Import New Patient Data into Database

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Step 1 Create Trial Structure

The address for creating a trial in the database is
http://10.65.67.179:8888/dashboard/trial/management. As shown in figure 1.1. The
mandatory fields are trial name and the trial structure file. A sample trial folder
structure could be found in RDS: '*/PRJ-RPL/2RESEARCH/1_ClinicalData/LEARN_test*'
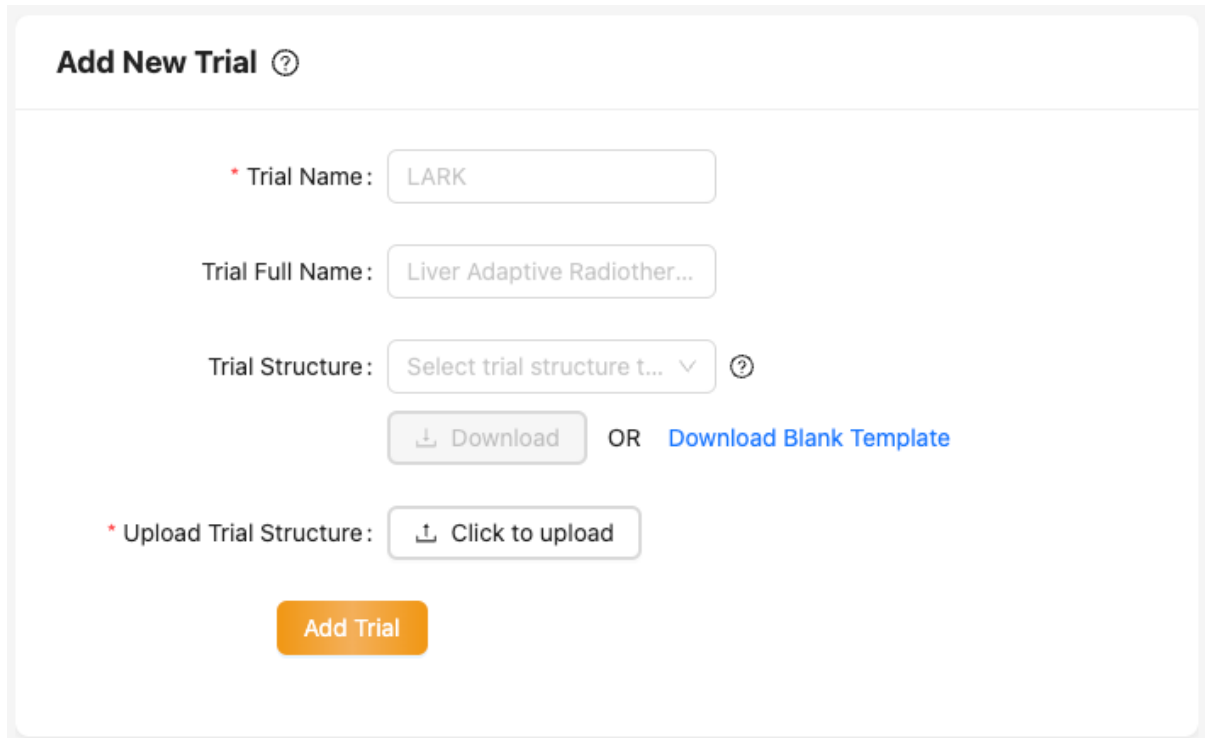

Figure 1.1

For creating the trial structure, you could start with downloading the blank template.
The blank template is a json file with two top level keys: prescription and fraction. We
assumed one patient should have one unique prescription item and many fraction
items.

The items under each level reflect the database tables and columns. You may not need
fill them all, just pick these items you need and delete the rest. Under each item, there
are six fields need to be filled. We take the mv_images_path as an example.

```
"mv_images_path": {
  "allowed": [],
  "display_name": "",
  "field_type": "",
  "level": "",
  "path": ""
},
```

The "allowed" field is a list, which contains all the possible file format in MIME types
(https://www.iana.org/assignments/media-types/media-types.xhtml). The "display
name" is the name you would like to show when you query the data. For example, if we

want to see MV Images at the front for mv_images_path, then we put MV Images into the field. The "Field_type" currently only has one option which is "Folder". The "level" is which the top level is. If the item under fraction, then the "level" field should be fraction.
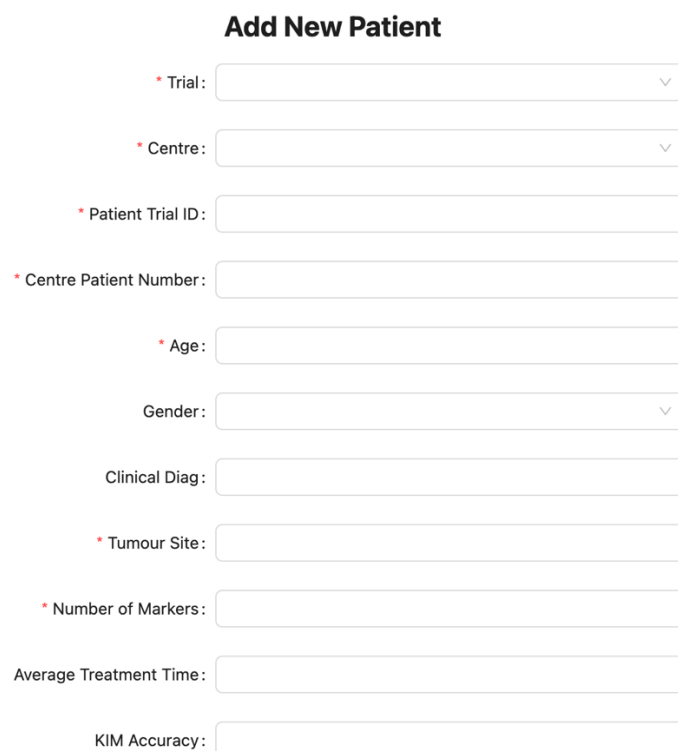
Step 2 Create Centre

The address is http://10.65.67.179:8888/dashboard/centre/management. In this page, we could check if the centre is already in the database by looking for the centre list. If the new centre is not in the centre list, then just fill the form under 'Add New Centre' section and click Submit button.

Step 3 Create patient records in database via the web application.

The address is http://10.65.67.179:8888/dashboard/patitents/addnew . The address will be changed without notice due to the ICT policy of the University. The up-to-date address could be found in the Institute WIKI page.

In this page, there are two sections. One is adding new patient individually, the others is bulky importing patient data by uploading a CSV file contains new patient information.

Add New Patient

* Trial :

* Centre :

* Patient Trial ID :

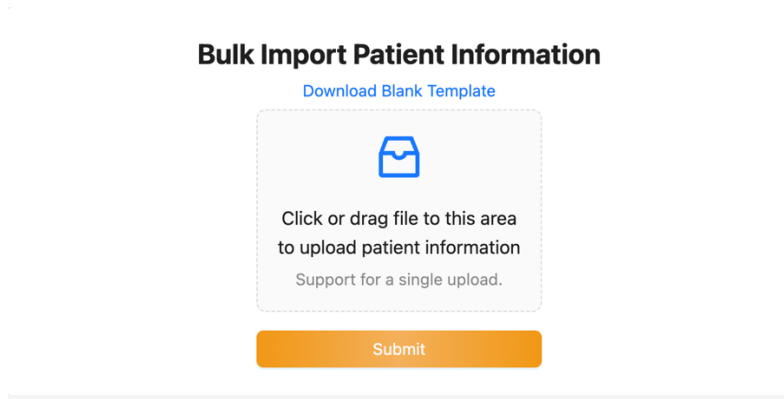* Centre Patient Number :

* Age :

Gender :

Clinical Diag :

* Tumour Site :

* Number of Markers :

Average Treatment Time :

KIM Accuracy :

Figure 3.1 Adding patient form

Figure 3.2 Bulky import patient information

Option 1 Adding patient via the web form

This option is simple and easy to use. It only requires you to fill the web form showed in figure 1 and click submit button. Then the patient will be created.

Option 2 Bulk import patient data

For bulk import patient data, please download the template CSV file and fill it with the new patient details. The fields listed below are mandatory:

- patient_trial_id
- clinical_trial
- test_centre
- centre_patient_no
- age
- tumour_site
- number_of_markers
- linac_type
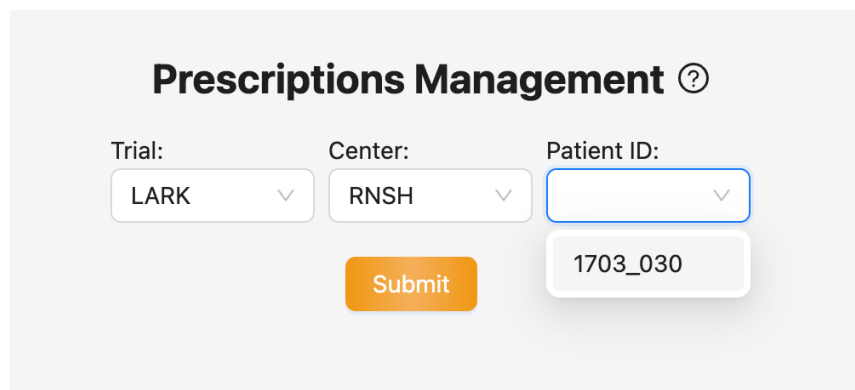
The fields listed below should be a single number:

- centre_patient_no
- age
- number_of_markers

After filled the CSV template file, drag the file into the uploading area and click submit button. Then the patient's records will be created.

Step 4 Check if the patient records have been created successfully

Please go to the Prescription section in the web application, shortcut is here: http://10.65.67.179:8888/dashboard/patitents/prescriptions .

In the Prescription section, please select the Trial and Center name for these new patients. Then check the Patient ID option, if the Patient ID tab showed the ID of new patients, these new patients have been added into the database successfully.
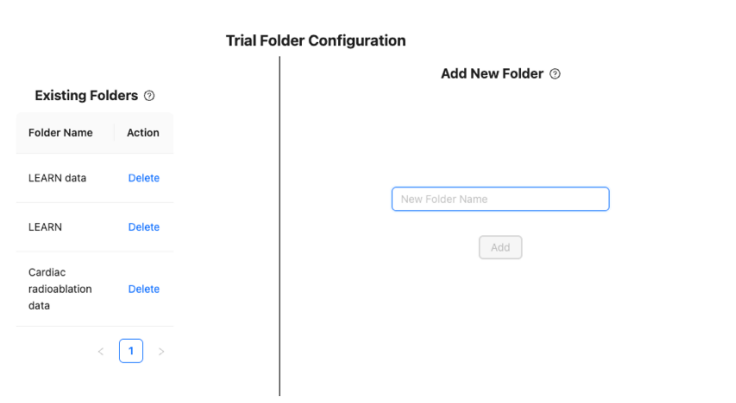

Figure 4.1 Example of checking new patients

Step 5 Sync folder from Cache to RDS (Optional)

This step is optional, you may be able to move the trial folder into RDS by other ways.

In order to move the trial folders from OneDrive to RDS, we need to add the folder to the sync list. Firstly, sharing the trial folder to the LearnDB server OneDrive account with either Read or Read and Write access. Then add the new folder name via the web page (Figure 5.1). In Figure 5.1, you are able to see the folder list for these folders already added into local cache.

Figure 5.1 Trial folder configuration

After we confirm the trial folder have been added, we need to move the incoming data to RDS. The function is under the File System tab in the web application, and it is named Folder List. The shortcut is http://10.65.67.179:8888/dashboard/filesystem/folderlist .

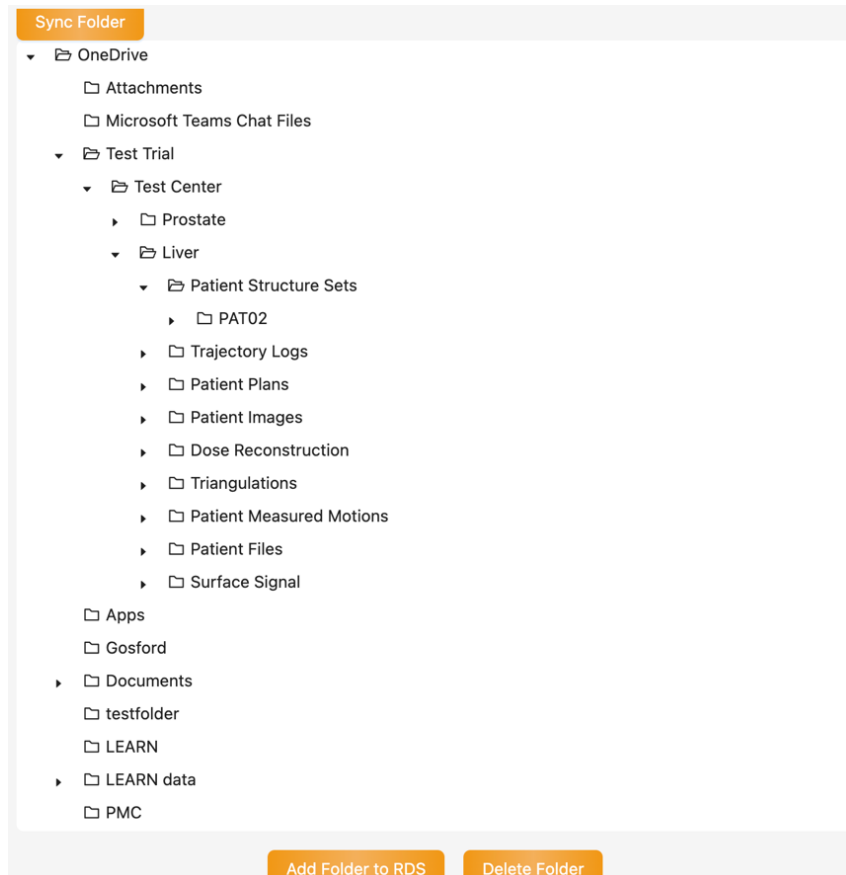In this section, you could see an interface similar to Figure 5.2.

Figure 5.2 Sample interface

The folders showed in this page are already in the local cache. If you could not find the folders for new patient, please try to click the Sync Folder button on the top left. After clicking the button, the local cache will do a manual sync with OneDrive. It may take an hour to a couple days depends on the size of new incoming data.

After the sync operation is done, you are able to select the folders contain the new patient data and click Add Folder to RDS button. After clicking the button, it also requires an hour to a couple days to move the folders from local cache to RDS. So please check RDS to see if all the files have been moved from local cache to RDS.

The Delete Folder allows you to delete these folders which are already in the RDS in order to free the space in local cache.
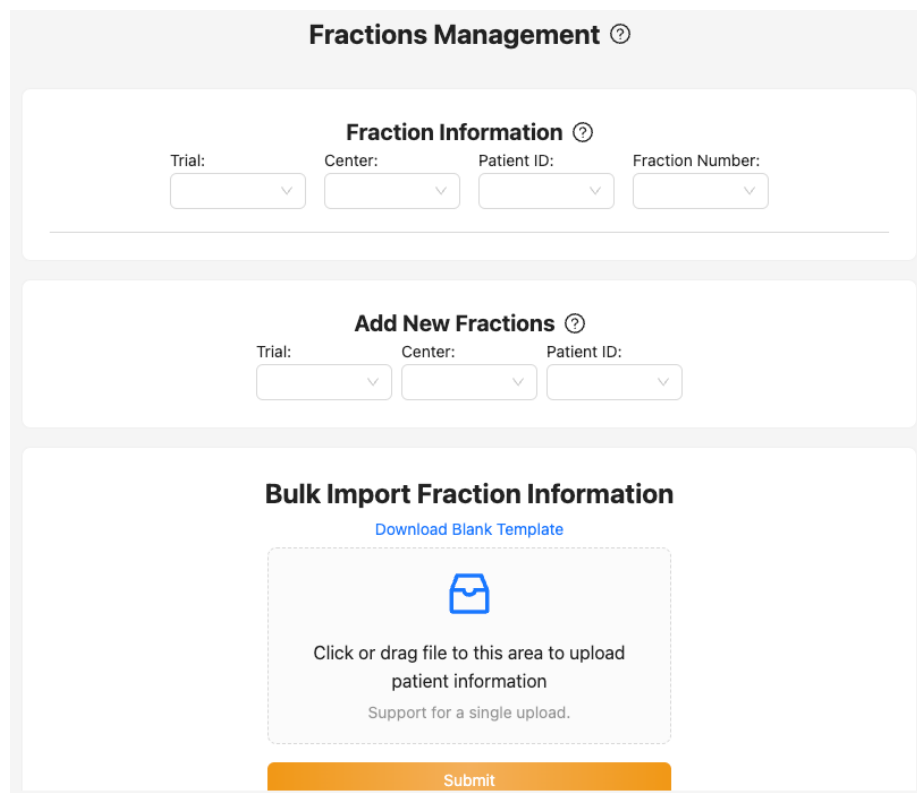
Step 6 Update the Fraction details for patients

We have to firstly update the fraction details for each new patient then update the database records. The function is under Patients tab, and it is named Fraction in the web application. The shortcut is
http://10.65.67.179:8888/dashboard/patitents/fractions .

Option 1 Bulky Import Fraction Information

In this page, we could see three sections as shown in Figure 6.1.

Fractions Management ⓘ

Fraction Information ⓘ
Trial: Center: Patient ID: Fraction Number:

Add New Fractions ⓘ
Trial: Center: Patient ID:

Bulk Import Fraction Information
Download Blank Template

Click or drag file to this area to upload patient information
Support for a single upload.

Submit

Figure 6.1 Fraction page

Normally we use Bulk Import fraction Information tab to update the fraction information for new patient. In this tab, download the blank template, and fill the csv file with fraction details for each patient, then upload it.

In the csv file, we need to create one row for each fraction or sub-fraction. For example, Patient 1 has two fractions, Fx1 and Fx2. Fraction 1 has three sub-fractions. So, the csv records should like this:

patientId	fractionName	fractionNumber
LEARN_test_RNSH_01	Fx1-a	1
LEARN_test_RNSH_01	Fx1-b	1
LEARN_test_RNSH_01	Fx1-c	1
LEARN_test_RNSH_01	Fx2	2

The fraction name should be the fraction or sub-fraction folder name, and the fraction number should be the actual digital fraction number.

Option 2 Individual Fraction Import

Apart from bulk import, we also provide the option for individual fraction import, see figure 6.2.

Figure 6.2 Add new fraction form

Please select and find the new patient id from the top tabs and fill the form and submit for each fraction and sub-fraction.

Example 1 The patient has no sub-fraction:

The fraction number should be a single number: 2 or 24

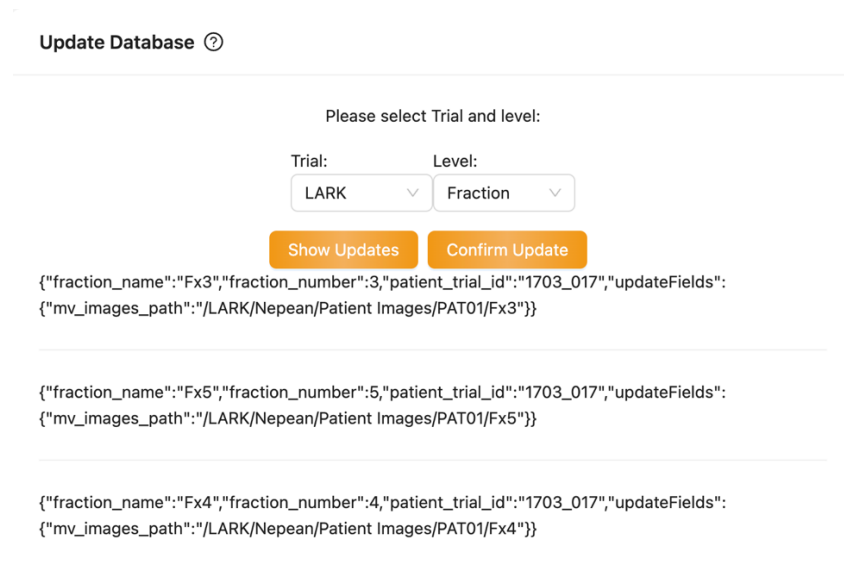The fraction folder name should be in the format: Fx2 or Fx24

Example 2 The patient has sub-fraction:

The fraction number should be a single number: 2 or 24

The fraction folder name should be the sub-fraction name: Fx2-a Fx2-b, or Fx24-a, Fx24-b

Step 7 Update the database records

After all the new data has been moved into RDS, we are able to update the path information for new patients. The function is under the Patients tab in the web application, and it is named QA Check. The shortcut is http://10.65.67.179:8888/dashboard/patitents/qacheck .

Figure 7.1 Example of update database

Under the Update Database section, we need to update the database for new patients in 2 steps.

Step 1 Update Prescription level:

Please select the trial and Prescription level by using the tabs and click Show updates. After a while, it will show the information which is able to update similar to Figure 7.1 example. Then we need to click Confirm Update button to update the database for new patients.

Step 2 Update Fraction level:

This step is the same as step 1 but selecting Fraction level under the Level tab.

After all the steps, we are now able to query the data for new patients by using the APIs.