



Medical Imaging Data As a Service

FAQs: Defined Exam Retrieval service

Getting Started

1. What is MIDAS?

The Medical Imaging Data As a Service (MIDAS) tool enables MGB investigators to obtain radiologic imaging studies for research purposes. The tool is supported by the Enterprise Medical Imaging team within the Data Science Office.

2. What is the Defined Exam Retrieval service?

The first module available under MIDAS is the 'Defined Exam Retrieval' service. Using this service, researchers can retrieve up to 1,000 imaging studies per request by specifying a list of patients and their unique imaging study identifier also known as accession numbers. Studies will be retrieved from the clinical imaging archives and stored in a temporary location that has security and access controls based on IRB permissions.

3. Can I request only a particular series of images from the study that I am interested in using?

No, you will receive the whole study.

4. Is an IRB protocol required?

Yes. You may not use this tool without an approved IRB covering access to the images you request.

5. Does this service de-identify images?

The MIDAS Defined Exam Retrieval service provides an image de-identification option that follows the DICOM standard process in which PHI is either replaced, completely removed, or modified. A key to the de-identification is provided so that IRB-approved study staff can re-identify the studies as needed. Please see section below for more details on the de-identification process.

6. Am I allowed to share de-identified data outside MGB?

No. De-identification in and of itself does not allow users to share data outside MGB. Your MGB IRB must be approved for data sharing and a Data Use Agreement may be required.

7. Who can access this service?

MGB researchers with an approved IRB to access medical image studies.

8. What is required to use this service?

To use this service, researchers must include three data elements for each study: the site where the study was performed, the site medical record number (MRN) for the patient, and the accession number – the unique imaging study identifier.

9. How is the MIDAS Defined Exam Retrieval service different from other MGB tools for image retrieval?

It is the fastest way to access Radiology studies, but requires the investigators to know exactly which studies they want, including the unique imaging study identifier. Another important difference is that the MIDAS Defined Exam Retrieval service provides an image de-identification option. Please see section below for more details on the de-identification process.

10. How do I get started?

Use this link to [access the MGB web site for services that Identify Subjects / Request Data](#) and scroll down to the 'Medical Imaging Data As a Service' (MIDAS) box for step-by-step instructions. There are three steps you must take to initiate the process:

1. [Request a Personnel Authorization System \(PAS\) Group](#)
2. [Complete the Defined Exam Retrieval Service Request Form with attestation](#)
3. Email the Defined Exam Retrieval Service Request Form to MGB Radiology Image Requests (phsradiologyimagingrequests@partners.org)

11. How do I request a Personnel Authorization System (PAS) group for my research team?

The PAS group is a requirement for using the MIDAS tools. It allows users to manage their team's access to the image studies. Use this link to [learn how to obtain a PAS group and make a request for storage](#). You will need to complete a prerequisite training prior to setup if you have never done this before. PAS requests are managed by [MGB Digital Service Hub](#).

12. Where can I access the Radiology Imaging Request form with attestation?

Use this link to access the [Defined Exam Retrieval Request Form](#).

13. Whom do I reach out to with any questions?

Please email phsradiologyimagingrequests@partners.org.

14. What is the estimated image retrieval time?

Estimated retrieval time is 3-5 business days per batch of 1,000 imaging studies, once the PAS Group is created.

15. How long can image studies be stored in the assigned location without cost?

180 days, once the requested imaging studies are available. The requesting research team will need to either arrange for payment for continued storage or move the imaging studies to their own permanent storage location after 180 days.

16. Is it possible to retrieve de-identified demographics information: age, gender, ethnicity for the patients matching the requested accession numbers?

No.

17. What is the cost for the Defined Exam Retrieval service?

The service is free! The storage is free for the first 180 days.

Depending on your needs (e.g., quantity of images, customization), we are happy to discuss further how we can support your project. An additional cost would be incurred for requests outside the current scope of the 'Defined Exam Retrieval' service.

18. How do I access the image studies and connect to the ERIS storage?

A file share is created as a network drive and can be accessed through Mac, Windows, or a Linux mount. Instructions on how to access will be sent upon completion of the image study transfer. The storage folder is exported as a network drive and this is the information you will receive for access.

You must be connected to VPN to access images/data. Use this link [to get started with VPN](#).

More Information About the MIDAS DICOM De-identification Service

19. What is De-identification?

Healthcare data protection Privacy and Security Rules embedded within the Health Insurance Portability and Accountability Act (HIPAA) of 1996, were augmented by the Privacy Rule of 2003 that codified the concepts of Protected Health Information (PHI). De-identification is the set of distinct processes for removal of PHI from data sets to protect the privacy of patients' personal health information and hinder the possibility of tying data back to an individual patient.

- There are limitations of the de-identification process: it may not remove all features that allow a subject to be identified.
- Regardless of the tool used, the ***PI is ultimately responsible for ensuring the dataset is accessed, stored, and managed in a way that is consistent with an approved IRB protocol***, including de-identification if required. ***We strongly recommend that the PI conducts a manual audit post-de-identification to ensure all PHI and other potential patient identifiers (e.g., unique markings or anatomy) have been removed*** or masked in accordance with the approved IRB protocol.

20. Which DICOM fields can be modified?

Click on this link to get a document listing all the [Default tags used in the de-identification filter](#) that is built into the MIDAS services. Any custom request may extend turnaround time. Please note, private tags get removed by default.

21. How can I access the de-identification mapping?

When your image studies are transferred to your temporary store and the request has been completed, you will receive an email with instructions and a de-identification mapping list. If you do not receive this email, please contact phsradiologyimagingrequests@partners.org.

22. Can the de-identification tool be used on my own DICOM-formatted imaging dataset?

No. The de-identification tool is embedded into the MGB Radiology infrastructure and requires that the process be initiated when an image study is retrieved from the clinical archives.

23. How do I de-identify my own DICOM-formatted imaging dataset?

Many tools are either freely or commercially available for de-identification of DICOM data, removal of burned-in pixel data, and/or defacing of images of the head. They may require substantial customization for adequate removal of PHI¹ and often manual quality reviews of the process are needed. Some of the better-known tools are listed below:

- [RSNA Clinical Trials Processor \(CTP\)](#)
 - Aides with the removal of Burned-in Pixel Data
 - Allows specification of specific metadata fields to keep during the de-identification processes that otherwise removes DICOM fields
- [DICOM Library](#)
- [GDCM](#)
- [PixelMed DICOMCleaner](#)
- [Tudordicom](#)
- [YAKAMI DICOM](#)
- [ACR's Transfer of Images and Data, ACR Connect](#)
- [SynthStrip](#) (skull stripping)
- [MiDeFace \(Defacing images\)](#)
- Many commercial PACS include de-identification tools

¹ Battle JC, Dreyer KJ, Allen B, et al. Data Sharing of Imaging in an Evolving Health Care World: Report of the ACR Data Sharing Workgroup, Part 1: Data Ethics of Privacy, Consent, and Anonymization. *J Am Coll Radiol* 2021;18:1646-1654.