

DICOM Patient Import

In order to begin planning in the .decimal ElectronRT app you must first have patients set up. The easiest way to do so is to import existing DICOM files.

Importing a New Patient

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

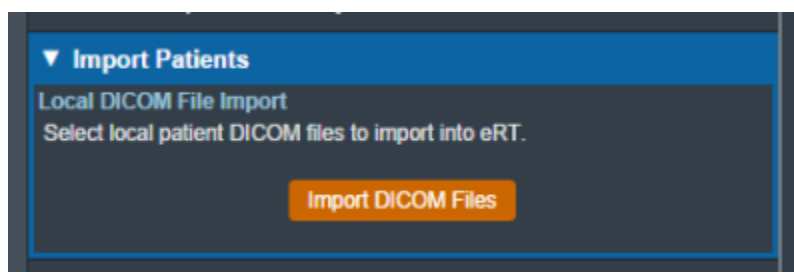


Fig. 1: Import in the Main App Page

Selecting the “Import New Patient” option will open the Importing UI.

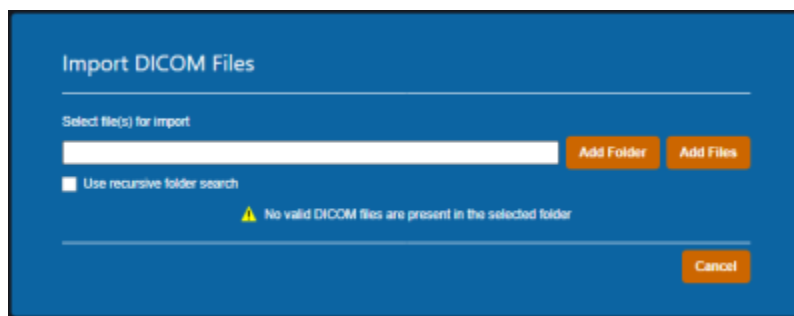


Fig. 2: Import Directory Input

Here you may either browse your computer or copy the path to the folder that contains the CT images and structures you wish to import.

Then the import will process:

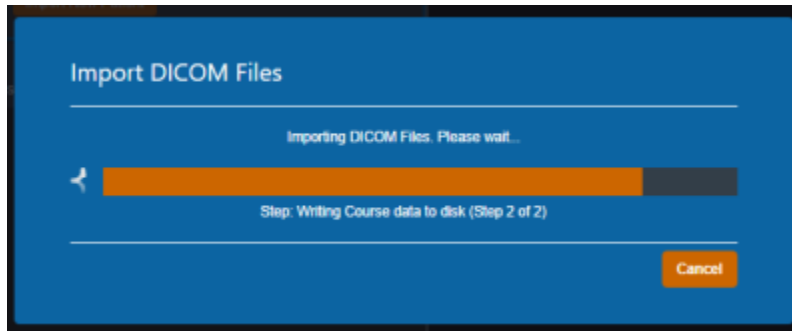


Fig. 4: Import Loading screen

If there are no Errors while importing you will be taken to a confirmation page for your import.

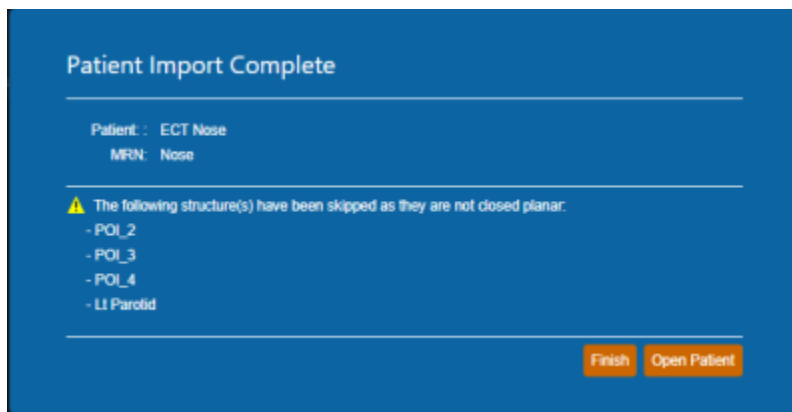


Fig. 5: Import Finalized

If there are errors please refer to the [Common Errors](#) section below.

Common Errors

Missing/Undefined External Structure

If the imported DICOM Structure Set does not have a structure flagged as *RT ROI Interpreted Type (3006,00A4) EXTERNAL* you will be directed to specify the external patient structure before the import resumes. The patient external structure must be set to the defining boundary of the patient's outer surface, and not a rind skin structure.

Note: You will be warned if the selected external structure is not the structure with the largest volume. This is to prevent incorrect structure selection (e.g.: when a 'External' and 'Skin' structure both exist, and the 'Skin' structure is a rind. If the user selects the 'Skin' structure the warning will state the 'External' structure has a larger volume, since that's the correct representation of the patient structure.

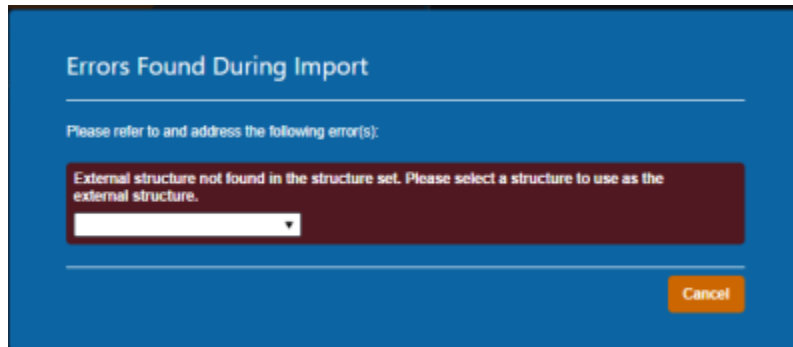


Fig. 6: Missing External Error

The drop down menu will have a list of the structures in the imported set. You will be able to select one as the external for this course then confirm your choice by pressing "Set External"

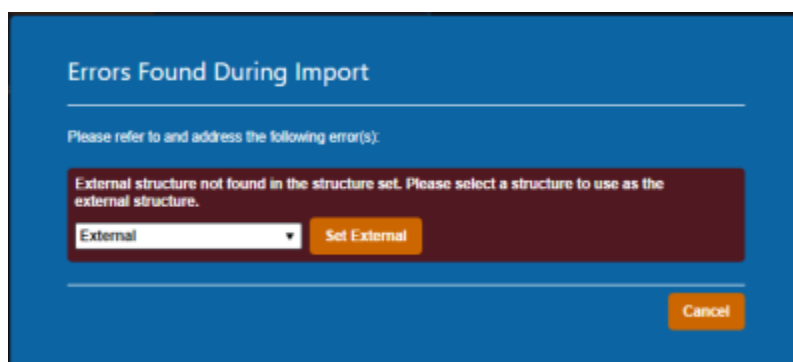


Fig. 7: Set External Dialog

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 correctly closed)

Structures that are skipped will be denoted at the end of the DICOM import as shown in [figure 8](#).

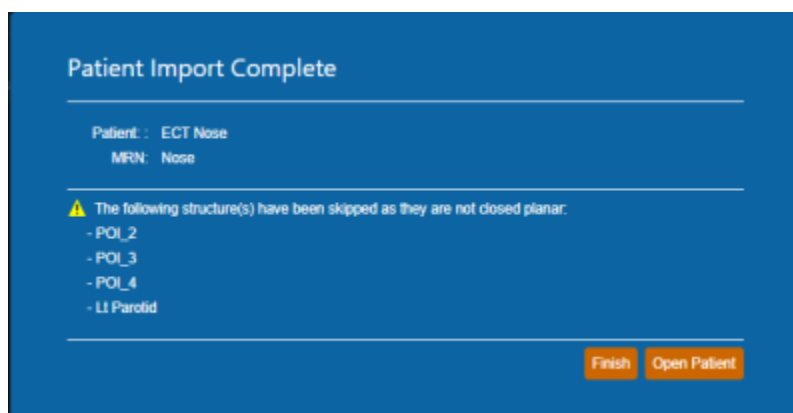


Fig. 8: Import Finalized

Importing an Existing Patient

If the files you have selected to import coincide with the MRN of a patient that already exists in the app you will receive this error.

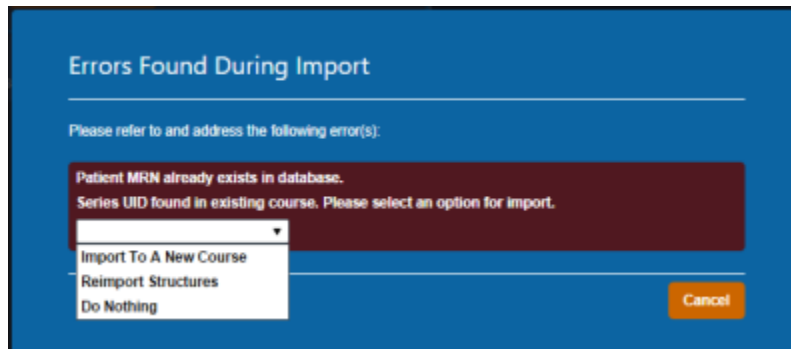


Fig. 9: Existing Patient Error

You have three options provided to resolve the error:

- **Import to a New Course**
- **Re-Import Structures**
- **Do Nothing**

Import to a New Course

Importing to a new course will simply complete the import but instead of affecting existing courses or plans for the patient the app will create a new course for this patient using the new import.

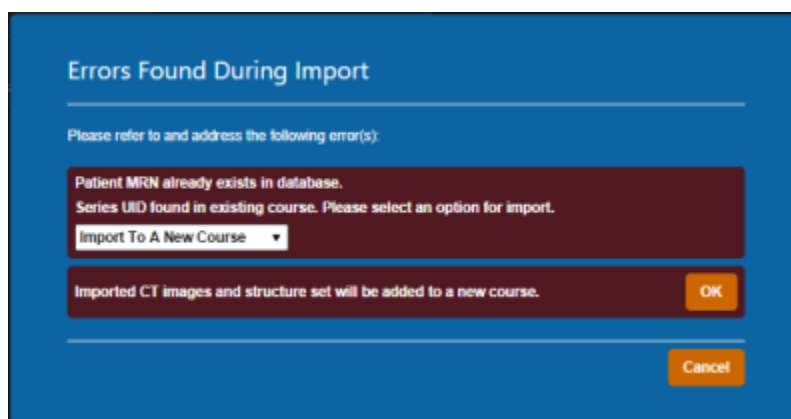


Fig. 10: Importing as a New Course

Re-import Structures

Re-Importing structures can be used if your goal is to update or add structures to your existing patient.

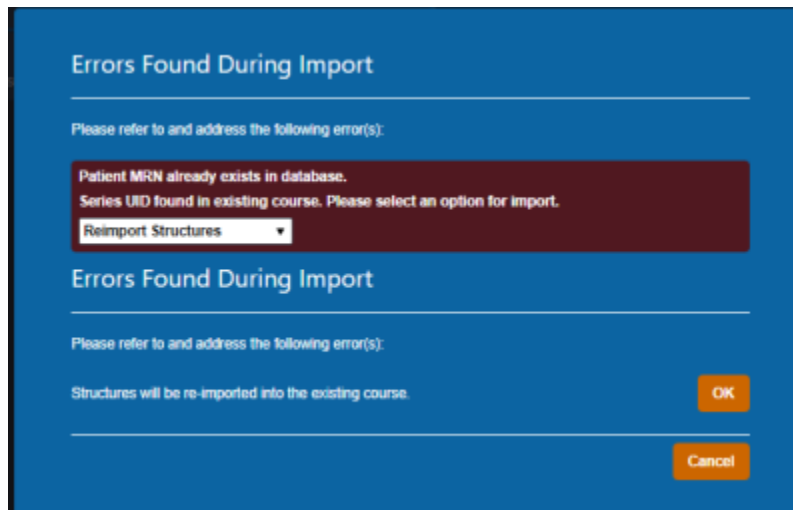


Fig. 11: Re-Import Structures

After selecting this option, you will be presented with a list of the structures in the import.

For each you may select one of three options:

- **Do not Re-import:** Skips this structure for the re import.
- **Replace existing geometry:** Replaces the existing structure in the current Course with the imported one.
- **Import as new structure:** Imports the structure to the Course as a new structure while not affecting the existing one and allows the user to specify a new name for the new structure. If the structure does not exist currently it creates it as normal.

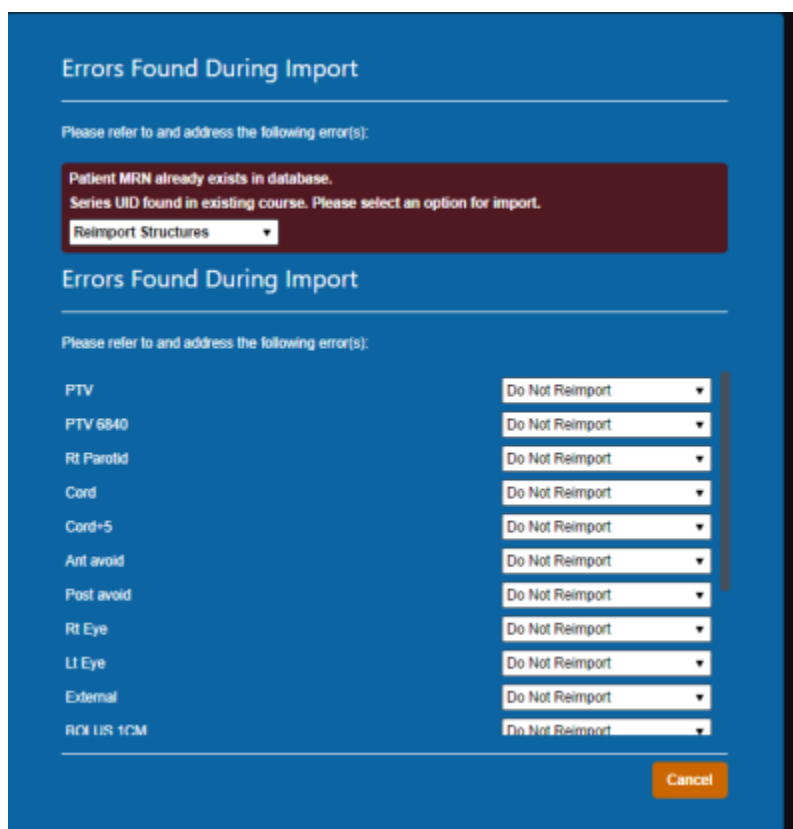


Fig. 12: Re-Importing Structure List

Once you have made your decision for each structure you must select “Re-Import Structures” to finalize your changes.

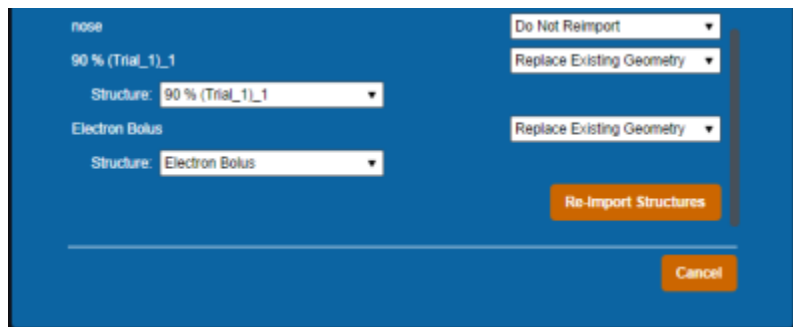
The screenshot shows a blue interface for re-importing structures. On the left, there are two structure entries: 'nose' and '90 % (Trial_1)_1'. Each entry has a 'Structure:' label followed by a dropdown menu showing the selected structure name. To the right of each entry is a dropdown menu for the action to take. For 'nose', the action is 'Do Not Reimport'. For '90 % (Trial_1)_1', the action is 'Replace Existing Geometry'. Below these entries is a large orange button labeled 'Re-Import Structures' and a smaller orange button labeled 'Cancel'.

Fig. 13: Finalize Re-Import

Do Nothing

This is the simplest action, selecting to do nothing will cancel your import and return you to the main menu.

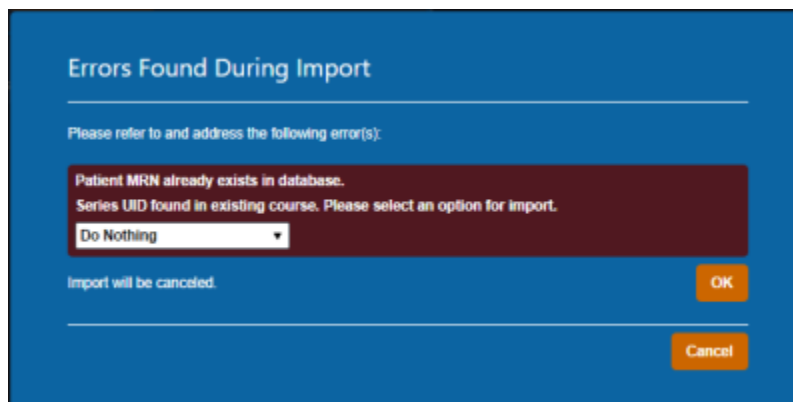
The screenshot shows a blue dialog box titled 'Errors Found During Import'. It contains the text 'Please refer to and address the following error(s):'. Below this is a red box with the error message: 'Patient MRN already exists in database. Series UID found in existing course. Please select an option for import.' Under the red box is a dropdown menu with 'Do Nothing' selected. At the bottom of the dialog are two orange buttons: 'OK' and 'Cancel'.

Fig. 14: Do Nothing

From:
<http://apps.dotdecimal.com/> - decimal App Documentation

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http://apps.dotdecimal.com/doku.php?id=electronrt:userguide:tutorials:dicom_import&rev=1595450072

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