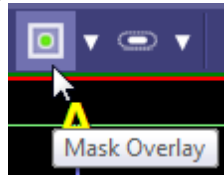
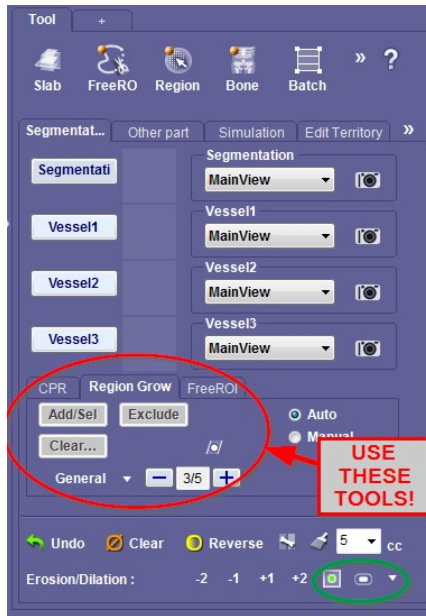


# Liver Volume LD2 with Segmentation

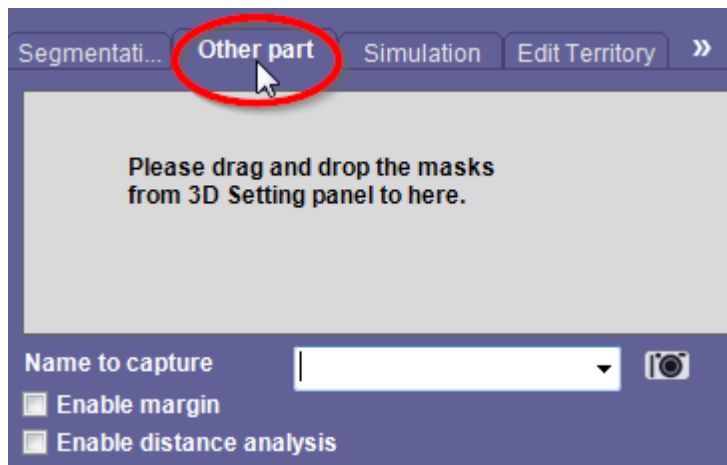
1. Load thin data into LD2
2. Click the Segment button in the LD2 Tool Panel. The segmentation is displayed in the 3D Main Viewing window.
  - a. Turn on the Green Mask Overlay to check the accuracy of the segmentation.



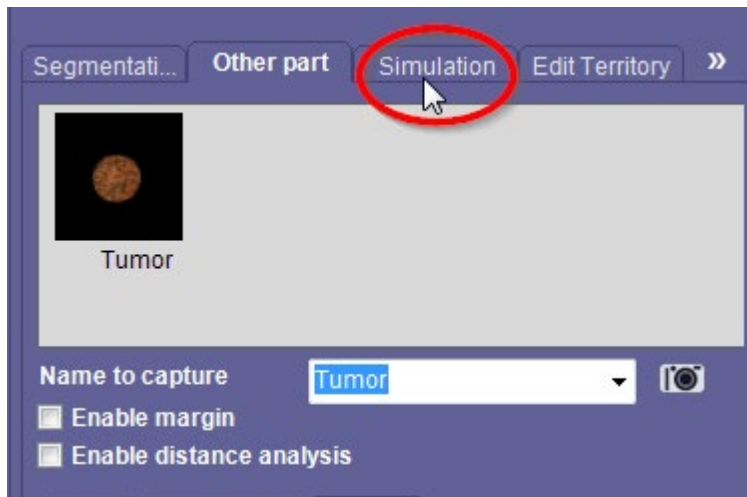
- b. Use the Free ROI & Dynamic Region Grow tool from **inside** the LD2 Tool panel to make any necessary corrections or to perform Manual segmentation.



3. Once Segmentation is complete and user has verified accuracy; capture the image by left clicking on the camera icon in the same row as the Segment button in the LD2 Tool panel. Segmented image will generate in the thumbnail next to the Segmentation button.
4. Add images to output panel:
  - a. Click “Alt + V” for liver Volume, turn on show mask (shadow view) and capture image.
  - b. Click “Ctrl + Alt + C” for “all in one” capture
  - c. From axial view, capture image periodically to “show” your work (approx. 5 images)
5. To segment and select other areas of interest to be identified and measured separately, left click on the “Other Parts” tab to open. (i.e. Tumor)

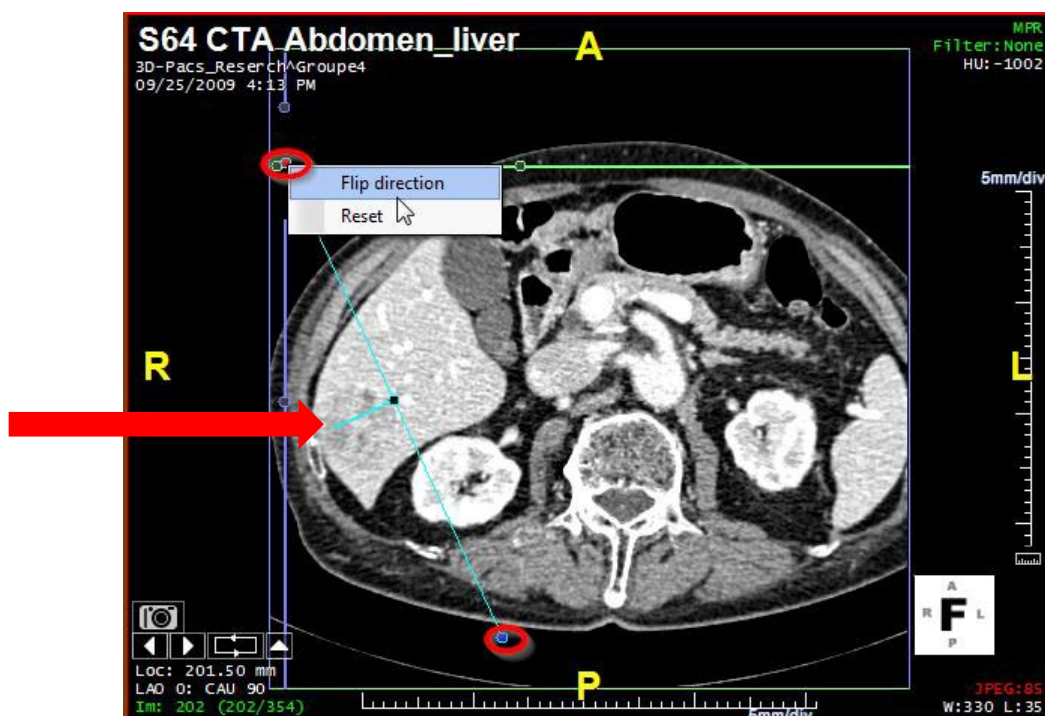


- a. Select the Free ROI tool from the LD2 tool panel and either using free hand ROI, Circle ROI or Sphere ROI, and use one of the MPR images to locate and identify the area to be added. All three tools will interpolate between slices so ROIs do not need to be drawn on every slice.
    - i. For Circle ROI: Left click and drag the mouse across the area of interest so that the circle is drawn around the area and repeat for several levels.
    - ii. For Sphere ROI: find the MPR image where the spherically shaped object has the largest diameter; left click and drag the mouse across the area of interest so that the circle outlines the object. This does not need to be repeated at different levels. The software automatically draws smaller ROIs above and below from that center ROI the user created.
  - b. Type the name of the segmented area into the field (i.e. Tumor) and click on Capture icon. Add Tumor Volume (“Alt + V”) to output panel.
8. Click the Simulation tab



To make a cut plane:

- a. Hold down the shift key then draw a line along the image extending well beyond the boundaries.
- b. To change the direction of the cut: Right mouse click on one of the control points and select “Flip direction” from the popup menu. BEFORE clicking “Cut” button. (The “dash” will be on the side removed or cut away)



- c. To edit the shape of the cut plane: use the nudge tool by holding down the Alt key and left click and hold on the image near the line where you want to move the plane. As you move the mouse close to the cut line the cut line will bend.
  1. When using the nudge tool: the further away from the cut plane you are when you left click the larger the nudge circle appears, the closer to the line the smaller the nudge ball appears
  2. To delete the cut plane: right click on one of the control points and select "Reset" from the popup menu. The user can then redraw a new cut plane.