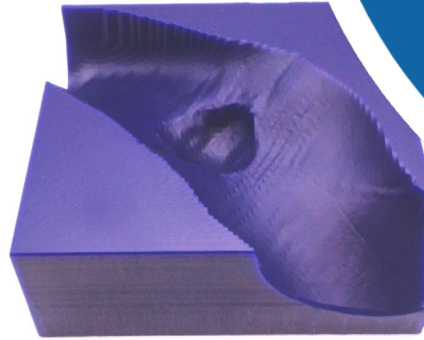
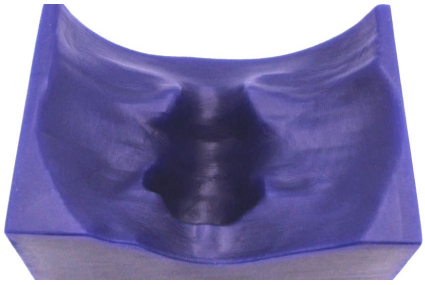


# ELECTRON BOLUS

SOFTWARE INSTRUCTIONS



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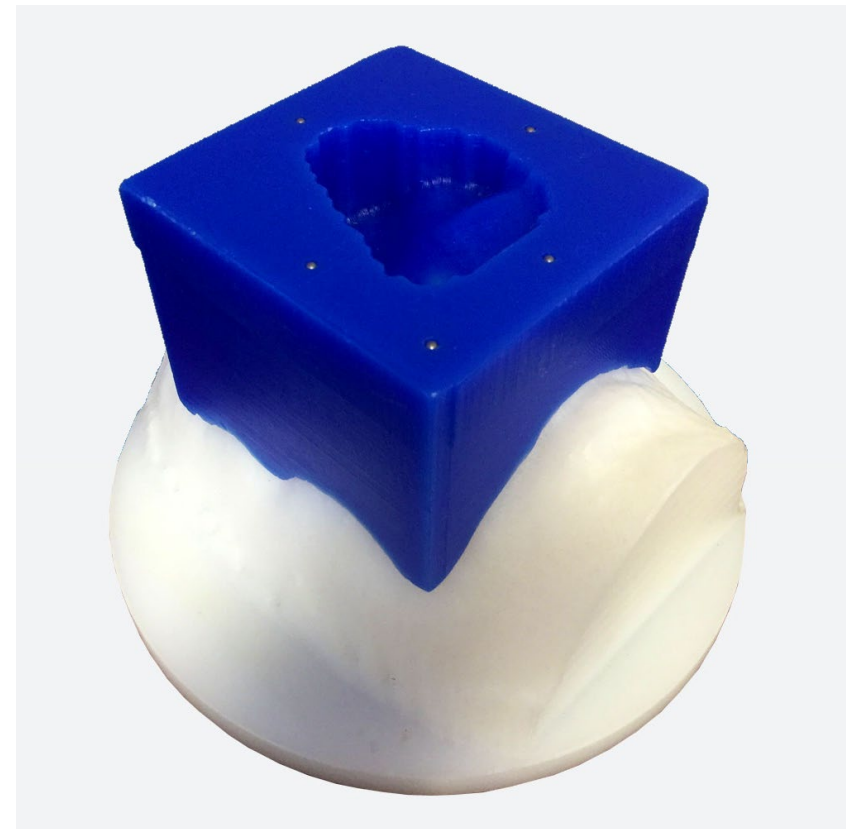
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## CREATE CONTOURS AND PLAN IN TPS

Please read through the [Bolus Starter Guide](#) prior to contouring and planning, as this will help ensure the best bolus possible. This walkthrough is meant to be a quick start to help the user immediately begin using the BolusECT (Optimized Thickness Bolus) module of p.d. For a detailed explanation of how each parameter works, please see the Help Menu within p.d.

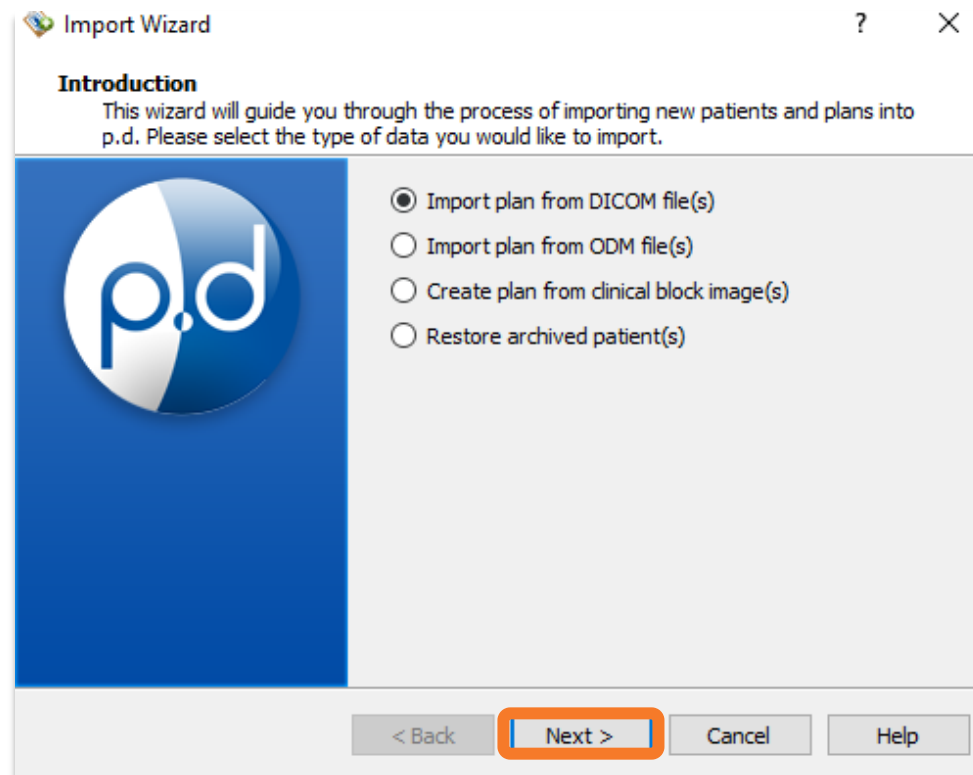
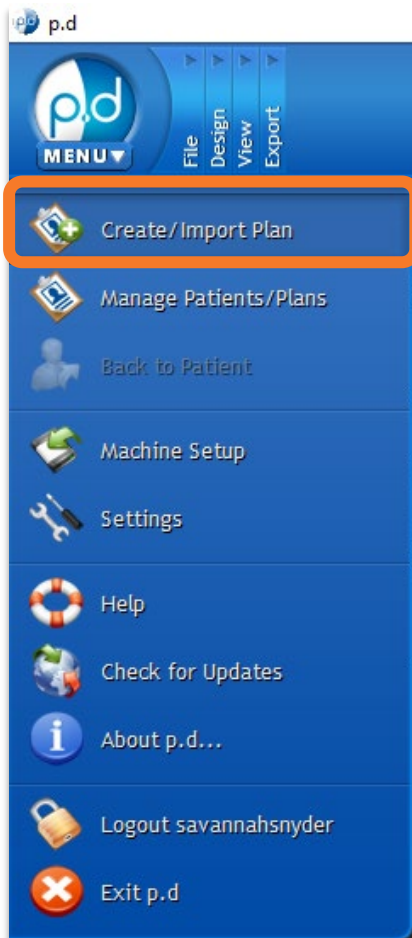


## CREATE CONTOURS AND PLAN IN TPS

- In the TPS, contour the external and PTV along with any OAR's.
  - Note: Include eye shields or similar in the external contour to ensure the bolus will fit accurately on top.
- Put on an electron beam at 105 SSD, or greater, at the desired treatment angle.
  - Note: The electron energy does not need to be decided on at this point. The beam should be en face to the area to be treated. (i.e. If the area to be treated is the bridge of the nose, you may want to consider kicking the table 90° and angle the gantry back towards the head.)
- Design the electron cutout. It is best to have at least a 1cm expansion around the area to be treated.



## IMPORT DICOM FILES INTO P.D




- Open the **p.d software** and sign in.
  - *NOTE: Ensure the p.d version is 5.3.2 or later.*
- Click the p.d icon in the upper-left of the window and select **Create/Import Plan** from the drop-down menu.
- Select **Import Plan from DICOM file(s)**.
- Select **Next**.

# IMPORT DICOM FILES INTO P.D

- Browse to the folder where you exported the DICOM files.
- Select all the required DICOM (\*.dcm) files:
  - CT images
  - RT Structure Set
  - RT Plan
- Select **Import**.

**Import DICOM Files**  
Please select the DICOM plan, structure set, and image files or location you wish to import.



Select file(s):

Select directory:

Import Recursively

Files:

ECT Nose	Last Modified
<input checked="" type="checkbox"/> 25442.1.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25442.2.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.1.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.2.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.3.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.5.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.10.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.12.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.14.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.18.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.23.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.24.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.32.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.35.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.37.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.56.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.59.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.60.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.63.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.74.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.76.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.77.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.83.img	2025-04-07 10:42 am
<input checked="" type="checkbox"/> 25445.4.img	2025-04-07 10:42 am

File Counts  
Plan: 1  
Structure: 1  
CTs: 122



## IMPORT DICOM FILES INTO P.D

- If prompted, select the machine name.
- Select **Applicator Size** from the drop down.
- Select **Finish**.

**Plan Information**

The imported plan is missing necessary information (or information is too ambiguous) for p.d to proceed, please confirm the following items before finishing.



Select Machine

Imported Machine Name: 23DXOBI

p.d Machine Name:

Machine Location:

Confirm Applicator Size(s)

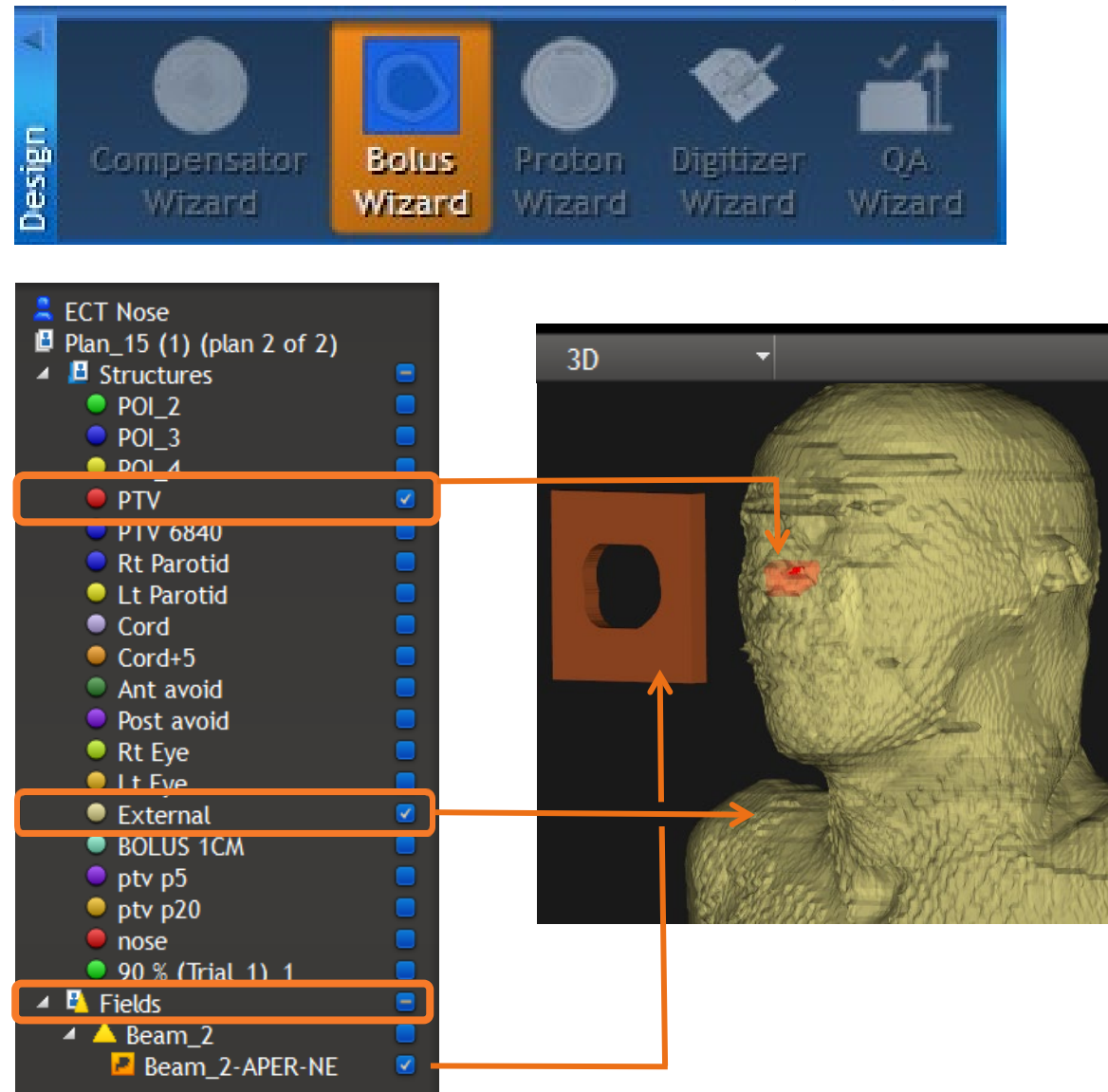
Beam\_2 : (Appl. ID: 10)

< Back **Finish** Cancel Help



## SELECT AND VERIFY CONTOURS

- Once the files are imported, **turn on the view** (i.e., check the checkbox) for the **body structure, target volume, and a treatment beam** to verify that you imported the intended dataset.
- Use the **3D View** to review your contours carefully.
- Select the **Bolus Wizard** from the **Design** section of the toolbar.



## THE BOLUS WIZARD

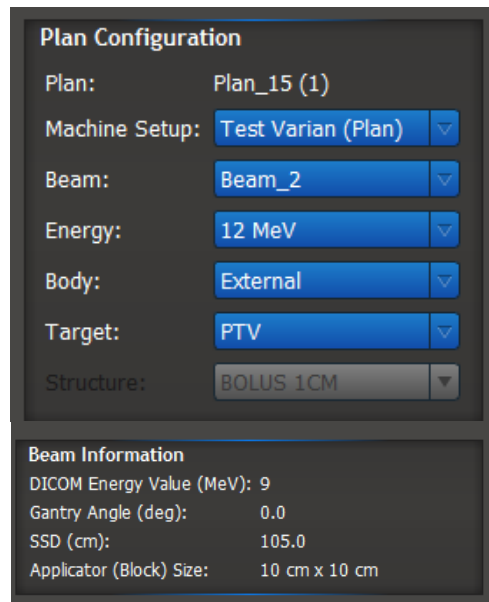
**Bolus Wizard**

Please choose from the options below to indicate if you'd like to design a new bolus or simply convert an imported structure into a bolus.

- Optimized Thickness Bolus**  
Select this option to design an ECT bolus with a custom fit patient-side and a variable thickness to conform the dose to a target structure
- Flat Top Bolus**  
Select this option to design a bolus with a custom fit patient-side and a beam side that is flat and enface with the selected beam
- Structure as Bolus**  
Select this option to convert an existing structure (imported from DICOM) into a bolus

Select Optimized Thickness bolus to create a BolusECT through p.d

## THE BOLUS WIZARD



**Plan Configuration**

Plan: Plan\_15 (1)

Machine Setup: Test Varian (Plan) ▼

Beam: Beam\_2 ▼

Energy: 12 MeV ▼

Body: External ▼

Target: PTV ▼

Structure: BOLUS 1CM ▼

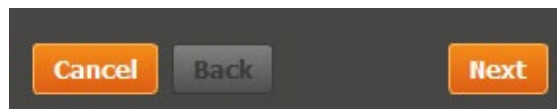
**Beam Information**

DICOM Energy Value (MeV): 9

Gantry Angle (deg): 0.0

SSD (cm): 105.0

Applicator (Block) Size: 10 cm x 10 cm



Cancel Back Next

- Verify the Beam, Energy, Body, and Target in the **Plan Configuration** section.
- Click the **Next** button to proceed.

The next page will allow you to create the distal (patient) side of the bolus.

## THE BOLUS WIZARD (PATIENT SIDE)

- For the first pass, you may leave all of the settings on the default.
- In the case of a sloping body part or shallow tumor, the **Depth Beyond Target** might need to be increased to allow the bolus to sit comfortably on the patient.
- Click **Generate Surface** after completing your selections. The white surface represents the distal side of the bolus.
- Click the **Next** button to proceed.

### Bolus Geometry Options

Field Size: 10 x 10 cm

Block Outer Border: 1.00 cm

**Depth Beyond Target: 1.00 cm**

Minimum Thickness: 2.0 mm

---

### Smoothing Options

Point Spacing: Fine (1 mm)

Distal PTV Smooth: 0 mm

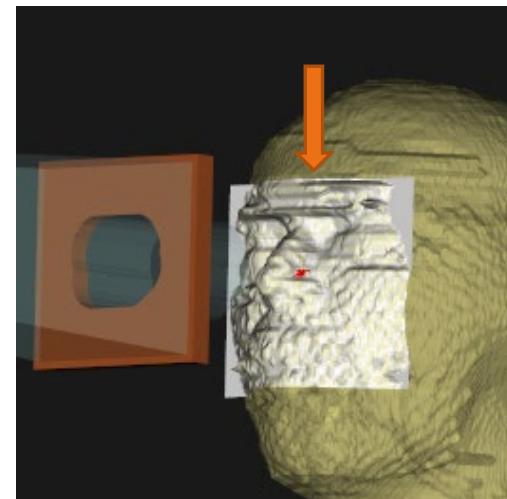
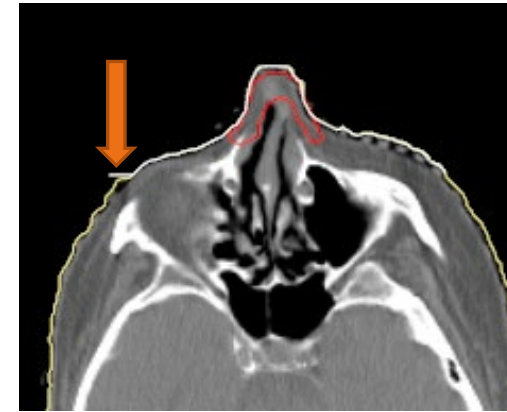
Apply rolling ball surface smooth

Smoothing Radius: 0.50 cm

---

Generate Surface
Cancel

Cancel
Back
Next



# THE BOLUS WIZARD (BEAM SIDE)

On this page, it is best to start out using the defaults and then move to adjusting after the bolus is designed. There will be four boxes displayed.

- The first box contains the [Design Parameters](#).
  - [Distal PTV Dose](#) specifies the isodose line that should conform to the distal edge of the PTV.
  - The next dropdown lists the "Operators" for designing the bolus. A more detailed explanation for each can be found in the Help section.
  - The [Target Inner Border](#) can be left at the default initially.
- The second box contains the [Beam Information](#).
- The third box contains the [Item Visibility](#).
  - The [Tree View](#) contains the structures.
  - The [Operator History](#) shows the individual steps of bolus generation.
  - [Current Reference Dose](#) allows the planner to choose which isodose lines are displayed.
- The fourth box contains [Dose Normalization](#).
- Click the [Generate Bolus](#) button to create your bolus.

The screenshot displays the Electron Bolus Wizard interface with four numbered sections:

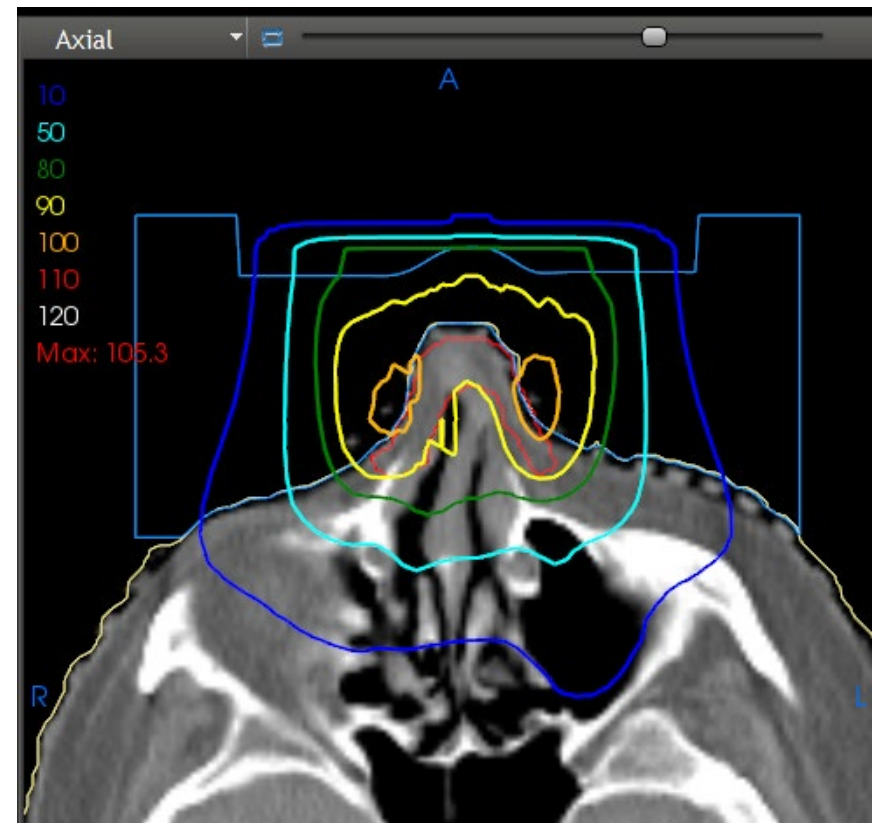
- 1 Design Parameters**: Includes a dropdown for Distal PTV Dose (90), a dropdown for Automated Marching, and a dropdown for Target Inner Border (cm) (0.00).
- 2 Beam Information**: Displays Beam Energy: 12 MeV, R90: 3.90 cm, Eff Field Size: 6.1 x 4.8 cm, and SSD: 105.0 cm.
- 3 Item Visibility**: Includes checkboxes for Tree View, Operator History, and Current Reference Dose, along with an Edit Isodose Settings button.
- 4 Dose Normalization**: Includes a dropdown for Normalization Value (100).

At the bottom, there are three buttons: Generate Bolus (orange), Stop (grey), and Rollback (grey).

## THE BOLUS WIZARD (BEAM SIDE)

The isodose lines and progress bar will update as the bolus generates. Once the status says *Bolus Construction Complete* the initial design has generated.

- The planner should evaluate this bolus and make sure it meets the treatment requirements before proceeding.
- Adjustments to the beam side of the bolus can be made, if desired.
  - Common adjustments include using the [Smooth](#) and/or [Specified Shift](#) operators.
- Click the [Back](#) button if you want to make changes to the patient side of the bolus.
- Click the [Finish](#) button to close the Bolus Wizard. If a different energy is needed, re-open the [Bolus Wizard](#) to start a new bolus.



Cancel

Back

Finish



# EXPORT THE BOLUS

*The planner should save the created bolus and export it back to the TPS for calculation and physician approval.*

- Navigate to the Export bar and click “Export Wizard”



- Choose the “Export plan to DICOM file(s)” option and click **Next**.
- Choose the export destination and select the correct content for your TPS.
  - Refer to starter guide for recommendations for your TPS.
- Click the **Export** button.

## Introduction

This wizard will guide you through exporting data to your treatment planning system. Please select how you would like to export the current plan.

Export plan to treatment planning system via DICOM  
 Export plan to DICOM file(s)  
 Export plan to Pinnacle treatment planning system via FTP  
 Export an item to STL file(s)

< Back   **Next >**   Cancel   Help

## Configure Export Options

Please select an appropriate export location or server, as well as the data content you wish to export.

Location: sers/sasnyder/AppData/Local/dotdecimal/p.d\Data\Export   Browse...

Content:
   
 DICOM RT Plan
   
 DICOM RT Structure Set
   
Export all structures with body + bolus
   
 DICOM CT Images

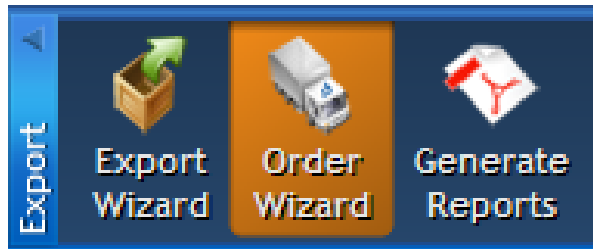
Anonymize Patient Info on Export

< Back   **Export**   Cancel   Help



## ORDER THE BOLUS

Once the bolus has been approved, the planner can initiate the Order Wizard.



- If you are in the Patient Window, select the **Order Wizard** from the **Export** section of the toolbar.

- Check the box next to the device(s) you want to order.
- Click **Next** to proceed.

#### Welcome to the Order Wizard

This wizard will help order your devices through .decimal Direct. Please make your selections to continue.

Material & Type	Size	Device Tag / Engraving (CompID)
<input checked="" type="checkbox"/> Wax Bolus	TBD	Beam_2-EB-NE
<input checked="" type="checkbox"/> Copper Electron Aperture	10x10	Beam_2-APER-NE

Click the pencil icon above to edit the device tag (CompID), if desired.

< Back **Next >** Cancel Help



## ORDER THE BOLUS

**Shipping Information**

Please verify the shipping information below (\* indicates a required field).



Account# (SiteID):

Institution Name\*:

Address Line 1\*:

Address Line 2:

City\*:

State/Province\*:

Zip/Postal Code\*:

The default address shown above is shared with all users at your site and can be managed through the Machine Setup page. Click [here](#) for more information.

&lt; Back

Next &gt;

Cancel

Help

**Billing Information**

Please enter PO Number for billing below (optional).



P.O. Number (optional):

The provided PO# will appear on the invoices that .decimal sends for this order. This information is optional, but may be required by your finance department in order to remit payment. Please check the policy with your local finance dept.

&lt; Back

Next &gt;

Cancel

Help

- You will now see the **shipping information screen** where you will fill out and/or verify the address where the device will be shipped, and select **Next**.
  - The shipping address will be set based on the machine selected during import. See the software **Help Menu** for more information on how to set shipping addresses.
- Enter a PO number if applicable and select **Next**.



## ORDER THE BOLUS

### Order Priority

Please select an order priority.



Standard

RUSH

**Estimated Ship Date: Tuesday Oct 28th 2025**

(if ordered within the next 1 hour and 23 minutes)

**Estimated Delivery Date: Wednesday Oct 29th 2025 by 05:00 pm**

(as provided by the shipping carrier)

< Back

Next >

Cancel

Help

- Select the **Order Priority**. There are Standard and Rush delivery options.
  - Please note that the estimated ship date and time of delivery will vary based on priority and destination.
- Select the **Next** button once confirming your option.

*There will be an extra charge for the Rush delivery option.*



## ORDER THE BOLUS

### Place Order

Please review your order information and submit your order.



- I agree to the [Terms and Conditions](#) and [Processing Agreement](#)
- I agree to test each device prior to use on a human
- I understand that production begins immediately and cancellation requests can only be made by calling .decimal at 1.800.255.1613  
(cancellation cannot be guaranteed and may require partial or full payment)

**Order Summary:**

Wax Bolus (Size: Not Available)  
Copper Electron Cutout (10x10)

**Order Priority: Standard**

**Arriving Oct 29, 2025**

**Shipping to:**

.decimal  
123 Nowhere St  
Sanford, FL 32771

< Back

Place Order

Cancel

Help

Select the required boxes agreeing to the **Terms and Conditions, Processing Agreement** and **Cancellation Policy** before clicking **Place Order**.

