Modified from **"Medical Student Planning Workshop"**

Instructions for Eclipse® Planning station

Opening the simulation CT (radiation plan)

1. Open the "Contouring" application in Aria (ask your instructor for assistance, a password may be required). This may be accessed through "Quicklinks".
2. Enter your patient's name or MRN in the "Search Patient" bar.
3. TIP: Tabs allow you to go between **Contouring**, **Image Registration** (for fusing images), **External Beam Planning** (for drawing blocks for palliative and conformal treatments), and **Plan Evaluation.**

Viewing options

1. Tools can be selected from the <u>menu bar at the top of the screen</u>.

   a. Use the magnifying glass to **zoom** in **(+)** and out **(-)** …TIP: in addition to clicking the button, you can drag across the screen to zoom in on a certain area!
   b. Select the **hand** and then click on the screen to **drag** the image to center on your region of interest.
   c. Use the **ruler** to measure distances on the image (in any plane!)
2. Use the scroll wheel on the mouse to scroll up and down through the axial images of the CT scan….TIP: Notice that **dotted reference lines in blue and green** appear on the coronal and sagittal reconstructions. You can also scroll through the coronal and sagittal scans by putting your mouse over those windowpanes.
3. Change "**Window/Level**" (if needed to improve gray-scale for your tissue of interest):
   a. Under the "View" menu select Window/Level (or use icon 3rd from left in bar above)
   b. Right-click on the slider to see a list of Window/Level presets
   c. Select "Abdomen" to view soft tissue, "Bone" to view bone (highest density), or "Lung" to view lung tissue (lowest density) and determine which window/level allows you to best delineate your target. You can always switch between them while contouring.

Contouring the target (GTV or CTV) or OARs:

1. Hover mouse over the box in upper left of the screen. A list of prepopulated structures will appear below
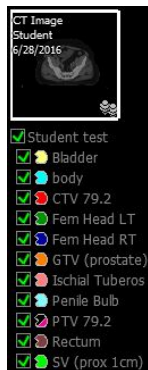
   NOTE: Structure sets in other versions of ARIA look like this:
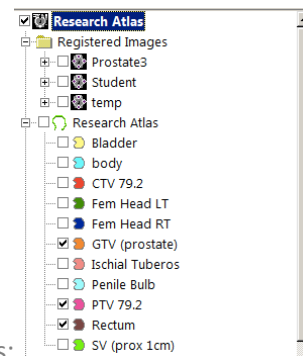
2. Check or uncheck the boxes to make the contours appear or disappear from view

3. Create a **new structure** by right clicking text at the top of the structure list (ie this structure list is called "Student test" and is selected so appears bold) →

4. You have to select a Label for your structure….if all else fails, choose "Undefined Normal Tissue". You can **rename** the structure in ID (or later right-click Properties). FYI You cannot use the same name twice.

5. To begin contouring, you must **select your structure** so that it appears bolded (ie GTV here) →
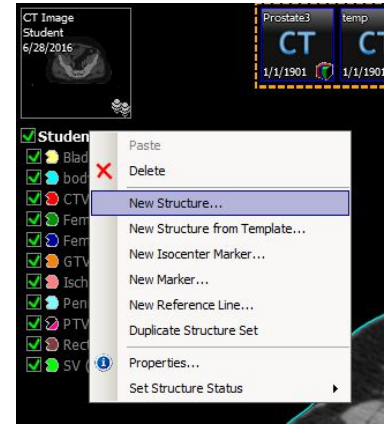
6. Contour the GTV by selecting either the pencil or paintbrush tool.

   a. To use the **pencil (aka "Draw Planar Contour")**, click around your area of interest until you close the structure (or right-click to close).

   b. To use the **Brush**, click and "paint" your area of interest. Select "static brush" if you don't want it to deform to the CT image.You can adjust the size of the paintbrush in the window that appears.

   c. To erase, either hold shift while contouring or select the **Eraser** .

   d. <u>Note</u>: you can only modify your contours on the axial images
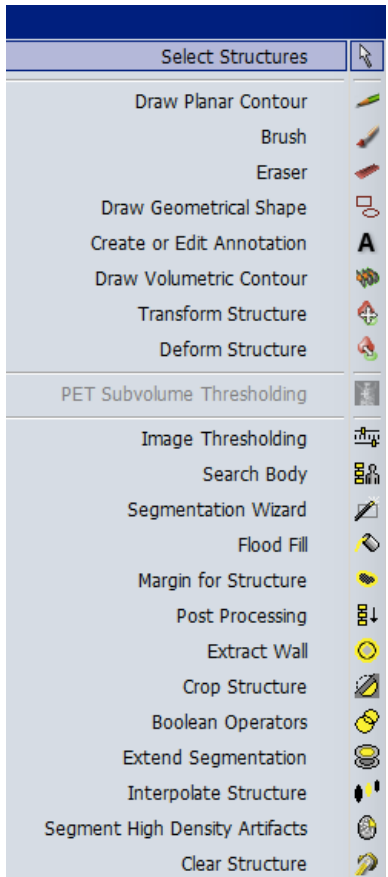
7. If you have a large structure, contour every other slice and **Interpolate** →

8. If you want to combine 2 structures into one new structure (such as prostate + SV for CTV), use **Boolean Operators**. Click the first structure, then click the 2 overlapping red circles, then click the second structure. *Check for correct syntax in OPERATION (this can be finicky).* Then assign the name of the new structure:
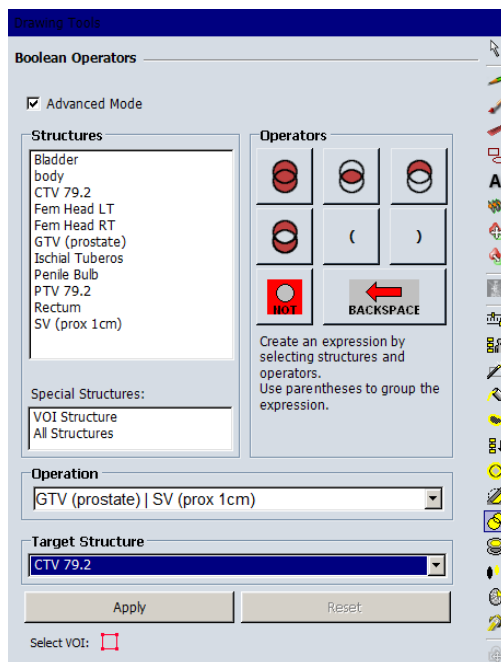
Create a PTV – create a planning target volume with adequate margins to account for variability in patient set-up.

1. Select "**Margin for Structure**" icon in the toolbar ⬛ or under the "Contouring" menu. The window on the following page should appear…

2. Select "CTV" (usually you will expand the PTV from CTV) under the drop-down menu for "Create Margin From" →

3. Specify your margin of expansion in centimeters. This is generally between 0.5 – 1 cm. Discuss with your instructor what is an appropriate expansion based on your patients immobilization and on-board imaging.

    a. Note: To expand the margin different → amounts in different directions, uncheck "Use symmetrical margin" and enter each direction.

4. Click "OK" to complete the expansion. *If you want to change your margins*, just repeat steps above – all contours in "PTV" will be replaced each time you re-run the expansion.

5. If you are contouring in the H&N (for example) and your CTV is close to the skin, you may need to crop a uniform expansion out of the air. Click "**Crop Structure**" from the toolbar. You can specify "Body" and even a margin from the surface (which is often needed for radiation dose to build-up).
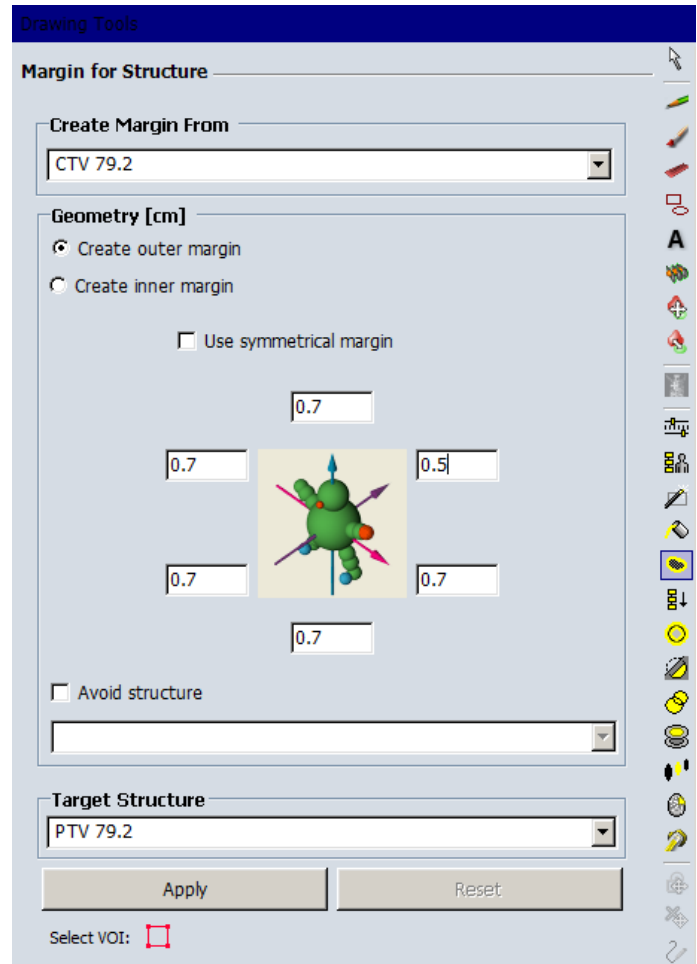
For better or worse, the remainder of the tools in the toolbar rarely get used… ☺