

Sample Screenshot Summary:

Note the file naming format and examples of timecodes

NOTE: Please note that some steps are time-consuming and repetitive. If a video becomes too long due to repetitive editing processes (such as using the Paint tool in 3D Slicer or mesh editing in MeshMixer), it is acceptable to cut the footage at a chosen point, as long as the editor determines that the general method of performing the repetitive task has been clearly demonstrated.

- **20694_screenshot_1.mp4**

- o 2.1.2 (Clicking on Add Data and selecting DICOM images from the file directory)

- **20694_screenshot_2.mp4**

- o 2.1.3 (Axial, sagittal, and coronal views displayed in the Slice Viewer)

- **20694_screenshot_3.mp4**

- o 2.1.4 (Contrast being verified to distinguish between myocardium and heart chambers)

- **20694_screenshot_4.mp4**

- o 2.2.1 (Navigating to the Segment Editor module. Clicking Add in the Segment Editor to create a new segmentation)

- **20694_screenshot_5.mp4**

- o 2.2.2 (Selecting Threshold as the segmentation tool. Setting Lower Threshold and Upper Threshold values)

- **20694_screenshot_6.mp4**

- o 2.2.3 (Adjusting the threshold range manually)

- **20694_screenshot_7.mp4**

- o 2.3.1 (Visual inspection of segmentation in axial, sagittal, and coronal views)

- **20694_screenshot_8.mp4**

- o 2.3.2 (The Paint tool being selected in the Segment Editor module. Segmentation being added, brush size being adjusted for small or complex areas)

- **20694_screenshot_9.mp4**

- o 2.4.1 (The Erase tool being used to remove the unwanted tissues or artifacts present in the segmentation)

- **20694_screenshot_10.mp4**

- - o 2.4.2 (The Scissors tool being used to cut the larger incorrect areas. TXT: Check the segmentation in all 3 planes to avoid removing important structures)

- **20694_screenshot_11.mp4**

- - o 2.5.1 (A shot of the correct segmentation where the myocardium is fully segmented, with no missing or extra areas, and the heart chambers are correctly defined, without unwanted connections)

- **20694_screenshot_12.mp4**

- - o 2.5.2 (Apply being clicked and the segmentation being finalized)

- **20694_screenshot_13.mp4**

- - o 2.5.3 (Segmentations, followed by Export to Files, and then STL format being selected to export the STL file)

- **20694_screenshot_14.mp4**

- - o 2.6.1 (Opening MeshMixer and navigating to File, followed by Import. Loading the STL files for both the myocardium and heart chambers)

- **20694_screenshot_15.mp4**

- - o 2.7.1 (Selecting each model and navigating to Edit, followed by Make Solid) **00:00-00:13**
 - o 2.7.3 (Adjusting the Solid Accuracy slider to balance detail and mesh stability and clicking Apply. Verifying the model) **00:13-00:15**
 - o 2.7.2 (In the pop-up window, Solid Type: Accuracy being selected) **00:17-00:18**

- **20694_screenshot_18.mp4**

- - o 2.8.1 (Select tool being used to highlight small unwanted artifacts and Edit, followed by Discard being used to discard them)

- **20694_screenshot_19.mp4**

- - o 2.8.2 (Navigating to Select, followed by Modify, Erase & Fill to reconstruct the disrupted areas)

- **20694_screenshot_20.mp4**

- - o 2.9.1 (Modify, and then Smooth being selected) **00:00-00:28**
 - o 2.9.2 (The Smooth Strength slider being adjusted) **00:28-00:43**

- o 2.9.3 (Shift and Left Click being used to deselect areas that do not require modification) *Not performed – this step was skipped in the method replay and is not mandatory.*

- **20694_screenshot_23.mp4**

- o 2.10.1 (Navigating to Edit, Boolean Union, and selecting both models. The joined structure without internal holes or overlapping surfaces being shown. TXT: Inspect the intersections and refine as needed using Erase & Fill or Smooth tools)

- **20694_screenshot_24.mp4**

- o 2.11.1 (Navigating to File, followed by Export. Saving the final unified model in STL format)