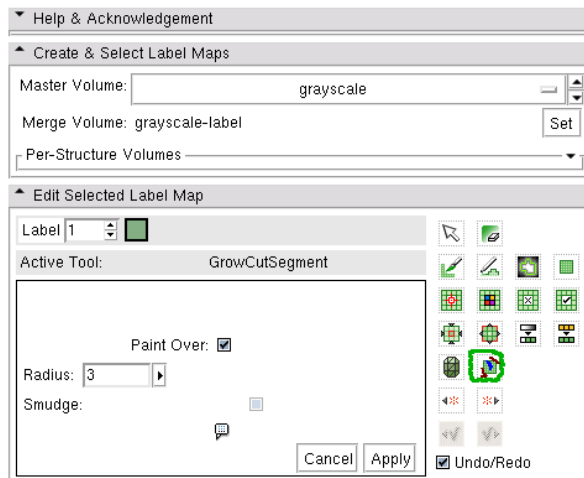
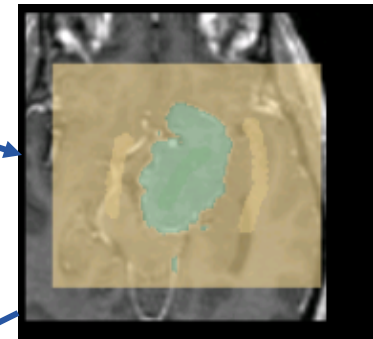


Interactive Segmentation in Slicer3.6.2

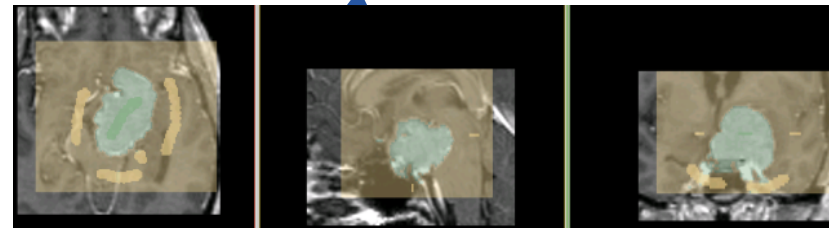
- GrowCut image segmentation is in Slicer's Editor Effect
 - Incorporates paint tool interaction
 - Optionally interact using "draw", "paint" Editor effect
- Supports simultaneous viewing of user inputs and segmentation
- Supports editing segmentation with additional gestures
- Simple user interface (no exposed parameters)



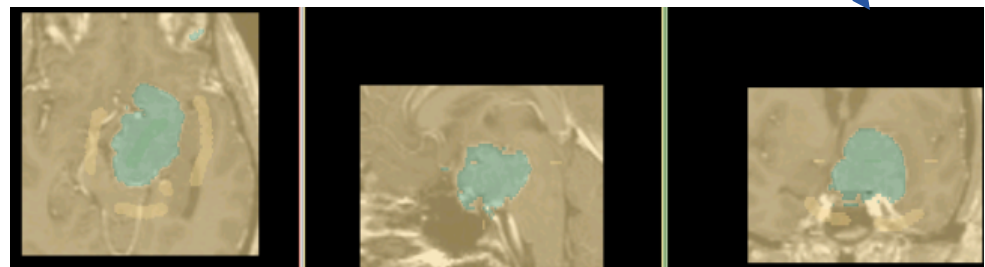
User painted gestures



Segmentation overlaid with gestures



Additional User painted gestures



Final Segmentation overlaid with gestures

Active Learning For Guiding Gesture Placements

- **Gesture suggestions to user** combines GrowCut segmentation with active learning using SVM
 - Suggestions are selected using a two-step approach
 - **Step I** treats GrowCut segmentation and SVM classification as diverse ensembles to select query candidates
 - **Step II** employs SVM margin-based gesture selection on the query candidates
- Number of interactions required for novel image segmentation with learning is 50% less than without learning
- Algorithm guided interactions minimizes segmentation variability

