



Center for Advanced Imaging Innovation and Research

# Slicer Prostate Workflow

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## Learning Objective

Segment prostate images using the Slicer Prostate Extension

Audience: End-users

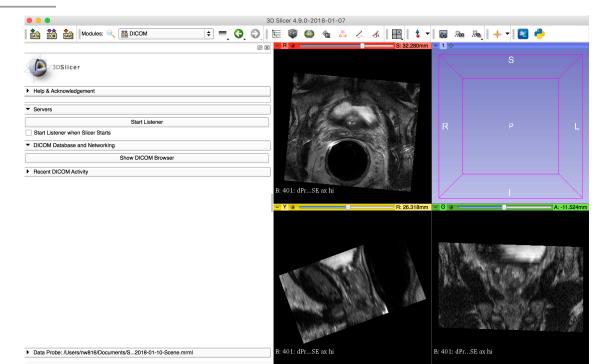
1. Download the SlicerProstate Extension <u>https://github.com/SlicerProstate/SlicerProstate</u>

2. Download the Publicly Available Dataset <a href="http://www.insight-journal.org/midas/collection/view/178">http://www.insight-journal.org/midas/collection/view/178</a>

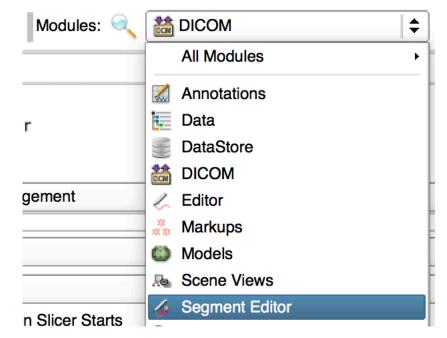
3. Load DICOM images in 3D Slicer by clicking the DICOM button, clicking import, and selecting the appropriate DICOM folder

DATA		Modules:	Reference Contraction Contraction	<b>¢</b>	Import	Export	Query	Send	Remove	Repair	»
	m lo	laise the DICOM nodule for bading DICOM atasets.			Patients:	•			×	Studies:	9
	36	JICEI			D-4i-		Det		D-4:		

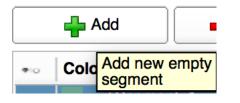
DICOM images should load and appear in all three planes on the right hand side of the user interface



4. Switch Module to "Segment Editor"



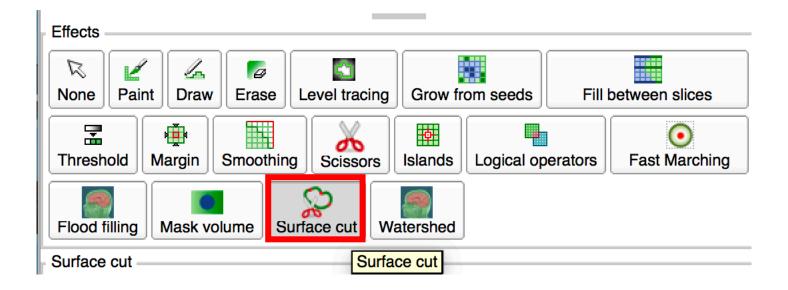
5. Click "Add" to add a new region of interest



6. Double click to change label name to "Prostate"

<b>#</b> io	Color	Name
•		Prostate

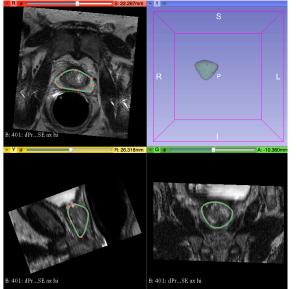
7. Click the "Surface Cut" button under the Effects tab on the bottom left of the screen



#### 8. Click the fiducial placement button located in the surface cut menu

Surface cut						
Use markup fiducials	Use markup fiducials to fill a segment Show details.					
Fiducial Placement:	\$	Ť.	Edit			
Data Probe: /Users/nw816/Doct Place a markup point 01-10-Scene.mrml						

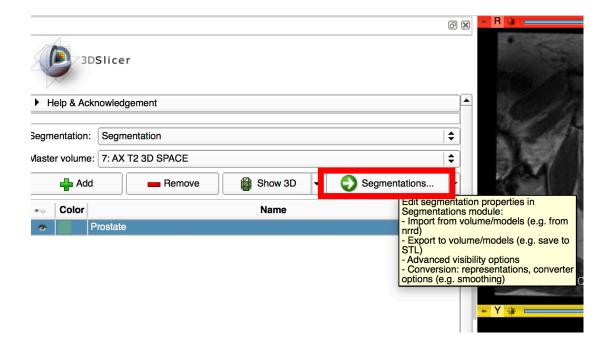
9. Mark edges of prostate in all 3 planes until it is appropriately segmented



#### 10. Click "Apply" to apply segmentation

Surface cut	Surface cut						
Use markup fiducials to fill a segment Show details.							
Fiducial Placement:			Edit				
Operation:	Erase inside	Fill inside	Set				
	<ul> <li>Erase outside</li> </ul>	Fill outside					
	Cancel		Apply				

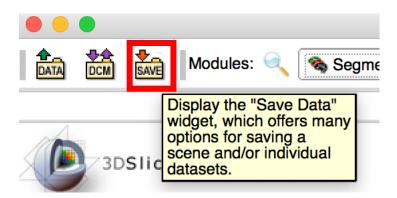
#### 11. To Export model, click "Segmentations"



#### 12. Make sure "Models" is selected and click Export button

Export	Import					
Labelmap	Models					
Export to new mod	el hierarchy	\$				
▼ Advanced						
Visible		\$				
7: AX T2 3D SPACE		\$				
	C Labelmap Export to new mod Visible 7: AX T2 3D SPACE	Labelmap     Models     Export to new model hierarchy Visible				

12. Click "Save" on the top left hand side of menu



### 13. Scroll down to prostate.vtk and save in preferred format

	붭 Save Scene and	Unsaved Data		
		Show options		
✓ File Name	File Format	Directory		
✓ 2018-01-10- Scene.mrml	MRML Scene (.mrml)	/Users/nw816/Documents/Slicer_Project_Week		
✓ 7 AX T2 3D SPACE.nrrd	NRRD (.nrrd)	/Users/nw816/Documents/Slicer_Project_Week		
Segmentation.nrrd	Segmentation (.nrrd)	/Users/nw816/Documents/Slicer_Project_Week		
Prostate.vtk	Poly Data (.vtk) XML Poly Data (.vtp) STL (.stl) PLY (.ply)	/Users/nw816/Documents/Slicer_Project_Week		
CI	Wavefront OBJ (.obj) ange directory for selected file	s Save X Cancel		