DICOM Patient Import

In order to begin designing boluses in the decimal Bolus Designer App you must first have patient imaging captured, structure geometries defined, and a treatment plan ready. This information is brought in the Bolus Designer App by importing DICOM CT, Structure Set, and Plan files.

Default Import Directory

The default import directory can be set in the app settings by navigating to View → Settings. This directory will always be the default directory when importing a patient. Users can then further refine the import folder as needed starting from this default level.

Importing a New Patient

If you have a set of CT Images, structures, and a plan you can import them directly into a new patient through the “Import Patients” menu.

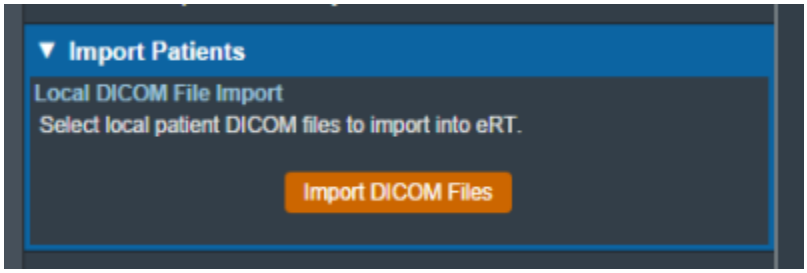

Fig. 3: Import in the Main App Page

Fig. 4: Import Directory Input

The Import DICOM Files option allows you to either browse your computer or copy the path to the folder that contains the CT images and structures you wish to import. The following options are available for browsing for local files:

- **Add Folder:** Browse for an entire folder of DICOM files to import into a patient

    - Use recursive folder search: This option can be selected prior to adding a folder to reclusively search and add all DICOM files within the selected folder and all sub-folders.
- **Add Files:** Browse for individual DICOM file(s) to import into a patient. Note: this option does not make use of the recursive folder search option.

A list of selected DICOM files for import will be displayed and you can choose to add more files for the selected patient or remove any files as desired.

Refer to the Processing Imports section once files have been selected to import.

Processing Imports

Clicking the Import button will start processing the selected files.

Fig. 5: Import Loading screen

When importing a new patient, the DICOM plan file must have the proper UIDs that reference the structure set in order for the plan to be successfully imported. If there are no Errors while importing you will be taken to the Electron Machine Definition page.

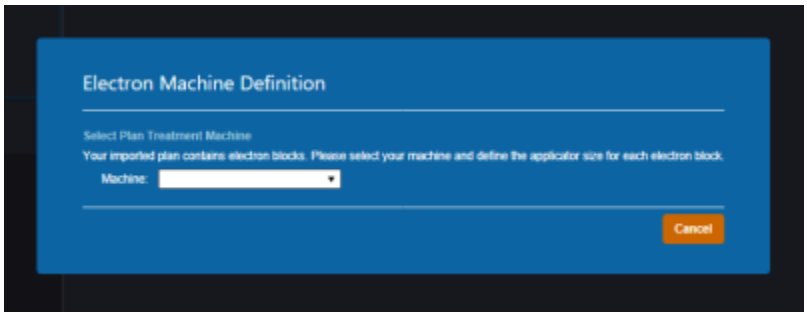

Fig. 6: Electron Machine Definition

If there are errors, please refer to the Common Errors section below for further details.

Electron Machine Definition

Users must select an electron treatment machine from the current site when importing a new plan into the Bolus Designer app. After a machine is selected, an applicator must be assigned to each beam in the

plan.

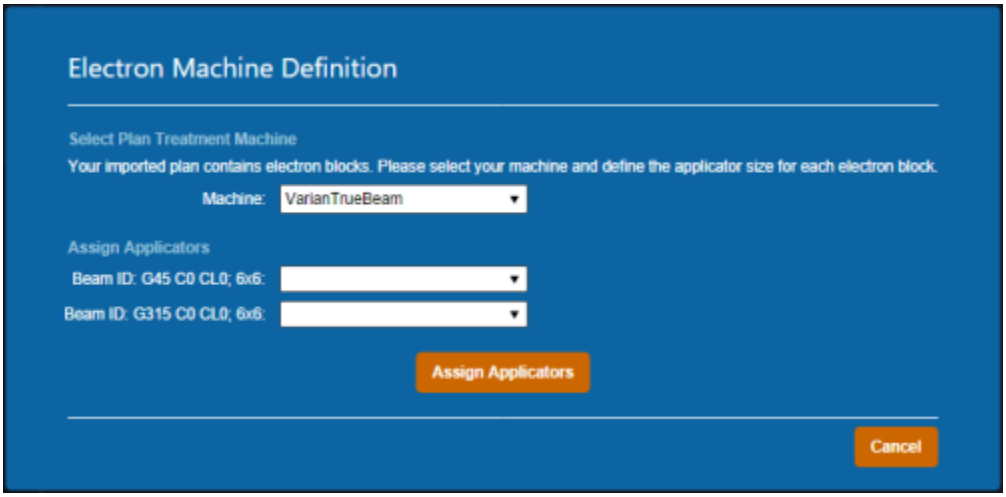

Fig. 7: Assigning Applicators

After every beam has an applicator assigned to it, the import can finish and you will be taken to a confirmation page for your import.

Common Errors

Structures Skipped During Import

Structures can be skipped during Structure Set import if the structures meet the following criteria:

- Non closed planar (e.g.: points or structures where slices are not fully closed)

Structures that are skipped will be denoted at the end of the DICOM import as shown in figure 8.

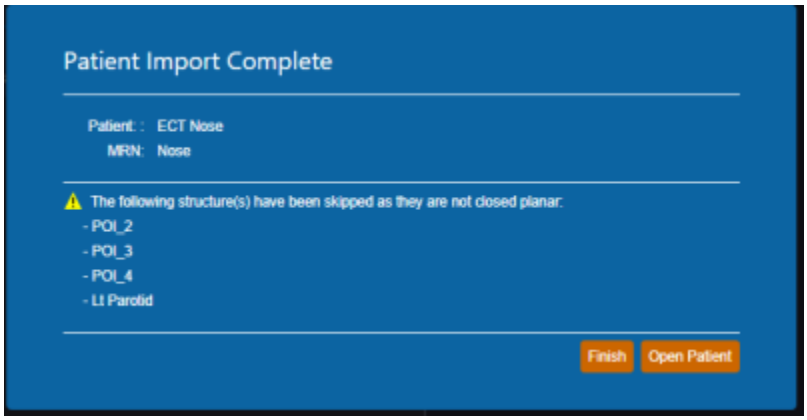

Fig. 8: Import Finalized

Missing CT Images, Structure Set, or Plan File

If the files you have selected to import do not include CT images, a structure set, and a plan file you will receive this error message.

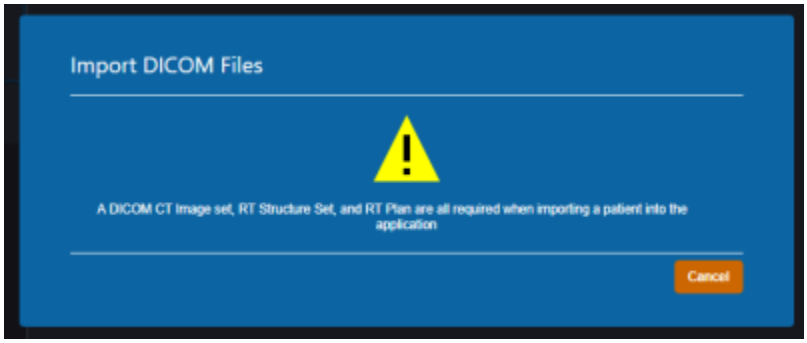

Fig. 9: Missing DICOM Files

You must re-start the DICOM import process and select the all the required files in order to successfully import a treatment plan.

Bolus Designer Settings

The Bolus Designer App allows users to view and edit app-level configuration settings. The Settings block is located in the main page of the app below the Import Patients block.

Export Logs

The Export Logs block allows the user to export a file containing logs of user activity within the app. This .csv file contains data exported from the app database that keeps track of critical user activity, including (but not limited to): opening of patients and plans, plan approvals, DICOM exports, and hardware ordering.

Refer to the Bolus Designer User Logging guide for details on what actions are logged.

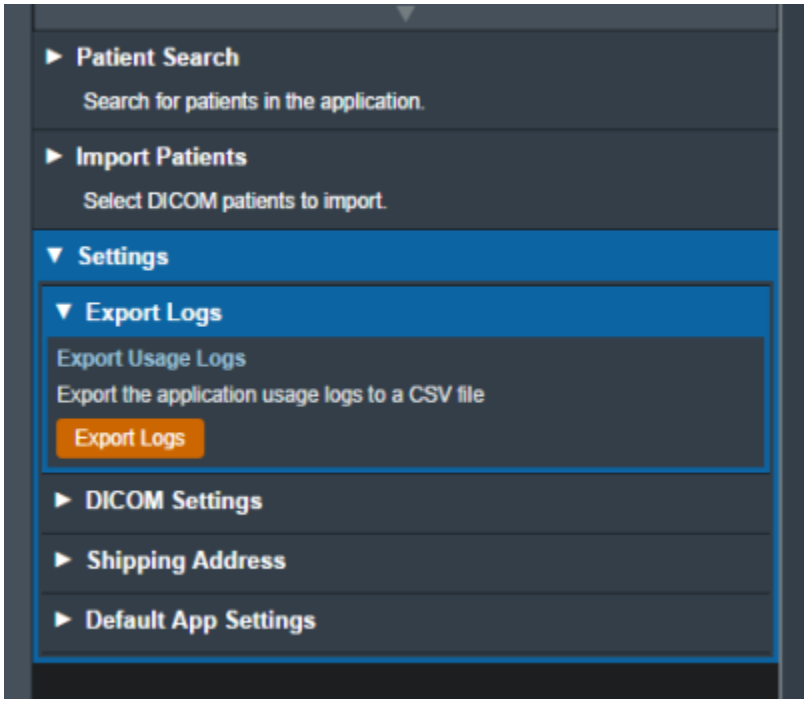

Fig. 10: Export Logs UI

DICOM Settings

The DICOM Settings block allows the user to view and edit settings related to the export of DICOM files. These settings include the default DICOM export directory and a list of DICOM export server AE titles.

These settings are applied and available to all users of the selected Site ID for which the settings are present.

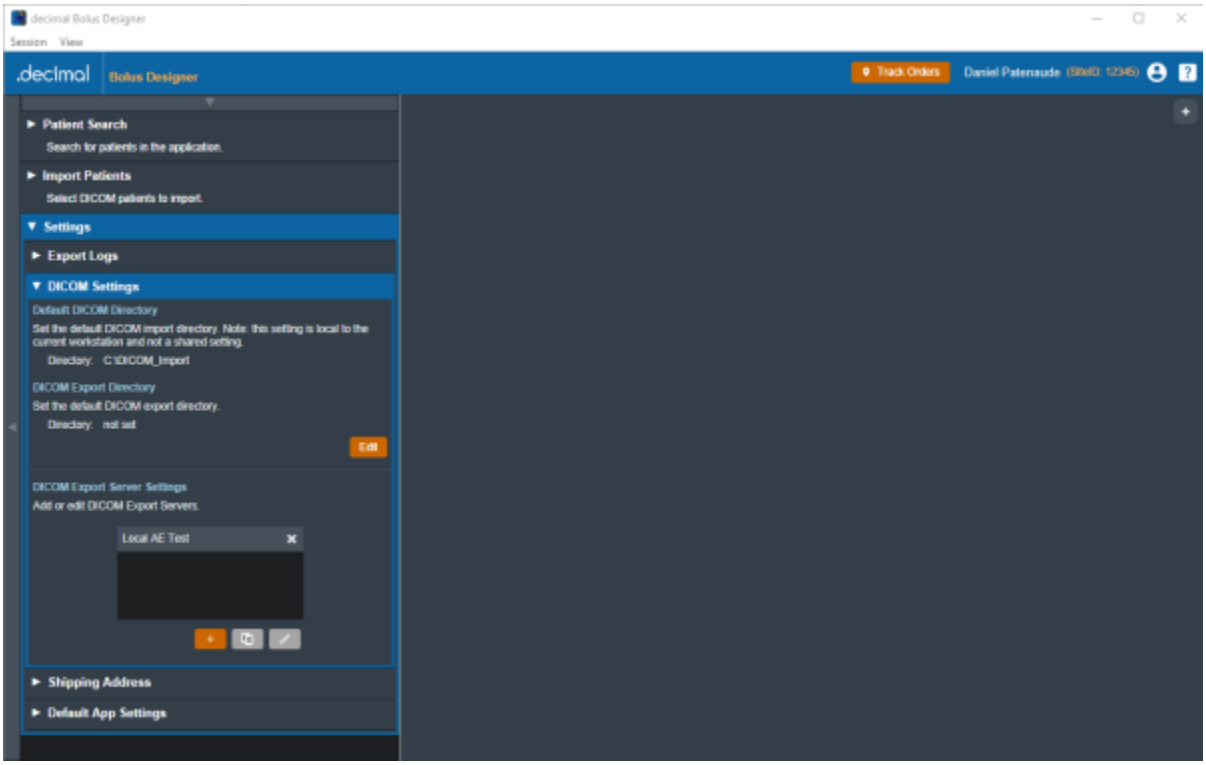

Fig. 11: DICOM Settings UI

DICOM Export Directory		
Export Directory	Sets the default export folder when exporting DICOM files to disk.	
DICOM Export Server Settings		
Export Export Servers	A list of DICOM AE titles (DICOM Receivers from another system) that the ElectronRT app can export to.	
	Server Name:	The name of the DICOM server that will displayed to the user when exporting within the Bous Designer app.
	IP Address:	The local network IP address to which DICOM files will be sent by the Bolus Designer DICOM sender.
	Port:	The local network port on which the DICOM sender should transmit the DICOM files.