

PVDOMICS Study

Lung CT Data Transmission

DCC - Lung Imaging Core
Cleveland Clinic
Cleveland, Ohio



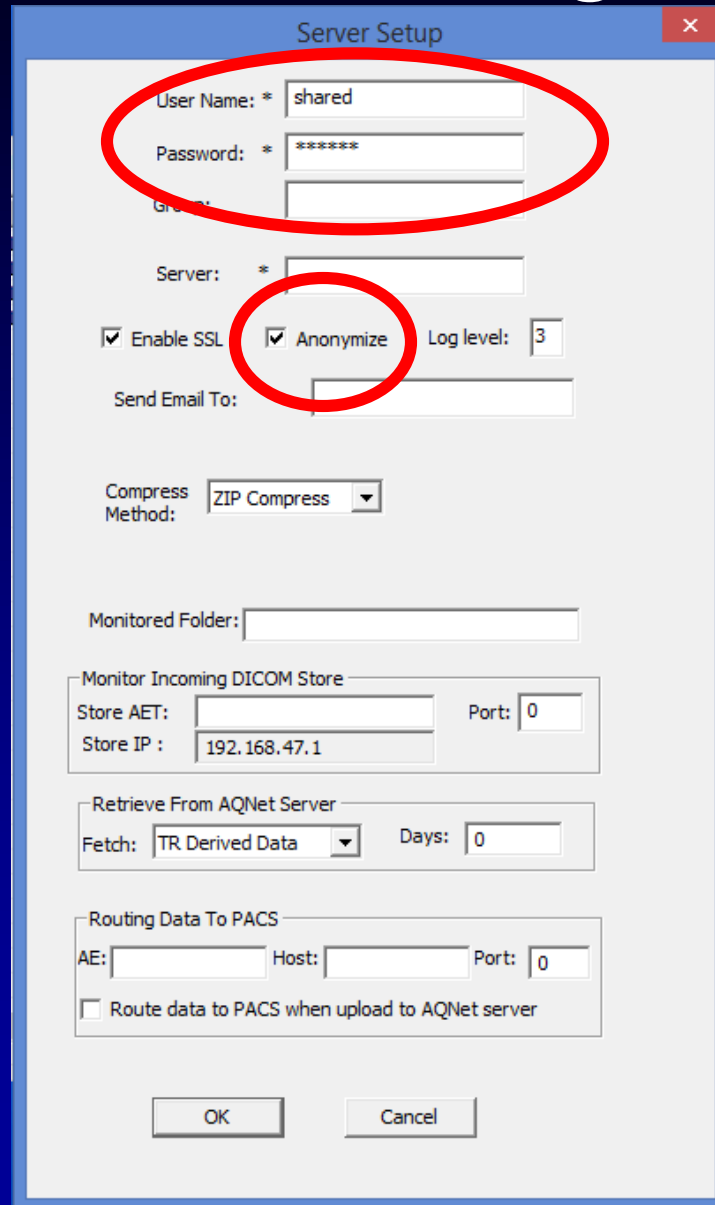
NHLBI Pulmonary Vascular Disease Phenomics Program

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National Institutes of Health with support from
the Pulmonary Hypertension Association*

iNtuition Uploader

- Purpose: Transfer Data to LIC
- To be configured by DCC administrators, TeraRecon and local study coordinators
- Software provided by DCC/TeraRecon administrators

Uploader Configuration



The screenshot shows a 'Server Setup' dialog box with the following fields and options:

- User Name: *
- Password: *
- Group:
- Server: *
- ☒ Enable SSL
- ☒ Anonymize
- Log level:
- Send Email To:
- Compress Method:
- Monitored Folder:
- Monitor Incoming DICOM Store
 - Store AET:
 - Store IP:
 - Port:
- Retrieve From AQNet Server
 - Fetch:
 - Days:
- Routing Data To PACS
 - AE:
 - Host:
 - Port:
 - ☐ Route data to PACS when upload to AQNet server

Buttons: OK, Cancel

Data Anonymization

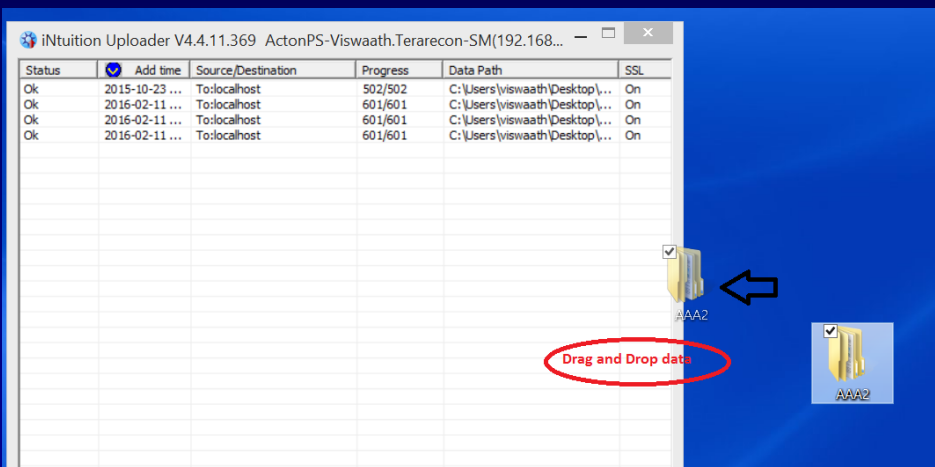
[illegible]

Data Anonymization and Assignment of ID

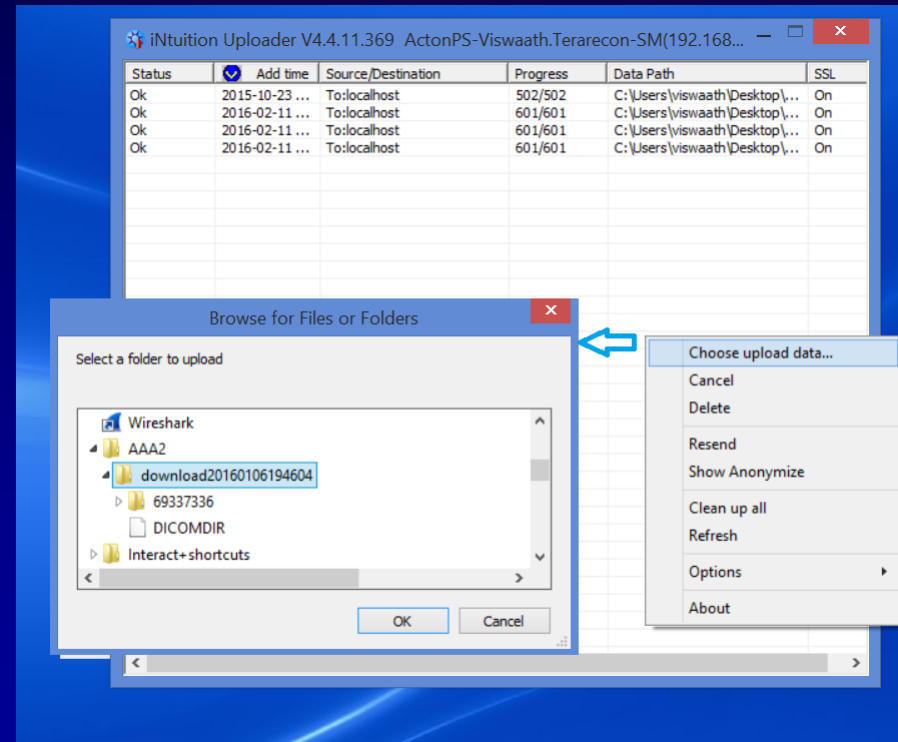
- Ascribe PVDOMICS id# to CT study before de-identification occurs:
 - File name convention is:
CT_id#_alphacode_testdate.pdf
- Assure PVDOMICS id# corresponds to participant's true MRN# and keep locally (including MRN #, Accession #, Name and DOB, etc.)
- Essential for retrieval of patient information for clinical purposes

Uploading Data

Option 1



Option 2



Can be dragged from CT console, PACS, local drive or pre-anonymized CD

Browse to a folder to upload the data

Transmitting Data via iNtuition Uploader Software

- Internet connection
- Anonymization occurs before data transfer
- Click on folder to submit and transfer
- Progress of data transfer on screen until complete

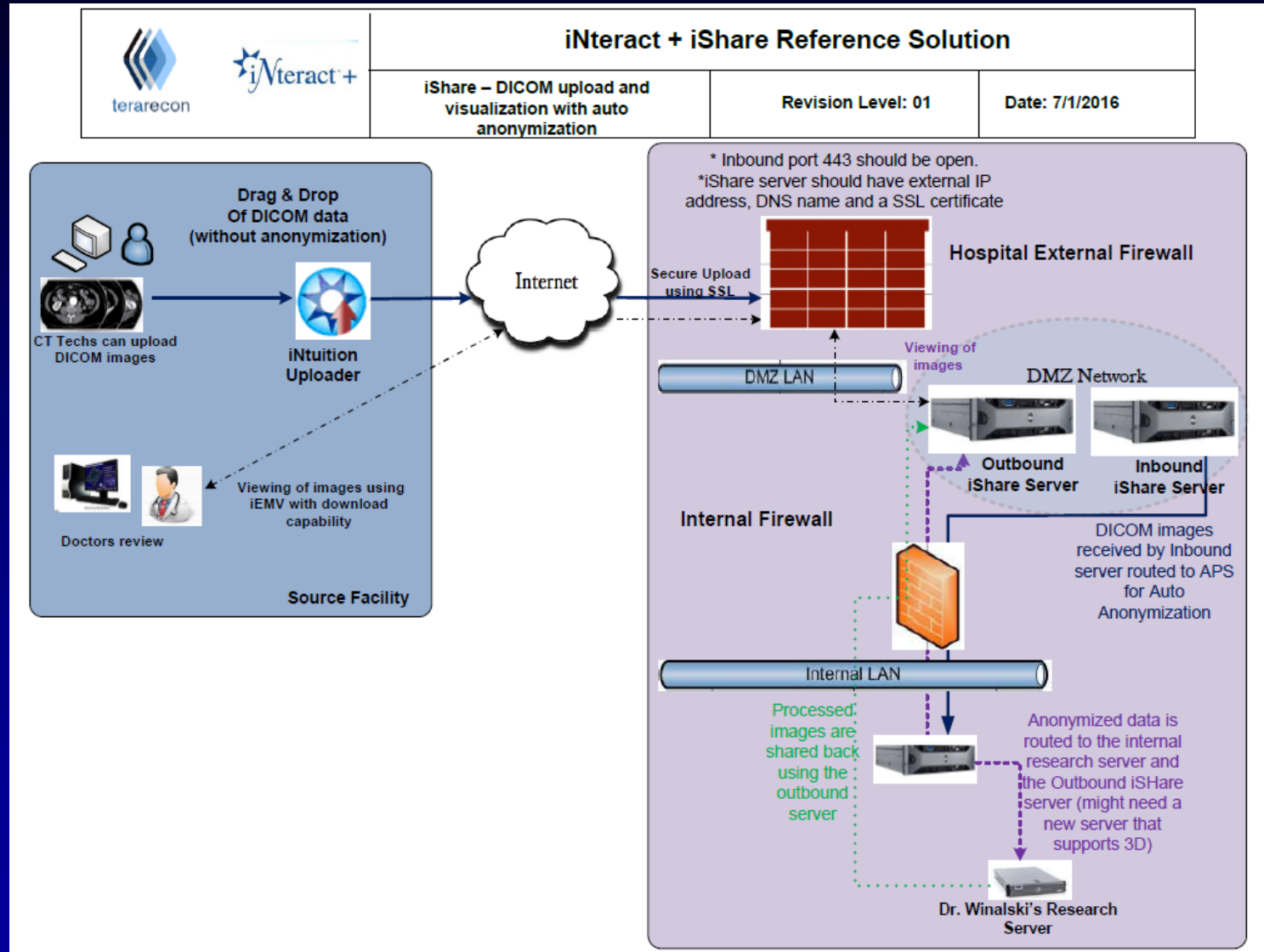
The screenshot shows the iNtuition Uploader application window. The title bar reads "iNtuition Uploader V4.4.11.369 ActonPS-Viswaath.Terarecon-SM(192.168...". Below the title bar is a table displaying upload logs. A black arrow points to the fourth row of the table.

Status	Add time	Source/Destination	Progress	Data Path	SSL
Ok	2015-10-23 ...	To:localhost	502/502	C:\Users\viswaath\Desktop\...	On
Ok	2016-02-11 ...	To:localhost	601/601	C:\Users\viswaath\Desktop\...	On
Ok	2016-02-11 ...	To:localhost	601/601	C:\Users\viswaath\Desktop\...	On
Ok	2016-02-11 ...	To:localhost	601/601	C:\Users\viswaath\Desktop\...	On

General Overview of Digital Workflow

Obtaining, uploading and transferring data:

1. Technologist performs CT scan and saves DICOM in destination folder
2. Study coordinator performs 1-click removal of patient information than drags and drops DICOM file into iNtuition Uploader folder
3. Study coordinator electronically submits data
4. Secure digital transfer of data



Processing Clinical Reports

- Final Radiology Report must be de-identified prior to transferring
- Print hard copy of report
- Black out all identifying information such as name, DOB, MRN, etc.
- Enter participant's PVDOMICS ID #, alphacode, date of CT scan on each page
- Scan and save as a pdf

Name: [REDACTED] PVDOMICS ID#:
DOB: [REDACTED] CT_XXXXXX_ac_MMDDYYYY
MRN: [REDACTED]

CHEST CT WITHOUT CONTRAST

Indication: Shortness of Breath
Technique: Spiral CT acquisition without contrast. 1 mm slice thickness.
Dose reduction techniques were employed.
CT Dose-Length Product: 245 mGy*cm
Comparison: None Available

RESULTS:

1. Lines, Tubes, and Devices: N/A
2. Lungs and Pleura: Patent central airways. No dominant nodules. No focal lung consolidations or effusions.
3. Cardiomediastinal silhouette: Heart and great vessels within normal size limits. No pericardial effusion.
4. Neck base: N/A
5. Thoracic lymph nodes: No significant mediastinal adenopathy.
6. Bones and Soft tissues: Mild degenerative changes of the thoracic spine.
7. Upper abdomen: No acute upper abdominal abnormalities.

IMPRESSION:

Normal Chest CT.

Transferring Clinical Reports

- File naming convention is:

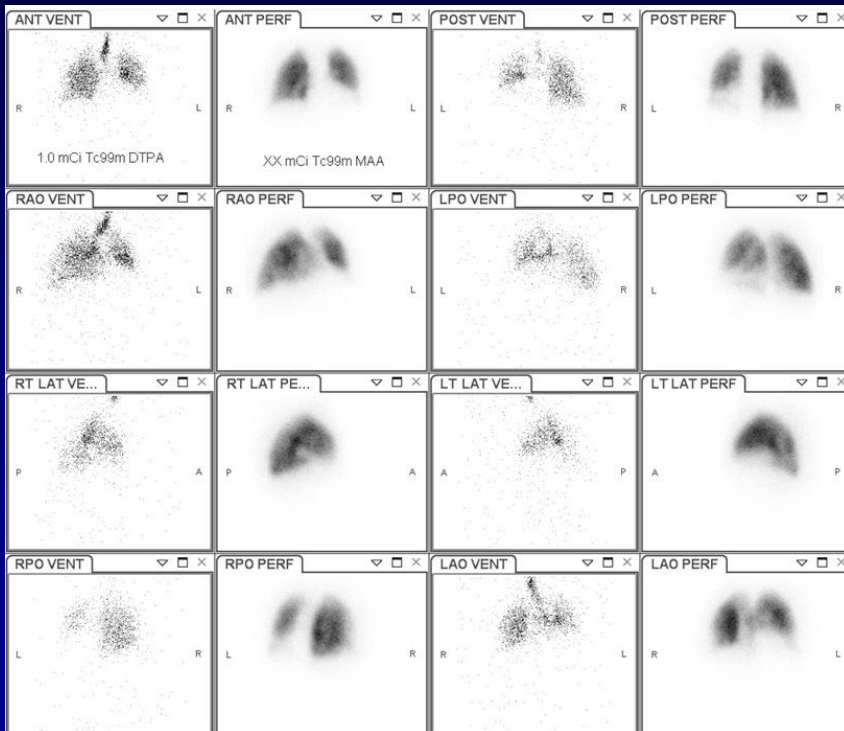
“CT_xxxxxx_ac_mmdyyy.pdf”

file content PVDOMICS id # alphacode test date file type

The diagram illustrates the components of the file naming convention 'CT_xxxxxx_ac_mmdyyy.pdf'. Blue arrows point from labels below to specific parts of the filename: 'file content' points to 'CT', 'PVDOMICS id #' points to 'xxxxxx', 'alphacode' points to 'ac', 'test date' points to 'mmdyyy', and 'file type' points to '.pdf'.

- Log in to SSH with previously assigned account name and password
- Drag and drop file into SSH home directory for PVDOMICS on DCC server
- Include document transfer date on Form 252 (or 253)
- DCC will move file out of home directory for processing and site will not be able to get to it again-its all one way in from the sites
- Please send DICOM data and emailed clinical report as close in time as possible with recorded dates for both

Ventilation Perfusion Imaging



- Not required if participant has accompanying CTA and CTA images are provided to LIC
- Not required if V/Q has been performed within one year prior to enrollment
- Report only will be transmitted to LIC at DCC; V/Q images will not be transferred

Transferring V/Q Reports

- Identical method to transmitting CT reports
- Final report must be de-identified, printed, re-identified with PVDOMICS ID #, scanned, saved as pdf and uploaded to PVDOMICS home directory for transfer to DCC
- File naming convention is:

“VQ_XXXXXX_ac_mmdyyy.pdf”

file content PVDOMICS id # alphacode test date file type

Conclusion

- Simple, efficient and secure method of data upload, transmission and network sharing via TeraRecon iUploader, iNtuition Server, and iShare
- Study coordinator and CT technologist work together with minimal post-scanning/processing effort
- Will ensure accurate transmission of DICOM for post processing data analysis at Lung Imaging Core which will be essential to phenotyping patients in PVDOMICS study

Lung Imaging Core @ Data Coordinating Center

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