

# Notes for Haacke Group

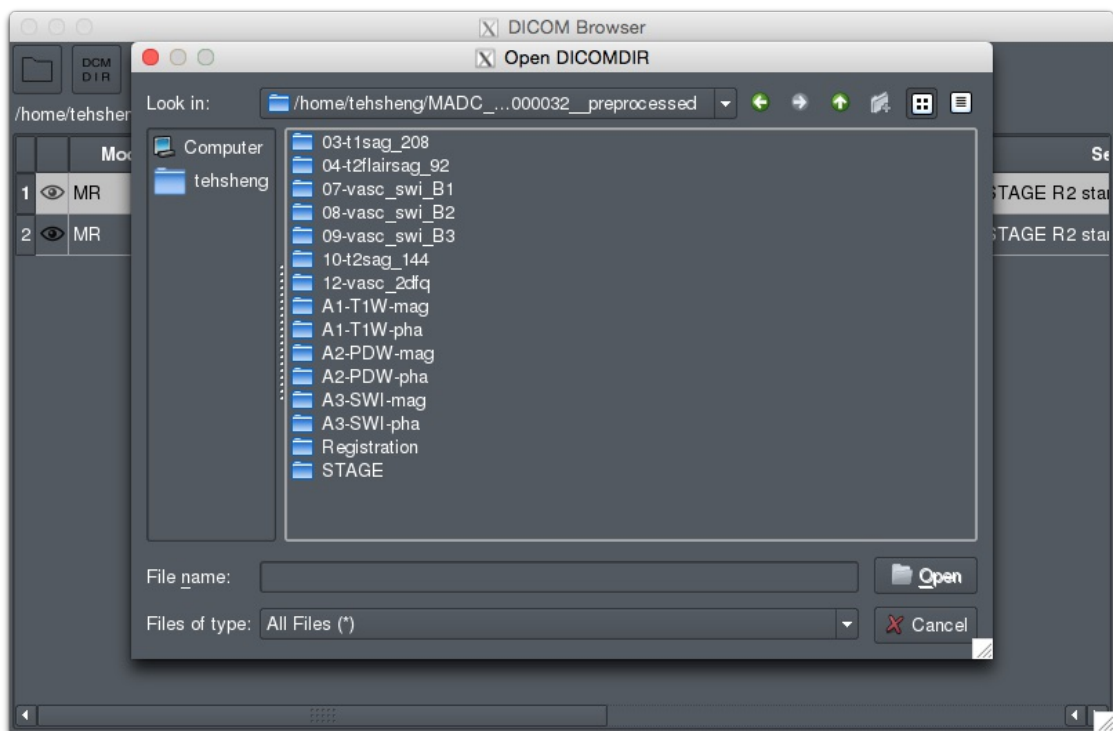
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## Questions regarding reports

### General questions

1. For the **Processed** subject folders (see snapshot below),
  - what are the folders with prefix **A1/A2/A3** for? and how can they be used in our analysis stream?
  - there are some folders with the **Registration** folder. Are these dicom registered to **MNI space**?
  - snapshot



### Individual subject report

0. For all analysis, are the MRI head images coregistered to MNI space?
  - If yes, can locations of the findings be reported as MNI coordinates with deficit volumes paired?
1. For **white matter hyper intensities** in Section 2. Conventional MRI Sequences,
  - can the coordinates as well as the volumes be provided as well as which image modality it was derived from (ie. FLAIR, T2W, or T1W)?

- is there a derived overlay file (that can be overlayed to the corresponding image modality dicoms) which labels/annotate the locations of the **white matter hyper-intensities**?
2. For Cerebral microbleeds in Section 3. Susceptibility Weighted Imaging Findings,
    - can the coordinates as well as the volumes be provided as well as which image modality it was derived from (ie. SWI Phase, SWI Magnitude, SWI mIPs, SWIM MIP, SWIM Phase)?
    - is there a derived overlay file (that can be overlayed to the corresponding image modality dicoms) which labels/annotate the locations of the **cerebral microbleeds**?
  3. For the Microbleed Anatomical Rating Scales (MARS) form, in Section 3.6,
    - Is it possible to include the Medial Temporal Lobe (MTL) in this table?
    - can an Excel file be provided to allow easy download and integration into our database?
  4. For Section 3.7, SWIM Quantification of the Deep Gray Matter ,
    - could this section be re-analyzed after the age/gender information is provided (which has been included in our 4th batch package)?
  5. For the tables in 3.8, 3.9, 3.10, 3.11,
    - again, is it possible to include the MTL regions in this table?
    - can you define the meaning and units of the variables: Number , Mean and Volume ?
    - the Number variable seems to share the same values for table 3.8 - Iron Quantification of the Deep Gray Matter Structures and Dentate Nucleus using R2\* and table 3.9 - Iron Quantification of the Deep Gray Matter Structures and Dentate Nucleus using SWIM . Is there a specific reason for this?
    - the Number variable seems to share the same values for table 3.10 - T1 MAP Values for the Deep Gray Matter Structures and Dentate Nucleus using R2\* and table 3.11 - PD MAP Values for the Deep Gray Matter Structures and Dentate Nucleus using SWIM . Is there a specific reason for this?
  6. For the Section 5. Compiled Flow Report section,
    - in the C2 Blood Flow table, there is inconsistent use of abbreviated terminology or not in the table
      - such as Total Jugular (ml/s) is used as Total IJV (ml/s) in the Flow findings section in the group findings report (dated 2-28-2018).
      - or no entry and definition for Total ICA (ml/s) or Total VA (ml/s) but has been listed in the Flow findings section in the group findings report.
    - I have included an example snapshot from subject hlp17ummm01359 for his/her individual report vs. group findings report
    - For the Average Velocity , Integrated Flow , Negative Volume Flow Rate , Positive Volume Flow Rate , and Volume Flow Rate charts, is it possible to provide an Excel file to allow access to the raw data?
    - snapshot1

## C2 Blood Flow

Dominant IJV			Right, -6.82 ml/s, 60.4% CBF		
Subdominant IJV			Left, -4.05 ml/s, 35.9% CBF		
<b><u>Veins</u></b>					
Total right side flow (ml/s)		LIJV ?	-6.82		
Total left side flow (ml/s)			-4.05		
Total Jugular (ml/s)		?	-10.9		
Total Venous (ml/s)		?	-10.9		
<b><u>Arteries</u></b>					
Left ICA flow (ml/s)	4.18	LICA ?	Right ICA flow (ml/s)	3.72	RICA ?
Total right side flow (ml/s)		LVA ?	5.46		
Total left side flow (ml/s)		RVA ?	5.82		
Total CBF (ml/s) [ICA+VA]			11.3		
Total Arterial Blood flow (ml/s)			11.3 different than Total CBF ?		
<b><u>Normalized Venous Flow</u></b>					
Type 1			0.963		
Type 2			0		
Type 3			0		

- snapshot2

## Flow findings:

### Plots

Case ID	LIJV (ml/s)	RIJV (ml/s)	LICA (ml/s)	RICA (ml/s)	LVA (ml/s)	RVA (ml/s)
hlp17umm00773_03440	3.05	0.29	2.88	2.36	0.54	0.34
hlp17umm01341_03495	1.17	5.46	2.69	2.50	0.86	0.60
hlp17umm01346_03445	0.45	4.10	2.27	1.87	0.04	1.18
hlp17umm01359_03418	4.05	6.82	4.18	3.72	1.64	1.74
hlp17umm01360_03482	3.58	3.96	1.02	3.67	2.69	0.94
hlp17umm01362_03521	1.77	5.12	2.35	2.56	0.69	1.29
hlp17umm01364_03481	2.54	4.66	2.61	3.03	1.45	0.12
hlp17umm01366_03424	2.73	1.34	1.80	2.48	0.79	0.43
hlp17umm01367_03423	5.61	1.28	2.35	2.41	0.68	1.52
hlp17umm01368_03527	0.31	0.10	3.14	3.59	1.09	0.46
hlp17umm01378_03526	4.40	3.35	3.36	2.66	1.38	0.38
hlp17umm01379_03535	3.34	3.09	2.28	3.40	0.74	0.61
hlp17umm01380_03536	2.35	5.36	3.27	4.32	1.49	0.83

Case ID	Total IJV (ml/s)	Total ICA (ml/s)	Total VA (ml/s)	Total CBF (ICA +VA) (ml/s)
hlp17umm00773_03440	3.34	5.25	0.88	6.13
hlp17umm01341_03495	6.63	5.19	1.46	6.66
hlp17umm01346_03445	4.55	4.22	2.12	6.25
hlp17umm01359_03418	10.86	7.90	3.38	11.28
hlp17umm01360_03482	7.54	4.69	3.63	8.31
hlp17umm01362_03521	6.89	4.90	1.98	6.89
hlp17umm01364_03481	7.20	5.63	1.57	7.20
hlp17umm01366_03424	4.07	4.28	1.22	5.50
hlp17umm01367_03423	6.88	4.76	2.20	6.95
hlp17umm01368_03527	0.41	6.73	1.55	8.28
hlp17umm01378_03526	7.75	6.02	1.76	7.78
hlp17umm01379_03535	6.44	5.68	1.35	7.03
hlp17umm01380_03536	7.70	7.59	2.30	9.91

## Group Findings Report

1. Can the CMB Counts and Quantification table in Page 7 and FLAIR Table of WMH in Page 13 be included as well in each subject's individual report? This links back to the the #1, #2 requests in the individual report section for the location/coordinates and volumes of the deficits.
2. Again, can you define the variables for Pixels , Volume , Mean for both tables in CMB Counts and Quantification and FLAIR Table of WMH ?
3. The Mean and Volume column labels for tables in CMB Counts and Quantification section, seems to be mislabeled on Page 7 vs Page 10.
  - snapshot3

S.No	Case ID	Pixels	Volume	Mean	S.D.
1.	bmh17umm01337_03349	40	20	170.30	116.76
2.	bmh17umm01342_03350	20	10	153.20	85.60
3.	bmh17umm01342_03350	7	3.5	81.00	20.11
4.	bmh17umm01342_03350	16	8	133.19	51.69
5.	bmh17umm01342_03350	5	2.5	92.20	17.27
6.	bmh17umm01342_03350	4	2	63.75	3.90
7.	bmh17umm01342_03350	16	8	91.88	30.37
8.	bmh17umm01342_03350	217	108.5	210.26	124.31
9.	hlp17umm01339_03384	204	102	317.47	225.05
10.	hlp17umm01362_03521	23	11.5	141.30	159.15
11.	hlp17umm01362_03521	18	9	54.50	49.48
12.	hlp17umm01378_03526	23	11.5	161.39	110.71
13.	hlp17umm01379_03535	111	55.5	267.44	262.63

- snapshot4

No.	Case ID	Mean	Volume
1.	bmh17umm01337_03349	20	170.30
2.	bmh17umm01342_03350	142.5	825.47
3.	hlp17umm01339_03384	102	317.47
4.	hlp17umm01362_03521	20.5	195.80
5.	hlp17umm01378_03526	11.5	161.39
6.	hlp17umm01379_03535	55.5	267.44