

**Magnetic Resonance Research Center  
University of Pittsburgh  
MRRC 011: Data Retention**

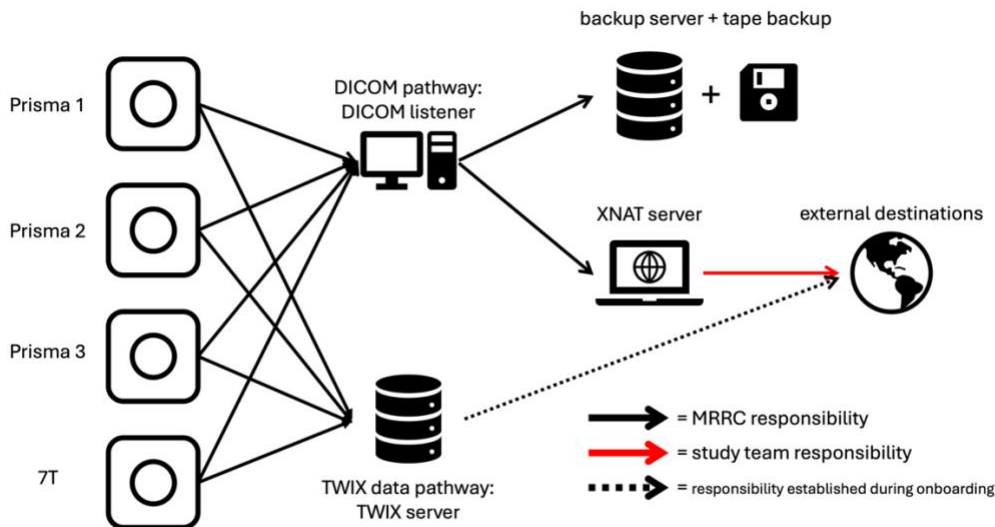
**1. Purpose:**

This SOP defines responsibilities of the investigator and MRRC regarding access to and retention of data produced by the MRRC.

**2. Background:**

The MRRC generates a large quantity of imaging data each day. The MRRC strives to generate high quality data, review for completeness of an imaging session, transfer data to the investigator in a timely manner, and retain data for as long as possible in case of catastrophic data loss by the investigator in the future. This document describes how data is handled and moved in the center. This document describes who is responsible for reviewing data and on what timeline reviews/transfers should take place.

**3. Figure and overview**



**Figure 1. Data flow overview**

**Figure 1** describes the flow of data from MRRC scanners to end destinations. There are two pathways – one for DICOM images (the pathway relevant to most MRRC users/projects) and one for raw TWIX data (only relevant to specific users).

Black pathways are the responsibility of the MRRC. The MRRC promises to briefly review each session for completeness at the conclusion of the scanning session and push DICOM data to XNAT **within 24 hours** of the scanning session. The MRRC strives to get DICOM data to XNAT as fast as possible (sometimes within a few hours of scanning). At the same time data is transferred to XNAT, the MRRC sends a copy of all DICOM data to a backup server and redundant tape. Backup server and redundant tape resources serve as potential last resort backups in case of

catastrophic data loss by the study team. The MRRC does not promise availability or integrity of data from the backup server and redundant tape.

Regarding black TWIX data pathways, the MRRC strives to push TWIX data to the TWIX server at the conclusion of the scanning session to ensure no raw data is lost as a scanner's temporary cache fills.

The red pathway is a study team responsibility. The MRRC is not responsible for transferring imaging data to external destinations (i.e., those outside the MRRC) such as a lab group's personal storage array, organizing sites, or clinical trial coordinating sites. The study team must transfer data from the MRRC's XNAT server to their preferred long-term storage and analysis solution **within 90 days of the scanning session**. Study teams can transfer data to external destinations either by downloading and reuploading or transferring via a command line tool. The MRRC's IT team can help train study teams in best practices for data transfer. In limited circumstances, the MRRC's IT team may transfer data as a professional courtesy but this should not be assumed. The study team should thoroughly check the scanning session for completeness and correct parameters within 90 days of the scanning session.

The dotted black pathway represents the transfer of TWIX data to external destinations. The responsibility to transfer and process TWIX data is highly variable. In some circumstances, the MRRC's faculty physics team transfers and processes TWIX data. In other circumstances, the MRRC's IT team configures a shared mounting point for an external physicist or study team member to access TWIX data. The terms of TWIX data transfer and processing should be established at the time of onboarding. TWIX data is only kept for 90 days from the time of the scanning session. Study teams should ensure all TWIX data is transferred to the study team's preferred long-term storage and processing solution within 90 days of the scanning session.

#### **4. Summary of important points for study teams:**

- The MRRC will have your imaging data ready to access within 24 hours
- You must check and download your data ASAP after data is available
- The sooner you check your data, the easier it is to resolve potential issues
- The MRRC promises 90 days of data availability on XNAT
- The MRRC strives to maintain data on XNAT for longer than 90 days but is forced to delete data on a rolling basis as the array fills
- Failure of the study team to download data from XNAT within 90 days of scanning could result in catastrophic data loss
- The MRRC maintains data in long term disk and tape backups, but the MRRC cannot guarantee the availability or integrity of this data
- TWIX data is kept for 90 days from the time of scanning session

#### **5. Change Log**

2026-03-03 – initial version