Patient Geometry

The Patient Geometry block allows the user to add points or edit points in the treatment plan. The user may also create uniform thickness boluses that can be used by beams in the plan.

Points

After choosing to add or edit a point, the user will be able to the edit the label, type (POI, localization, or dose reference), color, and description of the point. The geometric position of the point can be determined in one of two ways: as the center of a structure or as an explicit location.

Point Types

The types of points will determine how the point will be used in other features within the application. Below lists the supported point types and how these points are used:

- **POI:**
  - Used for reference in the Display UI
- **Localization:**
  - Used for reference in the Display UI
- **Dose Reference:**
  - Used for reference in the Display UI
  - Dose is shown at the specified point in the Dose Stats display view
  - Will be exported to Plan and Dose QA reports along with the dose/gamma values (see the applicable report second for further details)

Point Creation

The Center option allows the user to set the point's position to the center of a structure selected from the structure set.

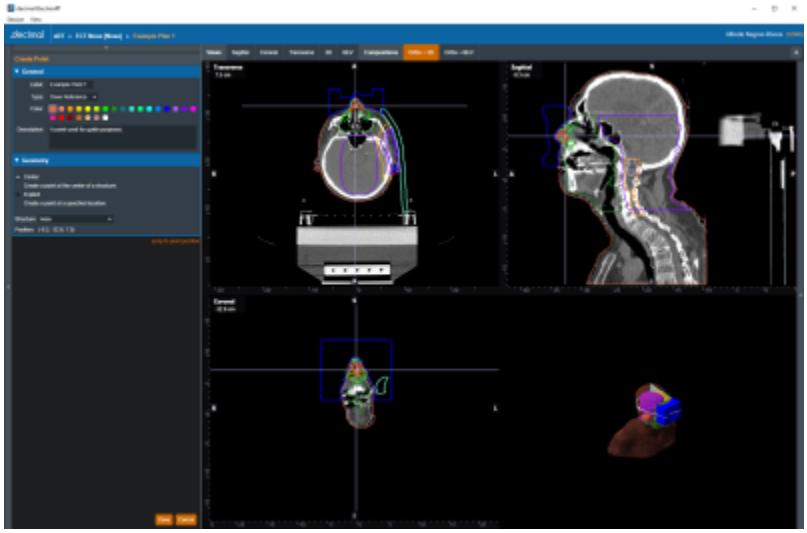

Fig. 1: Creating a Center Point

The Explicit option allows the user to set the XYZ coordinates or simply click on the CT image display to specify the point's position.

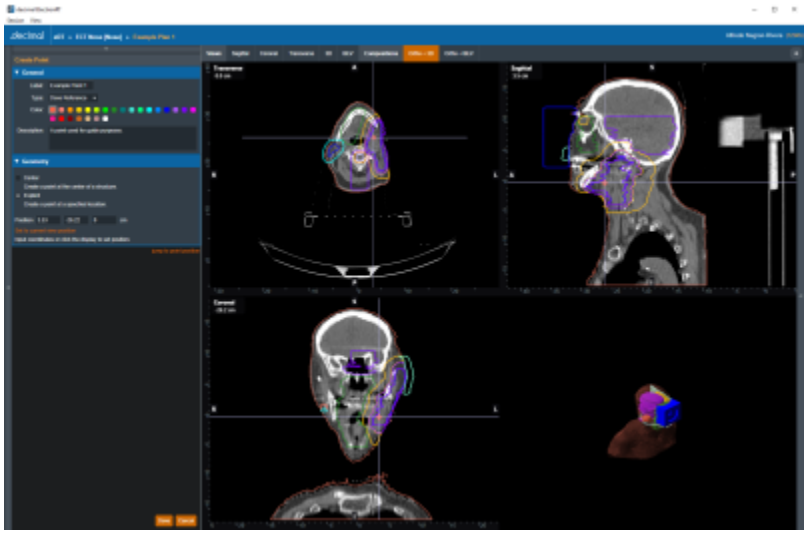

Fig. 2: Creating an Explicit Point

Uniform Thickness Boluses

The user has the option to add or edit uniform thickness boluses within the Patient Geometry block. When creating the bolus, the user can set the thickness and the reference structure. The shape of the bolus will be influenced by the selected structure (e.g. if the bolus will be placed on the patient's skin, the user should select the structure that corresponds to the patient's skin).

After selecting the structure, the user must specify the geometric extents of the bolus in each dimension. The user can either edit the coordinates of the extents by one of two ways:

1. **Manual Dimensions:** directly setting the dimension values for the UTB extents box
2. **Display Dragging:** drag the sides of the extents box shown in the CT image display.

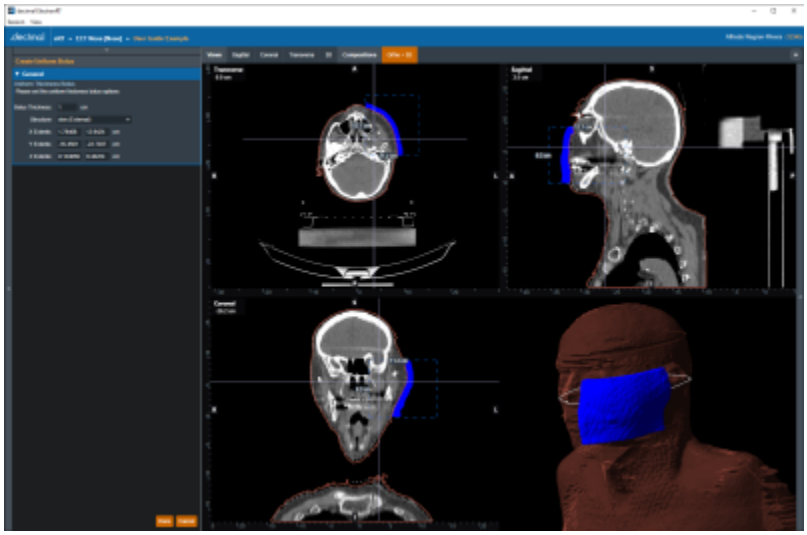

Fig. 3: Creating a Uniform Thickness Bolus