

# GRP 5 Prearchive and Performing Data Review

## PURPOSE OF THE PROCEDURE

The purpose of this procedure is to describe the process for reviewing imaging data uploaded to the ACQI-XNAT system using the Prearchive and the Archive review functions. This procedure also defines the steps required to perform a formal review of archived datasets.

## WHAT IS PREARCHIVE

The Prearchive is a temporary holding area in XNAT used to review uploaded imaging data before it is permanently stored in the main Archive.

The Prearchive allows users to:

- Check that images have been correctly anonymised
- Confirm the correct project and subject assignment
- Remove incorrect scans before archiving
- Prevent identifiable data from being stored in the Archive

You will only be able to view data assigned to Projects for which you have access permission.

## WHEN TO USE PREARCHIVE

It is recommended that all uploaded scans should be checked in the Prearchive before archiving.

Prearchive can be used whenever imaging data is uploaded via:

- DICOM send
- Upload tools
- External transfer pipelines
- Automated imports

## SCOPE

This procedure applies to:

- Investigators, research coordinators, trial technicians, and data managers involved in projects supported by the Australian Centre for Quantitative Imaging (ACQI) or the Australian Imaging Service (AIS).
- Any personnel performing reviews of data uploaded to XNAT for clinical trials supported by the Australian Centre for Quantitative Imaging/Australian Imaging Service to determine if the data is correct and meets the standards of the trial in term of anonymization and quality.

## RELATED PROCEDURES

| Procedure Number | Scope                             |
|------------------|-----------------------------------|
| GRP1             | Gaining Access to XNAT            |
| GRP2             | Managing a project                |
| GRP3             | Preparing Data for Upload to XNAT |
| GRP4             | Uploading Data to XNAT            |

|             |                                  |
|-------------|----------------------------------|
| <b>GRP6</b> | <b>Analysing project data</b>    |
| <b>GRP7</b> | <b>Uploading Additional Data</b> |

## PROCEDURES

### Opening the Prearchive

1. Log in to ACQI-XNAT.
2. From the top menu, select:

Upload → Go to Prearchive

This will open the Prearchive screen showing all sessions waiting to be reviewed.

### Overview of the Prearchive Screen

The Prearchive screen contains four main areas:

1. **Session List** – all uploaded sessions
2. **Session Details Panel** – information for the selected session
3. **Action Buttons** – archive, delete, move, or review sessions

Figure 1 Image taken from XNAT Documentation. Available here: <https://wiki.xnat.org/documentation/using-the-prearchive#UsingthePrearchive-SessionStatusesinthePrearchive>

4.

The screenshot shows the XNAT Prearchive interface. On the left is a table of sessions with columns for Project, Subject, Session, Scan Date, Upload Date, and Status. The first row is selected. On the right is a 'Details of Highlighted Session(s)' panel showing metadata for the selected session. Below the details are 'Actions' (Archive, Review and Archive, Change Projects, Delete, Rebuild) and 'Filters' (Projects, Upload Date, Scan Date, Status, Subject/Session).

**Filters** – limit what sessions are shown

### Viewing Session Details

The Details section of the prearchive displays the information of the currently highlighted session. You can also click the "Details" button to be taken to the session prearchive details page. From the details page you can:

- View full session and scan parameters
- View DICOM headers
- Check for duplicate sessions

- Remove scans before archiving

### Performing Actions on Sessions

Actions can be performed on single sessions or in bulk on any session (s) selected in the session list. The operations are:

- **"Archive"** moves the highlighted session(s) from the prearchive to the main XNAT archive.

Use this when:

- Anonymisation is correct
- Project is correct
- Subject is correct
- Scans are complete

- **"Review and Archive"** allows you to review the details of a single session before archiving. Recommended for most uploads.

Use this when:

- You need to confirm details
- You need to remove scans
- You need to check metadata

- **"Change Projects"** moves the highlighted session(s) to another project.

- **"Delete"** removes the highlighted session from the prearchive. Please note deleted sessions cannot be recovered.

Use this when:

- Upload is incorrect
- Data contains identifiers
- Session assigned to wrong subject
- Duplicate upload

- **"Rebuild"** refreshes the session information.

Use this when you have amended or fixed something in prearchive and want to check if it is ready to archive.

### Good Practice

|                                  |                            |
|----------------------------------|----------------------------|
| ✓ Always review before archiving | ✓ Check anonymisation      |
| ✓ Confirm project and subject    | ✓ Remove incorrect scans   |
| ✓ Archive promptly               | ✓ Delete incorrect uploads |

## Reviewing Dataset(s) in ACQI-XNAT

1. Confirm that the extracted session information displayed on the screen (i.e. project, subject, session label, scan list and dates) is correct
2. From the actions menu on the right, click “View Images” to open the image viewer.
3. Review the images to confirm that images are as expected.
4. Click back to return to the session information page.
5. In the scan list, hover the mouse over the first scan and click the “View Details”.
6. Click “View DICOM Headers” and check that the data is as expected and has been anonymised correctly.
7. Repeat Steps 5-6 for every scan in the session.

## PROCEDURE TESTS

Note: These tests should be performed for each upload method used (e.g. Desktop Client, Web Browser, or automated transfer). Different ingestion methods may result in different processing behaviour in XNAT. If more than one upload method will be used, all tests must be completed for each method.

| Test Description  | Test completed | Pass/Fail | Comments |
|---|----------------|-----------|----------|
| Confirm that an email notification is received when a new session is created    |                |           |          |
| Check that all scans have uploaded and have the correct number of images /files |                |           |          |
| Confirm that uploaded images display correctly                                  |                |           |          |
| Confirm that DICOM headers are correctly anonymised                             |                |           |          |

## Reviewing Dataset(s) outside ACQI-XNAT

1. Log in to XNAT and select the central project for the trial.
2. From the “Actions” menu on the right, select “Download Images”.
3. In the left panel, select the session(s) to download.
4. In the middle panel, select the data types to download.
5. In the right panel, select the download method.
6. Import the downloaded images into the reviewing software (for example, MIM) and confirm that the dataset is correct.

### Download Options:

**Download via XNAT Client:** This will send an xml digest directly to the desktop client and will download in the background. The desktop client will open, you will then need to set the download destination folder and then click download for your files to download. A default download location can be set in the Desktop Uploader.

**Zip download:** Downloads the selected data as a zip file.

**Catalogue XML:** This will download an xml catalogue of the files you want to download. This can then be used by an external application to download the images. For example, you can open the catalogue in the desktop client and begin downloading that way. This might be useful if you want to send the digest to someone else or download the images at a later time or on a different machine.

**Actions to take if there are issues with the dataset**

Examples of issues include:

- Incorrect anonymisation
- Missing scans
- Wrong subject
- Wrong visit
- Corrupted images
- Minor metadata errors
- Naming inconsistencies
- Comments required

Steps to take:

1. Open the imaging session.
2. Locate the Date Added field.
3. Note the username shown in brackets.
4. Obtain the uploader’s contact details from the Project Owner or Trial Administrator, if required.
5. Email the uploader explaining:
  - a. What the issue was
  - b. That the dataset must be re-uploaded.
6. Additionally, comments can be added to the session on XNAT.
  - a. From the Actions menu, click Edit.
  - b. Enter notes in Additional Notes.
  - c. Click Submit.
  - d. Scroll to the Additional Notes field and confirm the comment is saved.

**PROCEDURE TESTS**

| Test description   | Test completed | Pass/Fail | Comments |
|--|----------------|-----------|----------|
| Confirm that an email is received by the reviewer notifying them of a new session being archived |                |           |          |
| Can follow link in email to see the new session  |                |           |          |
| Can select “Download Images”   |                |           |          |
| Can choose required image sessions   |                |           |          |
| Can choose required image types  |                |           |          |
| Can download via the Desktop Client  |                |           |          |
| Can download a zip directly  |                |           |          |

|   |  |  |  |
|---|--|--|--|
| Can download a catalogue XML and use that to download via the Desktop Client  |  |  |  |
| All images are as expected after download. We expect them to match the images uploaded apart from anonymisation of the headers. |  |  |  |

#### DOCUMENT HISTORY

| Author          | Version | Effective Date | Changes  |
|-----------------|---------|----------------|--|
| Angel Kennedy   | 1       | 23/08/2021     | Initial release  |
| Angel Kennedy   | 2       | 25/10/2021     | Update for direct to archive uploads                                     |
| Christel Norman | 3       | 14/02/2023     | Update to add ACQI logo and review document                              |
| Grainne Cahill  | 4       | 10/04/2026     | Addition of Prearchive details and updates to reviewing recommendations. |