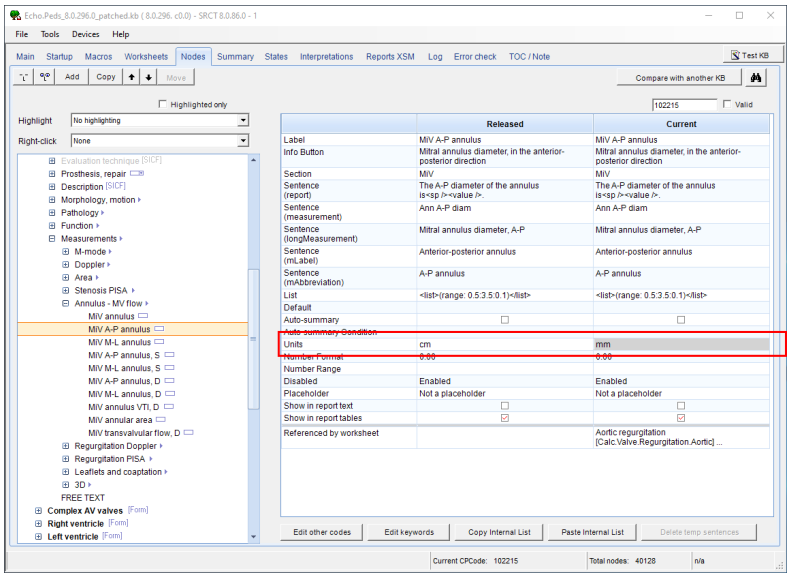
	Action	Explanation/Data
4	Select the ellipsis next to the **Patched KB** field and enter a name for the patched KB. NOTE: The **Log File** field will be populated automatically upon naming the patched KB.	
5	Click the **Patch** button to apply the patch and save the patched KB.	
6	When the patch installation is completed, the **Patch status** will be revealed at the bottom of the applicator dialog. **NOTE:** The patch applicator reports errors and warnings in the KB, and this does not imply that the patch failed or that it caused these errors or warnings. If the status is "PASS", then the patch worked and can be tested. If the patch application fails, please contact ASCEND Informatics.	

	Action	Explanation/Data
7	Patch Applicator automatically saves the updated KB with the name provided in the **Patched KB** field.	Most patches will not alter the version number of the knowledge base or its compatibility with Report Wizard*. **The enhancement to the IAC placeholders in the Adult Echo KB requires Report Wizard 8.0.49 or greater. Additionally, the ability to change the status of the IAC placeholders to ignore/not ignore measurements on a patched KB requires SRCT 8.0.126 or greater.**

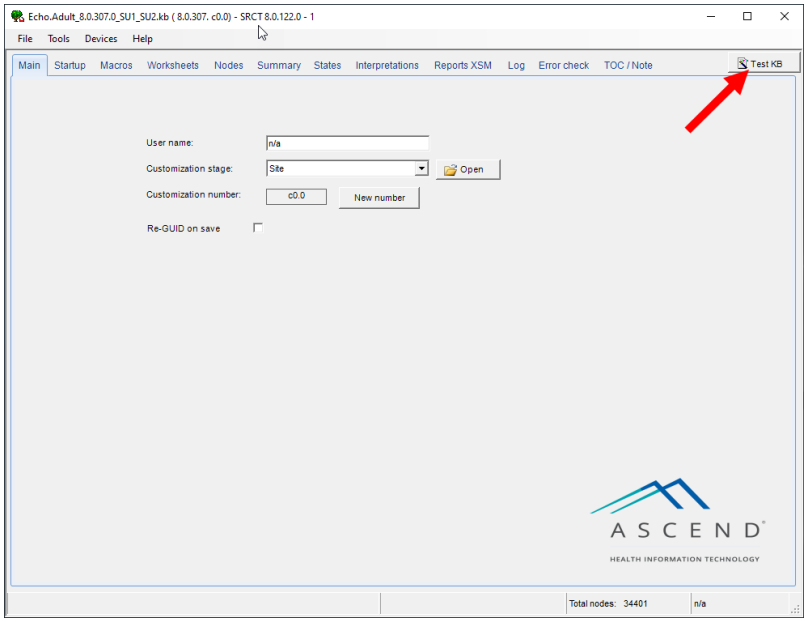
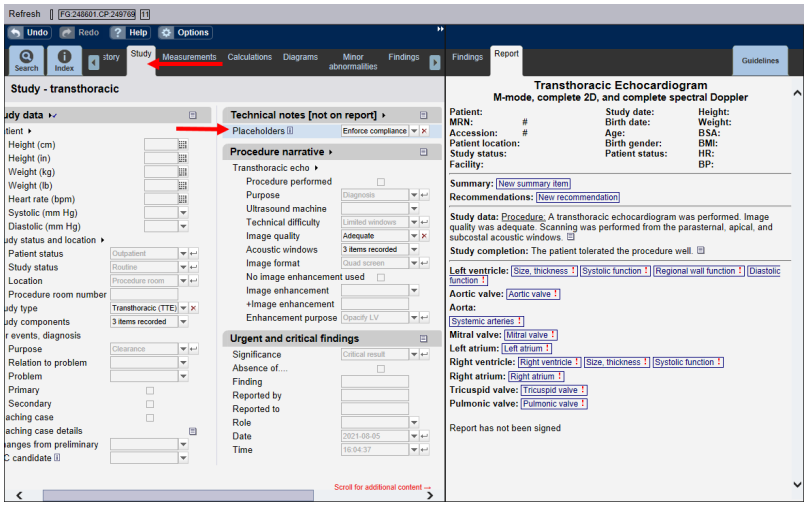
Testing the Pediatric Units Conversion

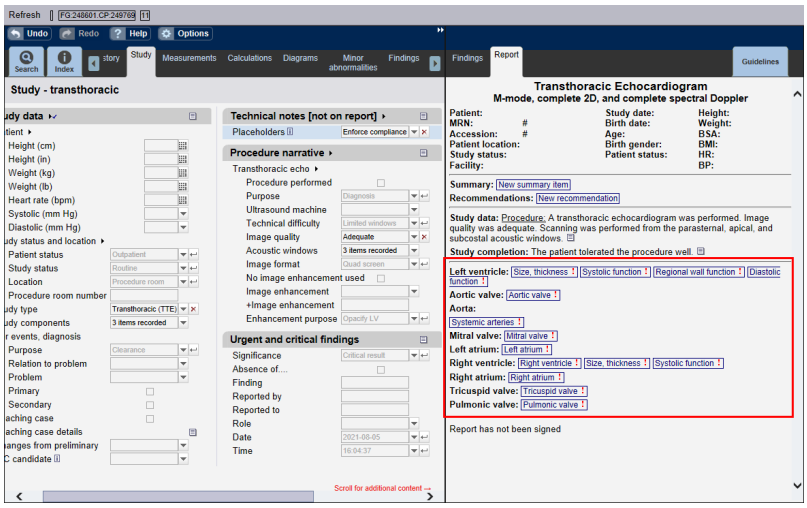
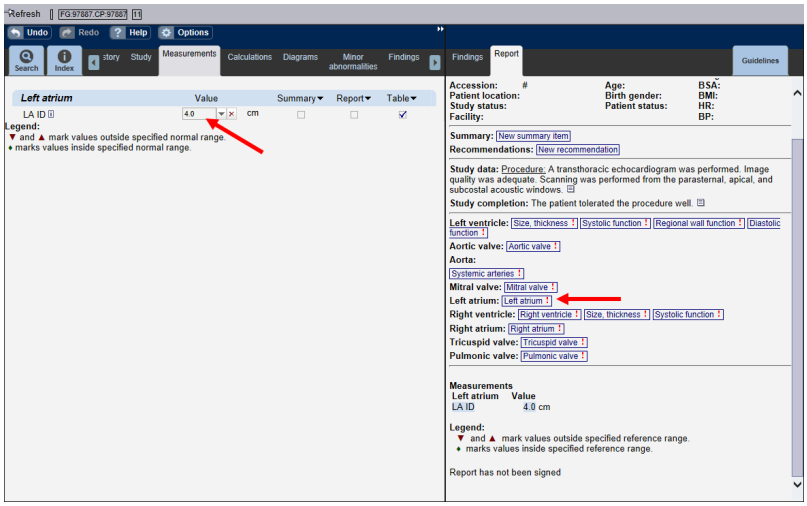
	Action	Image/Explanation
1	Open the patched Echo Peds KB in SRCT.	NOTE: This patch should be tested using **SRCT 8.0.**
2	Import the Boston normals reference range module or PHN normals reference range module provided as part of KB 8.0 SU2 by selecting **Tools > Reference Ranges… > Import**	
3	On the **Interpretations** tab, **Reference Ranges** subtab, and confirm that the reference ranges have imported.	

	Action	Image/Explanation
4	Select **Tools > Convert Units…** in the menu bar.	
5	Convert the units on all linear unit classes to mm with one decimal place precision by • Selecting a linear unit class in the **Group** picklist • Selecting the appropriate units in the **Conversion** picklists • Selecting the desired format in the **Number format** picklist (optional) Select **Convert** to accept the changes.	

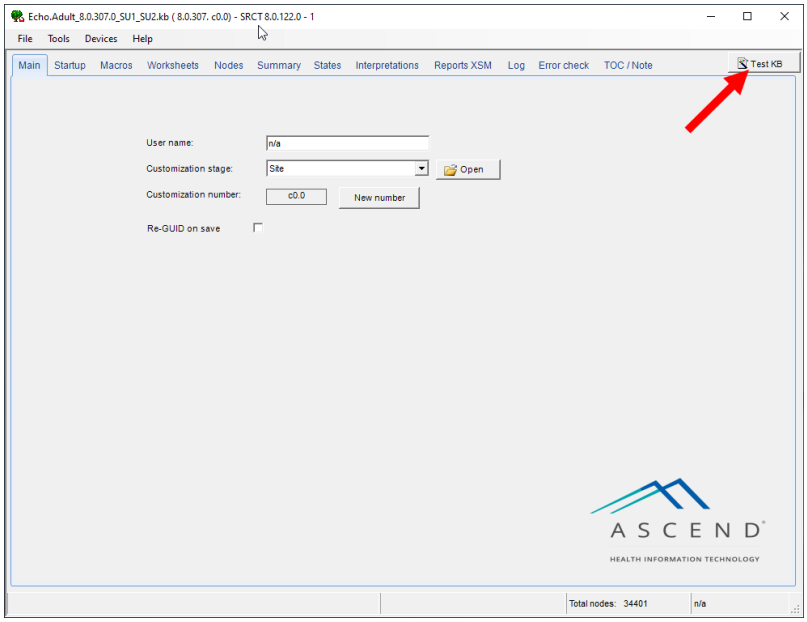
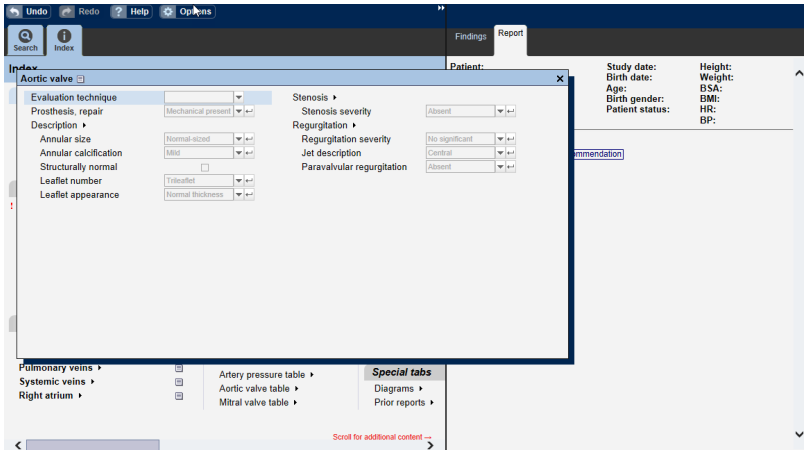
	Action	Image/Explanation
6	Confirm that the units were changed successfully and that no errors were reported.	
7	Run an error check and save the KB.	Confirm that there are no errors and validate any changes that require validation.

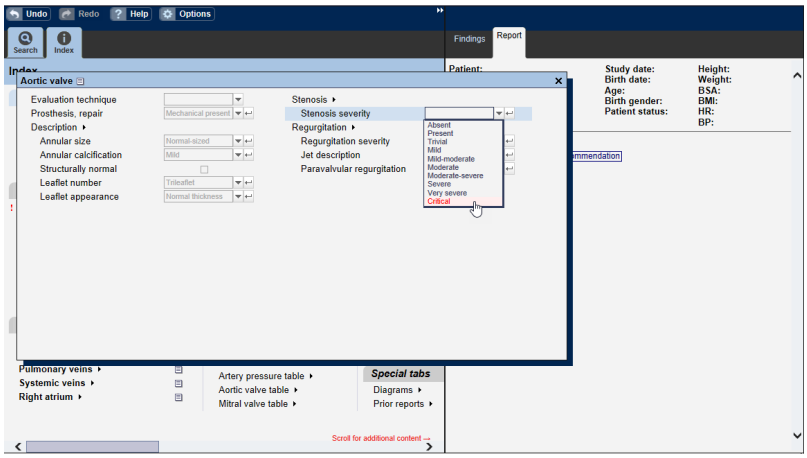
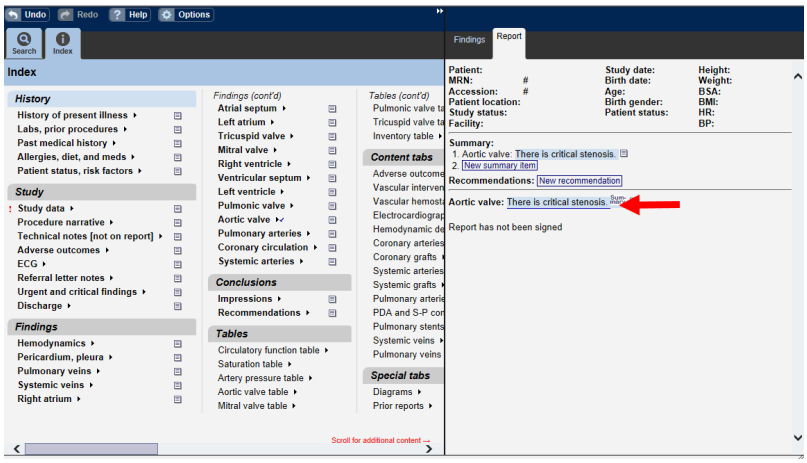
Testing the IAC Placeholders

	Action	Image/Explanation
1	Open the patched KB in **SRCT.**	NOTE: This patch must be tested using **SRCT 8.0** or greater.
2	Click **Test KB** to launch Report Wizard.	
3	Start a blank TTE study, then navigate to the **Study** tab. In the **Technical notes** section, select **Enforce compliance** in the **Placeholders** picklist.	

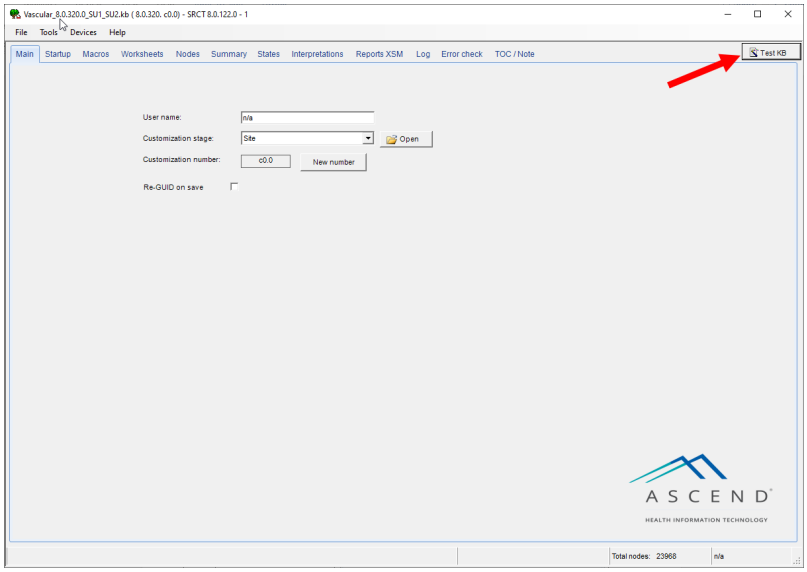
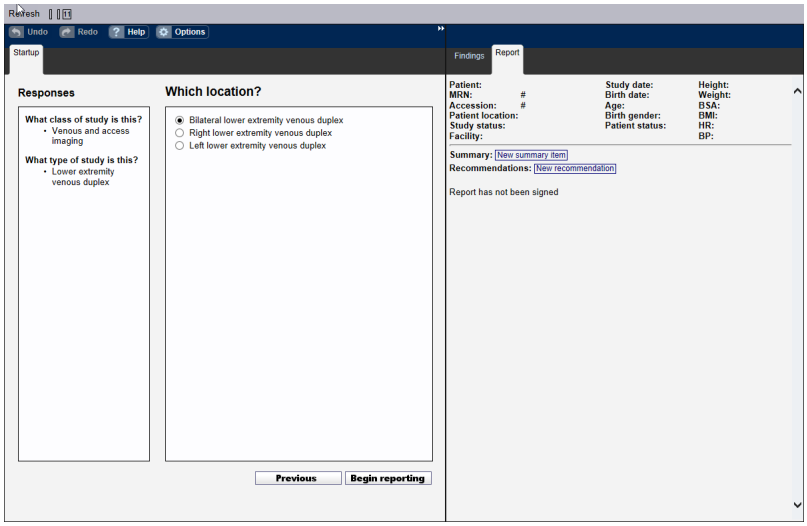
	Action	Image/Explanation
4	Confirm that the IAC required placeholders appear in the report.	
5	Manually enter a measurement for an anatomical structure with a required placeholder (e.g., Left Atrium). Do not enter any findings prior to entering the measurement. Confirm that the required placeholder remains next to the anatomic structure heading in the report.	

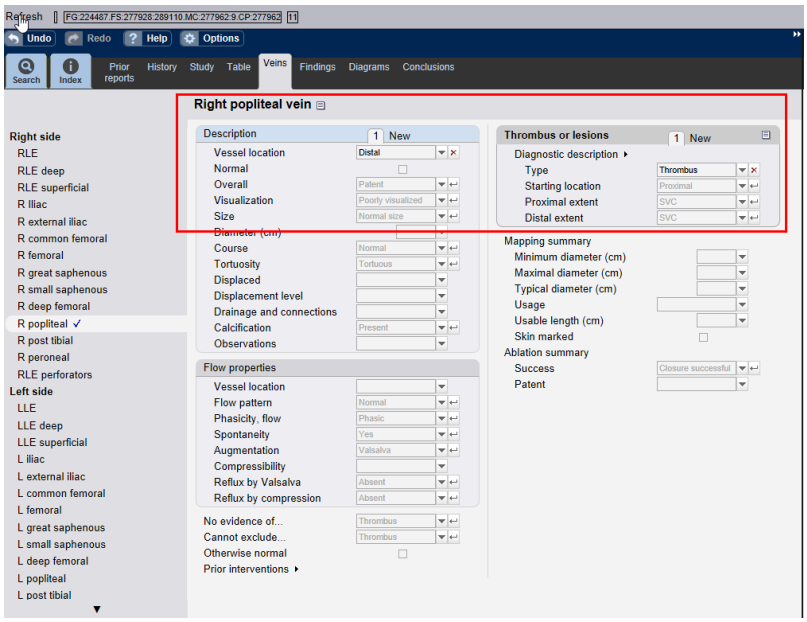
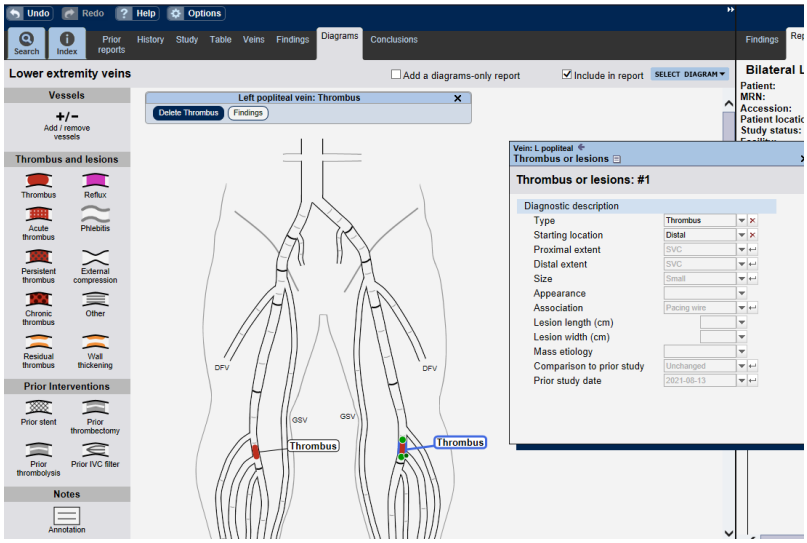
Testing the Critical Aortic Stenosis Sentence

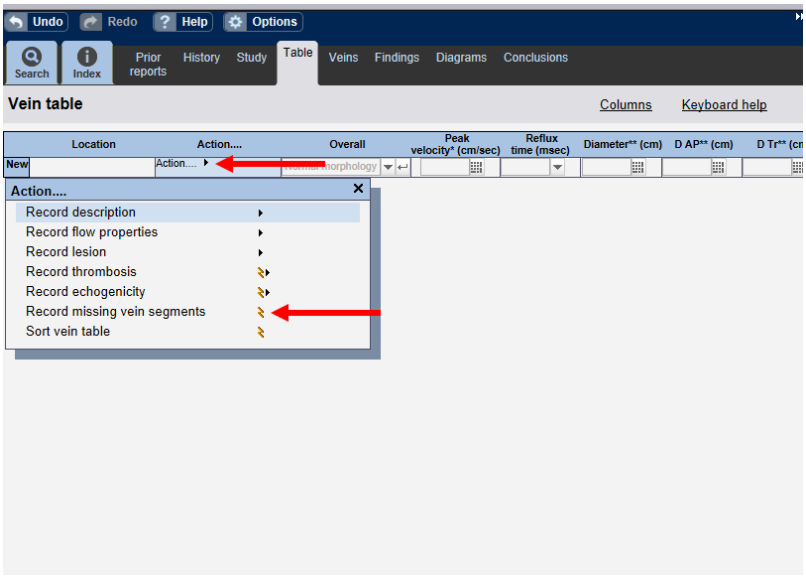
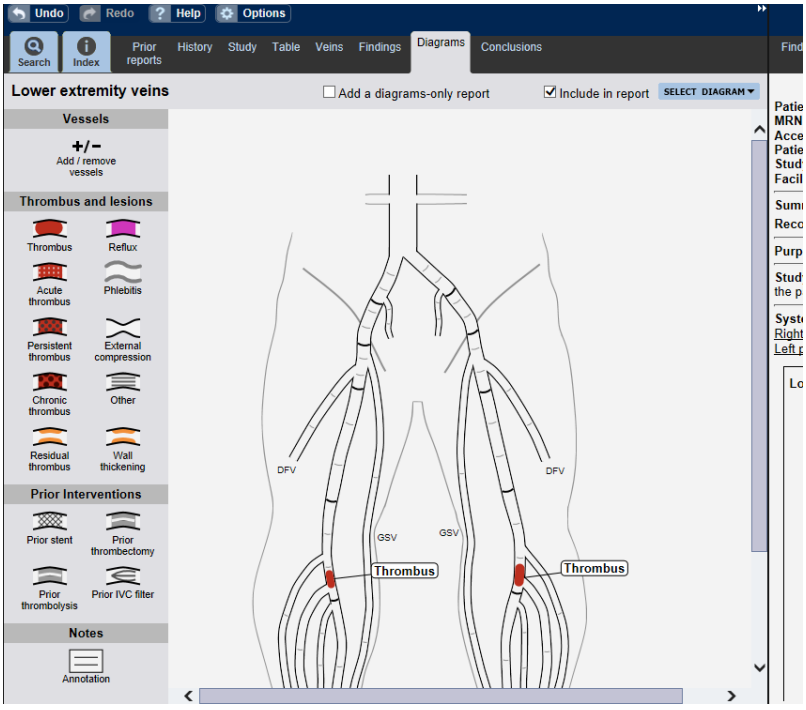
	Action	Image/Explanation
1	Open the patched KB in **SRCT.**	NOTE: This patch must be tested using **SRCT 8.0** or greater.
2	Click **Test KB** to launch Report Wizard.	
3	Start a blank study using **Enter Manually** in the start screen, then navigate to the **Aortic Valve** form**.** tab.	

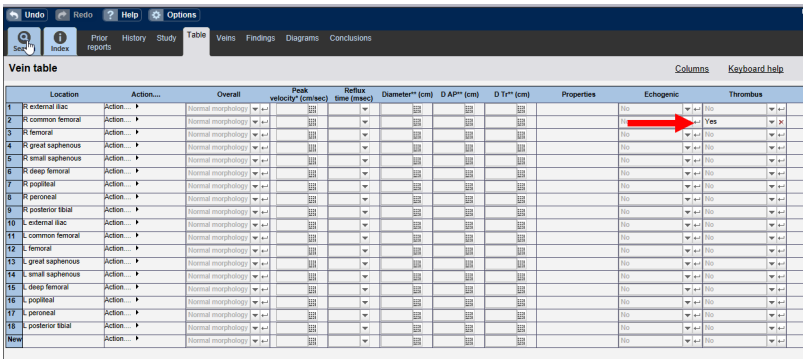
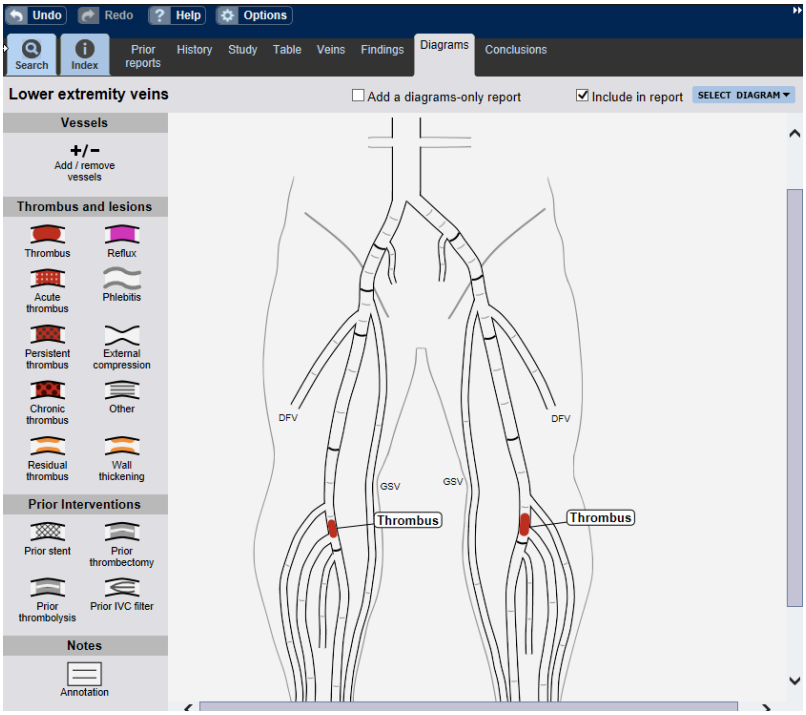
	Action	Image/Explanation
4	Expand the **Stenosis severity** picklist and select **Critical**.	
5	Confirm that the critical stenosis sentence appears in the report.	

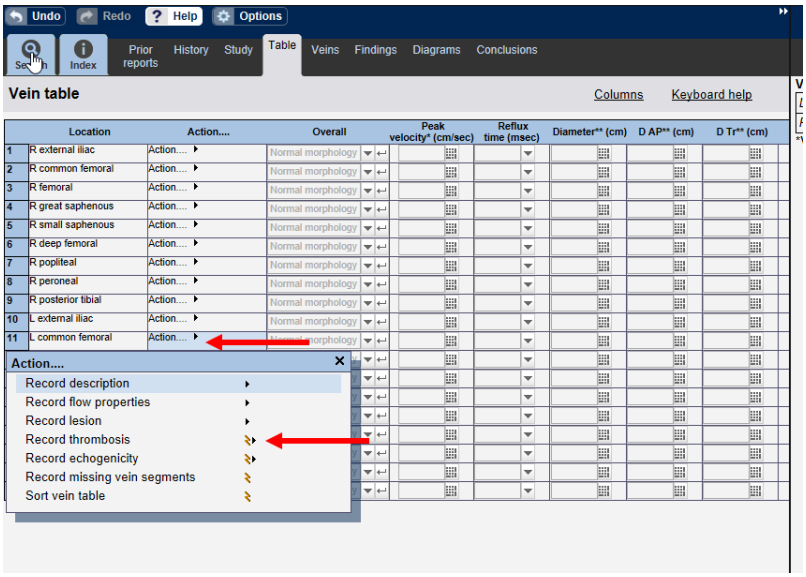
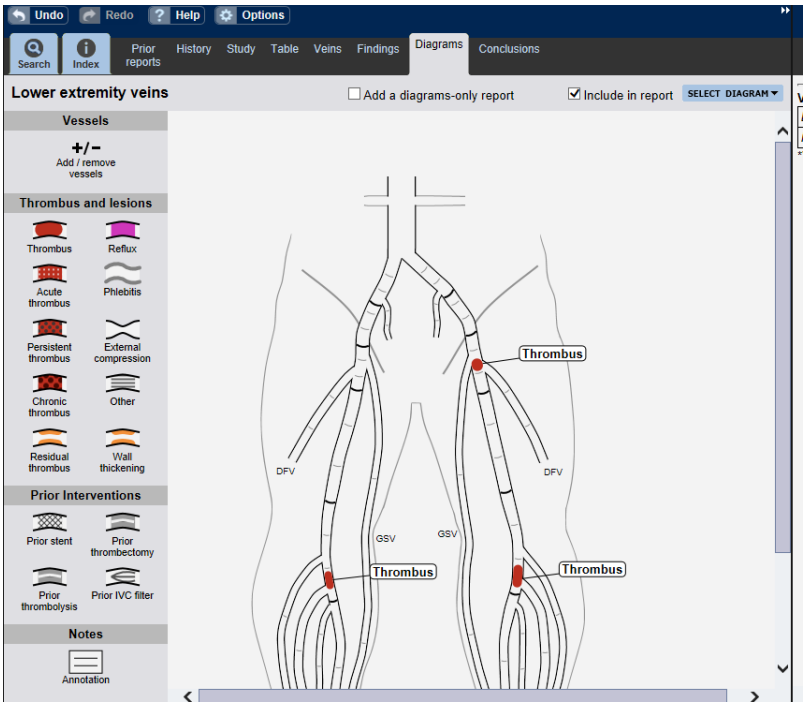
Testing the Venous Diagrams

	Action	Image/Explanation
1	Open the patched Vascular KB in **SRCT.**	NOTE: This patch must be tested using **SRCT 8.0** or greater.
2	Click **Test KB** to launch Report Wizard.	
3	Answering the start screen questions, start a **Venous** study	

	Action	Image/Explanation
4	Navigate to the **Veins** tab and record a thrombus in the Distal Right Popliteal.	
5	Navigate to the **Diagrams** tab and record a thrombus in the Distal Left Popliteal.	

	Action	Image/Explanation
6	Navigate to the **Table** tab to display the Vein table. Select **Action** and then **Record missing vein segments**.	
7	Navigate back to the **Diagrams** tab and confirm that the two previously drawn lesions remained in the diagram in their original vessel/segment.	

	Action	Image/Explanation
8	Navigate back to the **Vein** table and record **Yes** for thrombus in the **Right Common Femoral Vein**.	
9	Navigate to the **Diagrams** tab and confirm that no thrombus has been added to the **Right Common Femoral** vein.	

	Action	Image/Explanation
10	Return to the **Vein** table select **Actions** in the **Left Common Femoral** vein row, then select **Record Thrombosis.**	
11	On the **Diagrams** tab, confirm that the thrombus has been added to the **Left Common Femoral Vein.**	

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