Procedure for Comparing Virtual Injection to PCASL:

Reconstruct and Background Phase Correct

1. Reconstruct PCVIPR data on CN machines

* Find locations of PCASL/PCVIPR cases in the “PCASL\_Missing cases.xlsx” file
* Currently have not established the appropriate parameters (# frames, etc).

1. Create PATIENT folder on personal machine

* Example: D:\\Patients\\151002\_E9637\_D775

1. Pull RECON folder (with dat and DICOM folders inside) through FileZilla to PATIENT
2. Pull PCASL dicoms to PATIENT
3. Open Matlab
4. Add ‘PCToolV2’ to Matlab path
5. Run ‘standalone\_background\_correction’ on PCVIPR dat files

* Phase corrected dat files should be output to a folder called CORRECTED, located in the directory in which the original dat files are located.

Run virtual injection

1. Create folder named “inject\_data” in RECON folder

* If this folder already exists, there may be data in that folder. You can choose to save this data in a different folder, as it will be overwritten.

1. Open ‘new\_test.py’

* This should be opened with IDLE.
  + Right-click on the python file, an option “Edit with IDLE” should be available. If not, you may need to uninstall previous version of python.
* Check that PLoader (line 12) leads to the right data folder (CORRECTED if phase corrected)

1. Open command prompt
2. Move to RECON directory

* ‘cd’ changes directory, ‘dir’ lists directories, ‘D:’ changes to D-drive

1. Ensure ‘new\_test.py’ is in path

* If not, change path in environment variables in Windows (“Edit the System Environment Variables” 🡪 “Environment Variables …”)

1. Type “new\_test.py” in command line
2. Adjust THRESH until only vessels are seen
3. Run virtual injection

NPY/DICOM to NIFTI

1. Create COMPARE folder in PATIENT
2. Open Matlab
3. Move to inject\_data folder
4. Run ‘npy2nii’
5. Move to PCASL folder
6. Run ‘dcm2nii’
7. Copy TOA.nii and PCASL.nii file to COMPARE