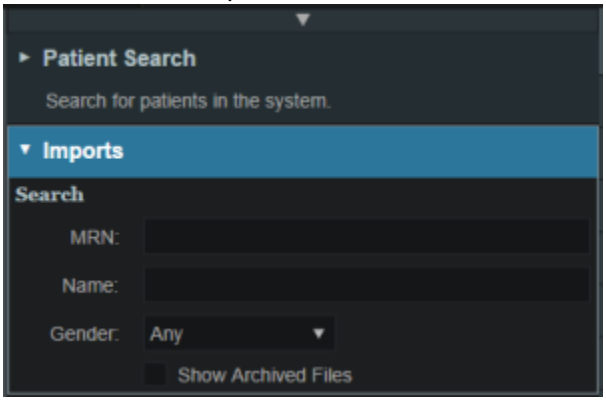
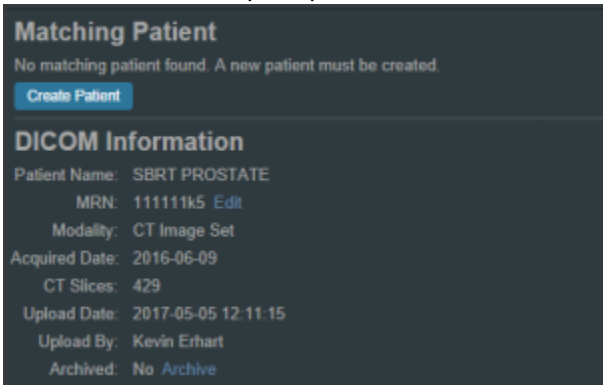
Importing Patient Data

Now that a patient has been uploaded from DICOM to the Thinknode RKS, the Planning App should recognize that new patient files are available to import into a Planning patient.

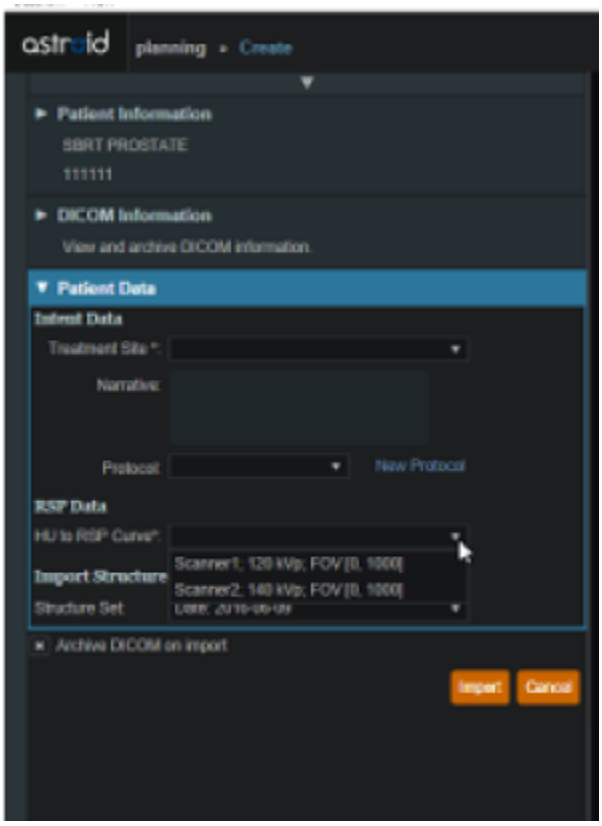
1. Open the Astroid Launcher and launch the Planning App from your realm
2. Once Astroid Planning starts, click on the Imports Block in the task control pane on the left side



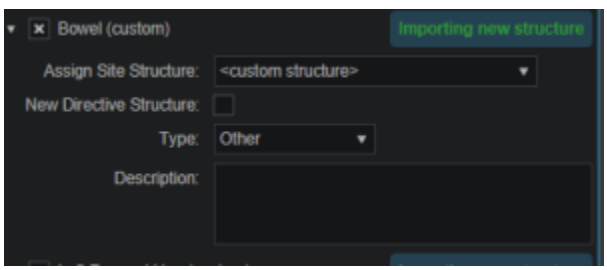
3. Select the CT image set from the list of available files for import
4. Ensure that the MRN is correct
5. Click the *Create Patient* button to start the import process



6. Ensure that the date and time displayed in Astroid matched the current date and time in the current Windows OS.
7. Fill in the requested Patient Intent, taking care to select the appropriate *Treatment Site* as this selection contains the template information that will be used during structure set import
8. Select the appropriate HU to RSP curve (as shown below)



9. The corresponding structure set (SS) file to import with these images will automatically be selected. The structures will show up below the Patient Data box in the Import structures box (note that the available choices will be automatically filtered based on the structure set DICOM UID information)
    1. The structures associated with the data set will be seen in a list of the available structures
    2. Here you may choose whether or not to import each structure by checking or unchecking the box beside each structure name
    3. Matched, Assigned, and Custom structures are designated with corresponding tags at the end of the structure name in the structure list
        1. You may only edit structures that are shown as *Custom*, which indicates the name did not exactly match a course structure from the *Treatment Site* template selected above
        2. For all custom structures, the type is by default set to “Other”, unless it contains the letters “TV” (as in PTV or CTV), in which case it is assigned the type of “Target”; the type may be changed here if needed
        3. Alternatively you may *Assign* a *Custom* structure to a course level template structure using the provided drop down menu (this is useful when structure names contain typos or contour names otherwise do not match your standard site protocols)
            1. Assigning a custom structure to a defined course structure will result in the imported structure inheriting all the predefined structure properties (e.g. name, type, color)



10. Once all structures have been selected, assigned, and edited as needed, click the *Import* button to create the patient and import the CT Images and Structures into it
11. The patient is now created and all available data has been imported
12. Click on the *Back to Import* button to return back to the *Imports* task

Structures

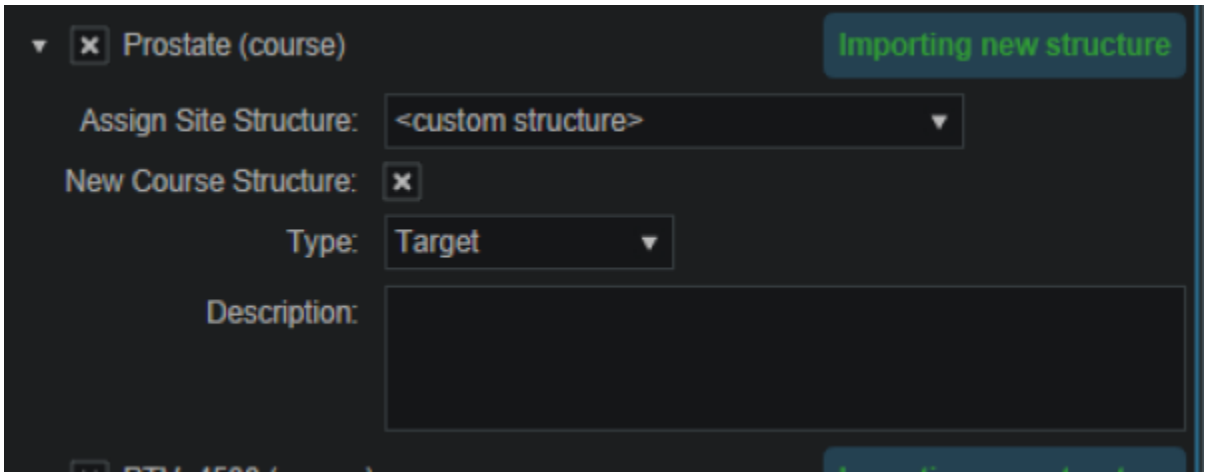
There are multiple levels that various structures can live at. Each level will effect how the structure will relate to the plan.

Site Level Structures

Site level structures are predefined templated structures. The user is not allowed to edit any aspect of a Site Level structure. Site level structures may be used for prescriptions as long as they have been designated as a Target.

Course Level Structures

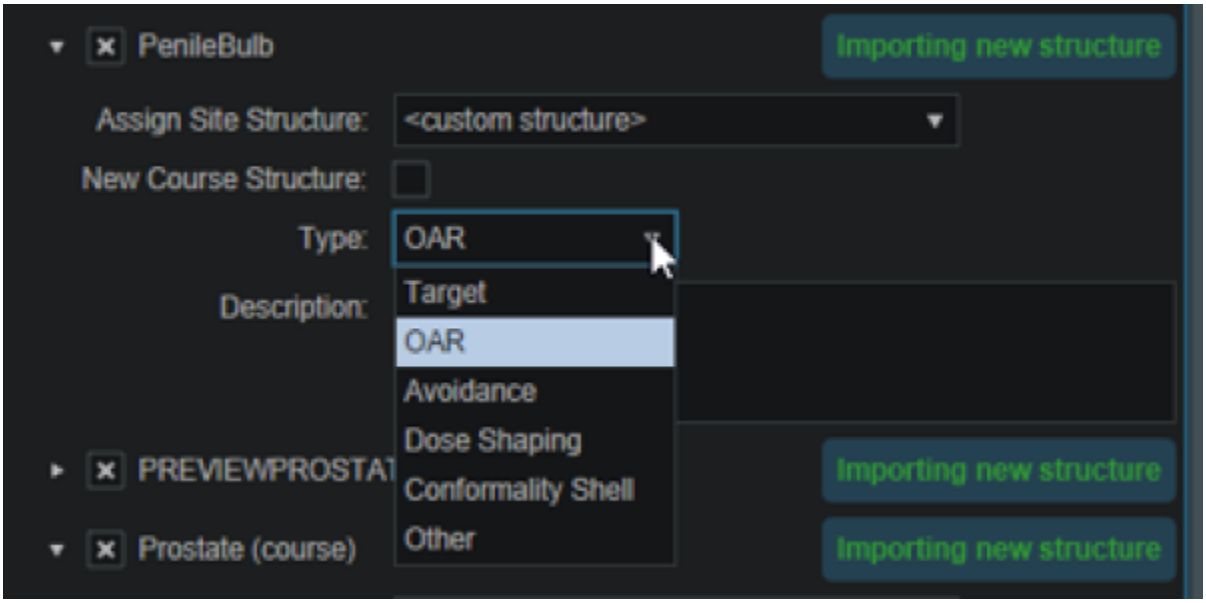
Course level structures are not predefined templated structures. Course level structures may be edited. A structure may be assigned as a Course level structure by choosing the box “New Course Structure”



The user at this point also has the choice of defining the Type of structure and also assigning it to one of the templated Site Structure. Structures that have been changed to Course level will have be designated as such by the word “course” appearing in parentheses beside the structure name. This is useful when a structure was misnamed during the contouring process. Course level structures that have been designated as Target structures can also be used for prescriptions. Ant structure with TV as part of its name will automatically be designated as a Course level structure.

Custom Structures

Custom structures show up at the Patient Model level. These are structures that were not part of the templated structures. The user has the option to assign a type of structure.



This assignment of structure type will determine the types of constraints or objectives you can put on the structure.

NOTE- Only structures with a Type of Target can be used as Beam Targets

NOTE- Site level, Course level and Custom structures can be shared within plans on the same patient

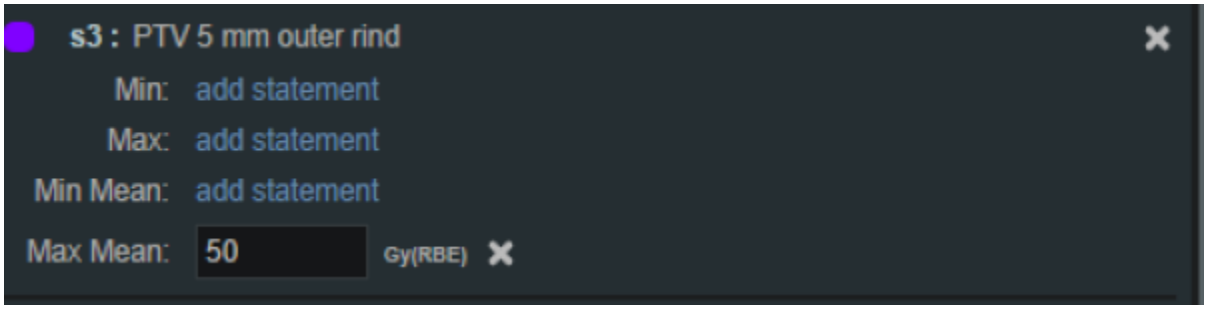
Plan Level Structures

Plan level structures are structures created with the Astroid TPS. These structures are derived from existing structures. See Patient Geometry on how these are created.

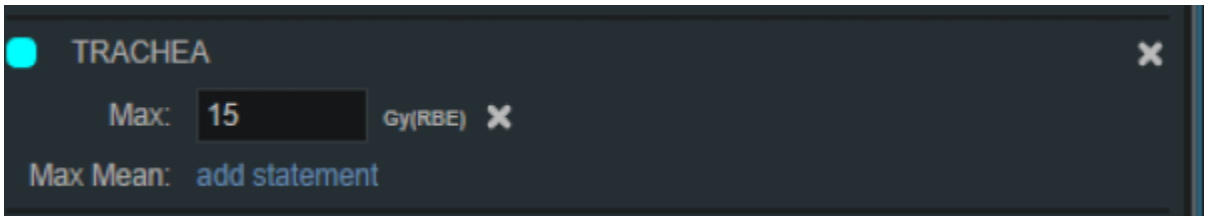
Using Structures in Constraints and Objectives

See Optimization Constraints and Optimization Objectives for definitions of Constraints and Objectives.

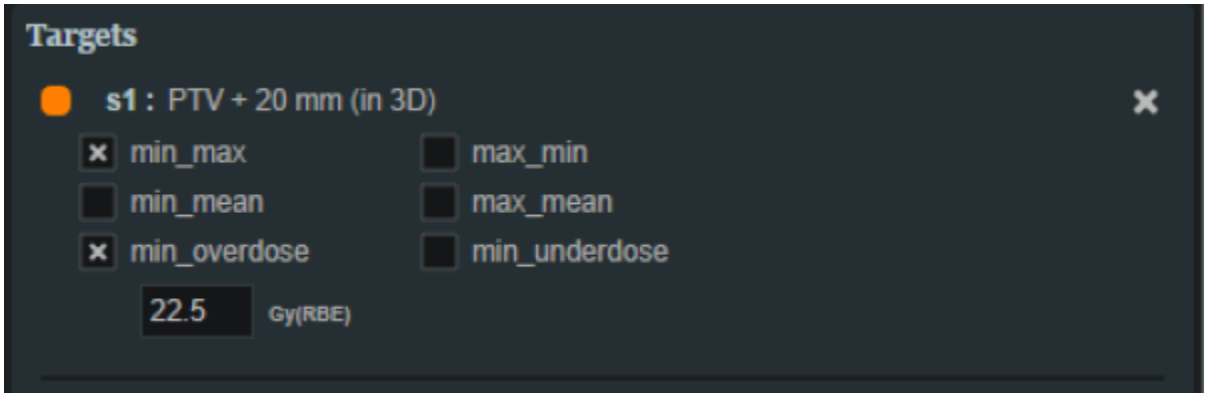
When the user is setting up their Constraints only on Targets will they have the ability to set minimum doses to be achieved for the minimum dose and the minimum mean dose. The user can also set the maximum dose they want to be achieved along with the maximum mean dose.



For all other structure types the user will only have the ability to set the maximum dose to be achieved along with the maximum mean dose.



Similarly when setting the Objectives the user can set objectives to both minimize and maximize the doses on Targets.



However on Non-Targets the user can only set objectives that will drive the dose down to these structures.