Department of Radiology and Imaging Sciences

Anonymization of DICOM Image Files for HIPAA-Compliant Research

The Department of Radiology will commence offering a "Best-Effort" service for automated removal of Protect Health Information (PHI) to qualified researchers*. All requests must be accompanied by an approved IRB protocol. If an outside organization will be receiving any image files, a BAA, data use agreement, contract, and/or other approval documents and agreements must be in place. Currently available software is capable of removing most known PHI items from the DICOM metadata, and quarantines images containing PHI that cannot yet be automatically removed.

The service will mask patient name and ID in all image files and replace them by a string consisting of project-defining prefix (e.g., "ILIAC_CT_"), and a patient-defining index (001, 002, … so: ILIAC_CT_001, …). Relevant date fields will not be blanked, but the date stamps will be shifted in time by an interval that will be constant for a specific project. This approach hides true dates but preserves the relative integrity of serial time stamps within the study. It will blank or delete DICOM tags for a variety of other information fields generally considered or suspected to PHI, including by default all "private tags". PHI "burned into" the pixels cannot be cleaned yet but such images will be removed from the study and placed in a "quarantine" area for further review if needed.

In scheduled (for the time being, nightly) batch runs the images will be retrieved from PACS, cleaned, and forwarded to a destination DICOM host. Users of the service will submit a list of PACS accession numbers of imaging studies that need removal of PHI, or present the image data stored in a secure location accessible to the service. Image data residing outside the Healthcare network can be shared in an approved manner via shared Emory Box folders, or contact the team about alternative secure image transfer. For output, please provide accessible DICOM parameters for a destination computer, or another secure storage solution.

IMPORTANT: Please note that the service, must not be considered "fool-proof". Investigators retain full responsibility for HIPAA compliance of their research. Users must inspect samples of the results, and commit to providing feedback to help resolve incomplete or erroneous results.

For more information, or to place a request, please contact Radiology Informatics:

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*Qualified researchers:

1) Emory faculty, fellows and residents and/or Emory students with identified Emory faculty sponsor.
2) Non-Emory faculty, fellows, residents, students must collaborate with an Emory faculty member who will be the contact person for all requests.

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