

**Modified from “Medical Student Planning Workshop”**

**Instructions for Contouring in the Pinnacle Planning station**

**Opening the simulation CT (radiation plan)**

1. Click the Pinnacle button to open the Launch Pad



2. Click the Institutions button



3. Select the appropriate institution
4. Click “Dismiss”
5. Click the Planning button



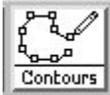
6. Select the appropriate patient. Click **Planning**.
7. To select **tools** (scroll, pan, zoom, etc) right click on the image, select a new tool, click dismiss



8. Use the up/down arrow keys to **scroll** through the scan one slice at a time.
9. You can also set the middle mouse button to switch between zoom, pan, and scroll by clicking  with the middle mouse button.
10. Change the “Window/Level” to optimize your view of the patient’s CT
  - a. Right click on image
  - b. Select “Window/Level”
  - 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.
  - d. Click “Dismiss”

## Contouring the target (GTV or CTV) or OARs:

1. Scroll to the target lesion and then **zoom** in.
2. Click “Contours” at the top of the screen.



3. Click “Add ROI” to create a new structure
4. Rename this structure “GTV” (or whatever you are drawing) and change the “ROI type” to match
5. Change the “2D Display” to “Poly” to view your contours on the sagittal and coronal reconstructions.



(Note: you can only modify your contours on the axial images)

6. Contour the GTV by selecting the contour tool 
  - a. You can also select either of the **pencils** to hand draw or mark points one by one. Try adjusting the diameter of the contour tool.
  - b. Once you have drawn an initial contour, you can expand or add to it by clicking inside and drawing out, or to erase click outside and move in.
  - c. You can **erase** the entire slice by selecting  and dragging over the contour.
  - d. Make sure to align your sagittal and coronal images over the GTV and check the accuracy of your contours in all three dimensions.
7. Contour the GTV on every slice. Move up and down in the scan with the up/down arrow keys.

## Create a PTV – create a planning target volume with adequate margins to account for variability in patient set-up.

1. Click “Add ROI”
2. Rename this ROI “PTV” and change the “ROI type” to “PTV”
3. Change the “2D Display” to “Poly” so we can see it in three dimensions.
4. Click “ROI Expansion/Contraction” at the bottom of the window
5. Select “GTV” as the Source and specify “PTV” as the ROI to modify.
6. Specify your margin of expansion in cm. You can either specify a uniform expansion or you can specify the expansion individually for L/R, A/P, and Sup/Inf.
7. Click “Expand” and then “Dismiss”
8. If you want to change your margins, repeat the steps above. All the contours in “PTV” will be replaced each time you re-run the expansion.
9. Change 3D display to “Wireframe” so that we can see the PTV when we are looking in 3D mode later.



10. Repeat this step for “GTV”