**MESA Exam 6 Ancillary Study 253 Data Set Variable Guide**

Brain MRI – ROI Volume

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| **Data Set name :** | MESAe6as253\_BMRIROIVol\_20240108 |
| **CC Contact :** | Dave Vu |
| **Contact Information :** | [voodoo@uw.edu](mailto:voodoo@uw.edu) |

**MESA Ancillary study #253, Atrial Fibrillation Study**

**PI: Susan R. Heckbert, MD, PhD, University of Washington**

See ancillary study publications1,2 in the Reference list for information on ancillary study methods and for examples of how to analyze the brain MRI data. Please acknowledge the Atrial Fibrillation Ancillary Study funding in all publications that use these brain MRI data: R01 HL127659 from the National Heart, Lung, and Blood Institute.

MESA participants from all six field centers who participated in the Atrial Fibrillation ancillary study3,4 at Exam 6 were invited to complete a brain MRI a median (IQR) of 18 (16, 20) months after the Exam 6 visit. This data set contains one record per ancillary study participant (n=1062) who had a brain MRI in March 2018 through August 2019 as part of the Atrial Fibrillation ancillary study. An initial manual reading was done to identify findings that needed to be reported as clinical alerts; alert conditions were reported to participants.

The Brain MRI Reading Center at the University of Pennsylvania provided this ROI (Region of Interest) Volume dataset, which includes brain volumes derived by multi-atlas based segmentation from the T1 MRI sequence and reported for MUSE ROIs 5,6.

QC codes:

The variable qc\_code contains information on quality control issues. The values and their explanations are as follows:

L1 incidental findings detected in initial manual reading; structural brain lesion was present that should not affect regional volumes, either normal or abnormal

L2 incidental findings detected in initial manual reading; structural brain lesion was present that should not affect normal regional volumes, but abnormal volumes may be affected

L3 incidental findings detected in initial manual reading; structural brain lesion was present that may affect both normal and abnormal regional volumes.

QC\_I\_T1\_1 or QC\_I\_T1\_2 scans with image quality issues, such as “missing parts of brain” and “moderate motion”

NA no qc issues

Comments regarding the qc\_code value are found in qc\_note.

Exclusions: for analysis of ROI volumes, analysts must exclude scans with the following qc\_codes:

L3 (n=15)

QC\_I\_T1\_1 (n=1)

QC\_I\_T1\_2 (n=1)

For these 17 participants, the variable roi\_exclude is set to 1 and all volumes have been set to missing.

Analysts may also wish to exclude in a sensitivity analyses those with qc\_code = L2 (n=2).

Recommended adjustments: All brain MRI analyses in MESA should be adjusted for field center. Analyses of brain MRI volumes should generally be adjusted for total intracranial volume (icv), which is a measure of head size.

All volumes are expressed in microliters (µl). Analysts and authors may prefer to convert these volumes to ml.

Abbreviations:

bs brainstem

dc diencephalon

**References**

1. Austin TR, Nasrallah IM, Erus G, Desiderio LM, Chen LY, Greenland P, Harding BN, Hughes TM, Jensen PN, Longstreth WT, Jr., et al. Association of Brain Volumes and White Matter Injury With Race, Ethnicity, and Cardiovascular Risk Factors: The Multi-Ethnic Study of Atherosclerosis. *Journal of the American Heart Association*. 2022;11:e023159. doi: 10.1161/JAHA.121.023159

2. Austin TR, Jensen PN, Nasrallah IM, Habes M, Rashid T, Ware JB. Left Atrial Function and Arrhythmias in Relation to Small Vessel Disease on Brain MRI: the Multi-Ethnic Study of Atherosclerosis. (under review).

3. Heckbert SR, Austin TR, Jensen PN, Chen LY, Post WS, Floyd JS, Soliman EZ, Kronmal RA, Psaty BM. Differences by race/ethnicity in the prevalence of clinically detected and monitor-detected atrial fibrillation: MESA. *Circulation Arrhythmia and electrophysiology*. 2020;13:e007698. doi: 10.1161/CIRCEP.119.007698

4. Heckbert SR, Austin TR, Jensen PN, Floyd JS, Psaty BM, Soliman EZ, Kronmal RA. Yield and consistency of arrhythmia detection with patch electrocardiographic monitoring: The Multi-Ethnic Study of Atherosclerosis. *J Electrocardiol*. 2018;51:997-1002.

5. Doshi J, Erus G, Ou Y, Gaonkar B, Davatzikos C. Multi-atlas skull-stripping. *Academic radiology*. 2013;20:1566-1576. doi: 10.1016/j.acra.2013.09.010

6. Doshi J, Erus G, Ou Y, Resnick SM, Gur RC, Gur RE, Satterthwaite TD, Furth S, Davatzikos C, Alzheimer's Neuroimaging I. MUSE: MUlti-atlas region Segmentation utilizing Ensembles of registration algorithms and parameters, and locally optimal atlas selection. *Neuroimage*. 2016;127:186-195. doi: 10.1016/j.neuroimage.2015.11.073

| **Order** | **Variable** | **Variable Description** |
| --- | --- | --- |
| 1 | idno | MESA Participant ID |
| 2 | agebrainmri6c | Age at Exam 6 Brain MRI |
| 3 | brainmri\_tt6c | Time from baseline to Exam 6 brain MRI (days) |
| 4 | qc\_code | QC Code for ROI dataset:  L1 = Incidental findings, level 1  L2 = Incidental findings, level 2  L3 = Incidental findings, level 3  QC\_I\_T1\_1 = Quality control issue at image level  QC\_I\_T1\_2 = Quality control issue at image level |
| 5 | qc\_note | MRI Reader Note explaining QC code |
| 6 | roi\_exclude | 0 = Include in analysis of ROI volume  1 = Exclude from analysis of ROI volume based on QC Code |
| 7 | icv | Intracranial Volume (µl) Hemisphere: Both Tissue Segment: gray matter+white matter+ventricle+BS+cerebrospinal fluid |
| 8 | totalroi | Total Regions of Interest (µl) Hemisphere: Both Tissue Segment: gray matter+white matter+ventricle+BS |
| 9 | totalgmwm | Total Gray Matter + White Matter (µl) Hemisphere: Both Tissue Segment: gray matter+white matter |
| 10 | gm | Gray Matter (µl) Hemisphere: Both Tissue Segment: gray matter |
| 11 | wm | White Matter (µl) Hemisphere: Both Tissue Segment: white matter |
| 12 | gm\_l | Gray Matter (µl) Hemisphere: Left Tissue Segment: gray matter |
| 13 | wm\_l | White Matter (µl) Hemisphere: Left Tissue Segment: white matter |
| 14 | gm\_r | Gray Matter (µl) Hemisphere: Right Tissue Segment: gray matter |
| 15 | wm\_r | White Matter (µl) Hemisphere: Right Tissue Segment: white matter |
| 16 | totalcsf | Total Cerebrospinal Fluid (µl) Hemisphere:  Tissue Segment: ventricle+cerebrospinal fluid |
| 17 | subarachnoid\_csf | Subarachnoid cerebrospinal fluid (µl) Hemisphere:  Tissue Segment: cerebrospinal fluid |
| 18 | corpus\_callosum | Corpus callosum (µl) Hemisphere: Both Tissue Segment: white matter |
| 19 | cerebellum | Cerebellum (µl) Hemisphere: Both Tissue Segment: gray matter+white matter |
| 20 | deep\_wm\_gm | Deep White Matter + Gray Matter (µl) Hemisphere: Both Tissue Segment: gray matter+white matter |
| 21 | frontal | Frontal (µl) Hemisphere: Both Tissue Segment: gray matter+white matter |
| 22 | limbic | Limbic (µl) Hemisphere: Both Tissue Segment: gray matter+white matter |
| 23 | occipital | Occipital (µl) Hemisphere: Both Tissue Segment: gray matter+white matter |
| 24 | parietal | Parietal (µl) Hemisphere: Both Tissue Segment: gray matter+white matter |
| 25 | temporal | Temporal (µl) Hemisphere: Both Tissue Segment: gray matter+white matter |
| 26 | ventricle | Ventricle (µl) Hemisphere: Both Tissue Segment: ventricle |
| 27 | cerebellum\_l | Cerebellum (µl) Hemisphere: Left Tissue Segment: gray matter+white matter |
| 28 | deep\_wm\_gm\_l | Deep White Matter + Gray Matter (µl) Hemisphere: Left Tissue Segment: gray matter+white matter |
| 29 | frontal\_l | Frontal (µl) Hemisphere: Left Tissue Segment: gray matter+white matter |
| 30 | limbic\_l | Limbic (µl) Hemisphere: Left Tissue Segment: gray matter+white matter |
| 31 | occipital\_l | Occipital (µl) Hemisphere: Left Tissue Segment: gray matter+white matter |
| 32 | parietal\_l | Parietal (µl) Hemisphere: Left Tissue Segment: gray matter+white matter |
| 33 | temporal\_l | Temporal (µl) Hemisphere: Left Tissue Segment: gray matter+white matter |
| 34 | ventricle\_l | Ventricle (µl) Hemisphere: Left Tissue Segment: ventricle |
| 35 | cerebellum\_r | Cerebellum (µl) Hemisphere: Right Tissue Segment: gray matter+white matter |
| 36 | deep\_wm\_gm\_r | Deep White Matter + Gray Matter (µl) Hemisphere: Right Tissue Segment: gray matter+white matter |
| 37 | frontal\_r | Frontal (µl) Hemisphere: Right Tissue Segment: gray matter+white matter |
| 38 | limbic\_r | Limbic (µl) Hemisphere: Right Tissue Segment: gray matter+white matter |
| 39 | occipital\_r | Occipital (µl) Hemisphere: Right Tissue Segment: gray matter+white matter |
| 40 | parietal\_r | Parietal (µl) Hemisphere: Right Tissue Segment: gray matter+white matter |
| 41 | temporal\_r | Temporal (µl) Hemisphere: Right Tissue Segment: gray matter+white matter |
| 42 | ventricle\_r | Ventricle (µl) Hemisphere: Right Tissue Segment: ventricle |
| 43 | basal\_ganglia | Basal ganglia (µl) Hemisphere: Both Tissue Segment: gray matter |
| 44 | deep\_gm | Deep Gray Matter (µl) Hemisphere: Both Tissue Segment: gray matter |
| 45 | deep\_wm | Deep white matter (µl) Hemisphere: Both Tissue Segment: white matter |
| 46 | frontal\_gm | Frontal (µl) Hemisphere: Both Tissue Segment: gray matter |
| 47 | frontal\_wm | Frontal white matter (µl) Hemisphere: Both Tissue Segment: white matter |
| 48 | limbic\_gm | Limbic (µl) Hemisphere: Both Tissue Segment: gray matter |
| 49 | occipital\_gm | Occipital (µl) Hemisphere: Both Tissue Segment: gray matter |
| 50 | occipital\_wm | Occipital white matter (µl) Hemisphere: Both Tissue Segment: white matter |
| 51 | parietal\_gm | Parietal (µl) Hemisphere: Both Tissue Segment: gray matter |
| 52 | parietal\_wm | Parietal white matter (µl) Hemisphere: Both Tissue Segment: white matter |
| 53 | temporal\_gm | Temporal (µl) Hemisphere: Both Tissue Segment: gray matter |
| 54 | temporal\_wm | Temporal white matter (µl) Hemisphere: Both Tissue Segment: white matter |
| 55 | basal\_ganglia\_l | Basal ganglia (µl) Hemisphere: Left Tissue Segment: gray matter |
| 56 | deep\_gm\_l | Deep (µl) Hemisphere: Left Tissue Segment: gray matter |
| 57 | deep\_wm\_l | Deep white matter (µl) Hemisphere: Left Tissue Segment: white matter |
| 58 | frontal\_gm\_l | Frontal (µl) Hemisphere: Left Tissue Segment: gray matter |
| 59 | frontal\_wm\_l | Frontal white matter (µl) Hemisphere: Left Tissue Segment: white matter |
| 60 | limbic\_gm\_l | Limbic (µl) Hemisphere: Left Tissue Segment: gray matter |
| 61 | occipital\_gm\_l | Occipital (µl) Hemisphere: Left Tissue Segment: gray matter |
| 62 | occipital\_wm\_l | Occipital white matter (µl) Hemisphere: Left Tissue Segment: white matter |
| 63 | parietal\_gm\_l | Parietal gray matter (µl) Hemisphere: Left Tissue Segment: gray matter |
| 64 | parietal\_wm\_l | Parietal white matter (µl) Hemisphere: Left Tissue Segment: white matter |
| 65 | temporal\_gm\_l | Temporal Gray Matter (µl) Hemisphere: Left Tissue Segment: gray matter |
| 66 | temporal\_wm\_l | Temporal White Matter (µl) Hemisphere: Left Tissue Segment: white matter |
| 67 | basal\_ganglia\_r | Basal Ganglia (µl) Hemisphere: Right Tissue Segment: gray matter |
| 68 | deep\_gm\_r | Deep gray matter (µl) Hemisphere: Right Tissue Segment: gray matter |
| 69 | deep\_wm\_r | Deep white matter (µl) Hemisphere: Right Tissue Segment: white matter |
| 70 | frontal\_gm\_r | Frontal gray matter (µl) Hemisphere: Right Tissue Segment: gray matter |
| 71 | frontal\_wm\_r | Frontal white matter (µl) Hemisphere: Right Tissue Segment: white matter |
| 72 | limbic\_gm\_r | Limbic gray matter (µl) Hemisphere: Right Tissue Segment: gray matter |
| 73 | occipital\_gm\_r | Occipital gray matter (µl) Hemisphere: Right Tissue Segment: gray matter |
| 74 | occipital\_wm\_r | Occipital white matter (µl) Hemisphere: Right Tissue Segment: white matter |
| 75 | parietal\_gm\_r | Parietal gray matter (µl) Hemisphere: Right Tissue Segment: gray matter |
| 76 | parietal\_wm\_r | Parietal white matter (µl) Hemisphere: Right Tissue Segment: white matter |
| 77 | temporal\_gm\_r | Temporal gray matter (µl) Hemisphere: Right Tissue Segment: gray matter |
| 78 | temporal\_wm\_r | Temporal white matter (µl) Hemisphere: Right Tissue Segment: white matter |
| 79 | frontal\_inferior\_gm | Frontal inferior (µl) Hemisphere: Both Tissue Segment: gray matter |
| 80 | frontal\_insular\_gm | Frontal insular (µl) Hemisphere: Both Tissue Segment: gray matter |
| 81 | frontal\_lateral\_gm | Frontal lateral (µl) Hemisphere: Both Tissue Segment: gray matter |
| 82 | frontal\_medial\_gm | Frontal medial (µl) Hemisphere: Both Tissue Segment: gray matter |
| 83 | frontal\_opercular\_gm | Frontal opercular (µl) Hemisphere: Both Tissue Segment: gray matter |
| 84 | limbic\_cingulate\_gm | Limbic cingulate (µl) Hemisphere: Both Tissue Segment: gray matter |
| 85 | limbic\_medialtemporal\_gm | Limbic medialtemporal (µl) Hemisphere: Both Tissue Segment: gray matter |
| 86 | occipital\_inferior\_gm | Occipital inferior (µl) Hemisphere: Both Tissue Segment: gray matter |
| 87 | occipital\_lateral\_gm | Occipital lateral (µl) Hemisphere: Both Tissue Segment: gray matter |
| 88 | occipital\_medial\_gm | Occipital medial (µl) Hemisphere: Both Tissue Segment: gray matter |
| 89 | parietal\_lateral\_gm | Parietal lateral (µl) Hemisphere: Both Tissue Segment: gray matter |
| 90 | parietal\_medial\_gm | Parietal medial (µl) Hemisphere: Both Tissue Segment: gray matter |
| 91 | temporal\_inferior\_gm | Temporal inferior (µl) Hemisphere: Both Tissue Segment: gray matter |
| 92 | temporal\_lateral\_gm | Tempora llateral (µl) Hemisphere: Both Tissue Segment: gray matter |
| 93 | temporal\_supratemporal\_gm | Temporal supratemporal (µl) Hemisphere: Both Tissue Segment: gray matter |
| 94 | frontal\_inferior\_gm\_l | Frontal inferior (µl) Hemisphere: Left Tissue Segment: gray matter |
| 95 | frontal\_insular\_gm\_l | Frontal insular (µl) Hemisphere: Left Tissue Segment: gray matter |
| 96 | frontal\_lateral\_gm\_l | Frontal lateral (µl) Hemisphere: Left Tissue Segment: gray matter |
| 97 | frontal\_medial\_gm\_l | Frontal medial (µl) Hemisphere: Left Tissue Segment: gray matter |
| 98 | frontal\_opercular\_gm\_l | Frontal opercular (µl) Hemisphere: Left Tissue Segment: gray matter |
| 99 | limbic\_cingulate\_gm\_l | Limbic cingulate (µl) Hemisphere: Left Tissue Segment: gray matter |
| 100 | limbic\_medialtemporal\_gm\_l | Limbic medialtemporal (µl) Hemisphere: Left Tissue Segment: gray matter |
| 101 | occipital\_inferior\_gm\_l | Occipital inferior (µl) Hemisphere: Left Tissue Segment: gray matter |
| 102 | occipital\_lateral\_gm\_l | Occipital lateral (µl) Hemisphere: Left Tissue Segment: gray matter |
| 103 | occipital\_medial\_gm\_l | Occipital medial (µl) Hemisphere: Left Tissue Segment: gray matter |
| 104 | parietal\_lateral\_gm\_l | Parietal lateral (µl) Hemisphere: Left Tissue Segment: gray matter |
| 105 | parietal\_medial\_gm\_l | Parietal medial (µl) Hemisphere: Left Tissue Segment: gray matter |
| 106 | temporal\_inferior\_gm\_l | Temporal inferior (µl) Hemisphere: Left Tissue Segment: gray matter |
| 107 | temporal\_lateral\_gm\_l | Temporal lateral (µl) Hemisphere: Left Tissue Segment: gray matter |
| 108 | temporal\_supratemporal\_gm\_l | Temporal supratemporal (µl) Hemisphere: Left Tissue Segment: gray matter |
| 109 | frontal\_inferior\_gm\_r | Frontal inferior (µl) Hemisphere: Right Tissue Segment: gray matter |
| 110 | frontal\_insular\_gm\_r | Frontal insular (µl) Hemisphere: Right Tissue Segment: gray matter |
| 111 | frontal\_lateral\_gm\_r | Frontal lateral (µl) Hemisphere: Right Tissue Segment: gray matter |
| 112 | frontal\_medial\_gm\_r | Frontal medial (µl) Hemisphere: Right Tissue Segment: gray matter |
| 113 | frontal\_opercular\_gm\_r | Frontal opercular (µl) Hemisphere: Right Tissue Segment: gray matter |
| 114 | limbic\_cingulate\_gm\_r | Limbic cingulate (µl) Hemisphere: Right Tissue Segment: gray matter |
| 115 | limbic\_medialtemporal\_gm\_r | Limbic medialtemporal (µl) Hemisphere: Right Tissue Segment: gray matter |
| 116 | occipital\_inferior\_gm\_r | Occipital inferior (µl) Hemisphere: Right Tissue Segment: gray matter |
| 117 | occipital\_lateral\_gm\_r | Occipital lateral (µl) Hemisphere: Right Tissue Segment: gray matter |
| 118 | occipital\_medial\_gm\_r | Occipital medial (µl) Hemisphere: Right Tissue Segment: gray matter |
| 119 | parietal\_lateral\_gm\_r | Parietal lateral (µl) Hemisphere: Right Tissue Segment: gray matter |
| 120 | parietal\_medial\_gm\_r | Parietal medial (µl) Hemisphere: Right Tissue Segment: gray matter |
| 121 | temporal\_inferior\_gm\_r | Temporal inferior (µl) Hemisphere: Right Tissue Segment: gray matter |
| 122 | temporal\_lateral\_gm\_r | Temporal lateral (µl) Hemisphere: Right Tissue Segment: gray matter |
| 123 | temporal\_supratemporal\_gm\_r | Temporal supratemporal (µl) Hemisphere: Right Tissue Segment: gray matter |
| 124 | thirdventricle | 3rd ventricle (µl) Hemisphere: Both Tissue Segment: ventricle |
| 125 | fourthventricle | 4th ventricle (µl) Hemisphere: Both Tissue Segment: ventricle |
| 126 | rightaccumbensarea | Right accumbens area (µl) Hemisphere: Right Tissue Segment: gray matter |
| 127 | leftaccumbensarea | Left accumbens area (µl) Hemisphere: Left Tissue Segment: gray matter |
| 128 | rightamygdala | Right amygdala (µl) Hemisphere: Right Tissue Segment: gray matter |
| 129 | leftamygdala | Left amygdala (µl) Hemisphere: Left Tissue Segment: gray matter |
| 130 | brainstem | Brain stem (µl) Hemisphere: Both Tissue Segment: NONE |
| 131 | rightcaudate | Right caudate (µl) Hemisphere: Right Tissue Segment: gray matter |
| 132 | leftcaudate | Left caudate (µl) Hemisphere: Left Tissue Segment: gray matter |
| 133 | rightcerebellumexterior | Right cerebellum exterior (µl) Hemisphere: Right Tissue Segment: gray matter |
| 134 | leftcerebellumexterior | Left cerebellum exterior (µl) Hemisphere: Left Tissue Segment: gray matter |
| 135 | rightcerebellumwhitematter | Right cerebellum white matter (µl) Hemisphere: Right Tissue Segment: white matter |
| 136 | leftcerebellumwhitematter | Left cerebellum white matter (µl) Hemisphere: Left Tissue Segment: white matter |
| 137 | righthippocampus | Right hippocampus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 138 | lefthippocampus | Left hippocampus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 139 | rightinflatvent | Right inf lat vent (µl) Hemisphere: Right Tissue Segment: ventricle |
| 140 | leftinflatvent | Left inf lat vent (µl) Hemisphere: Left Tissue Segment: ventricle |
| 141 | rightlateralventricle | Right lateral ventricle (µl) Hemisphere: Right Tissue Segment: ventricle |
| 142 | leftlateralventricle | Left lateral ventricle (µl) Hemisphere: Left Tissue Segment: ventricle |
| 143 | rightpallidum | Right pallidum (µl) Hemisphere: Right Tissue Segment: gray matter |
| 144 | leftpallidum | Left pallidum (µl) Hemisphere: Left Tissue Segment: gray matter |
| 145 | rightputamen | Right putamen (µl) Hemisphere: Right Tissue Segment: gray matter |
| 146 | leftputamen | Left putamen (µl) Hemisphere: Left Tissue Segment: gray matter |
| 147 | rightthalamusproper | Right thalamus proper (µl) Hemisphere: Right Tissue Segment: gray matter |
| 148 | leftthalamusproper | Left thalamus proper (µl) Hemisphere: Left Tissue Segment: gray matter |
| 149 | rightventraldc | Right ventral dc (µl) Hemisphere: Right Tissue Segment: white matter |
| 150 | leftventraldc | Left ventral dc (µl) Hemisphere: Left Tissue Segment: white matter |
| 151 | cerebellarvermallobulesiv | Cerebellar vermal lobules i-v (µl) Hemisphere: Both Tissue Segment: gray matter |
| 152 | cerebellarvermallobulesvivii | Cerebellar vermal lobules vi-vii (µl) Hemisphere: Both Tissue Segment: gray matter |
| 153 | cerebellarvermallobulesviiix | Cerebellar vermal lobules viii-x (µl) Hemisphere: Both Tissue Segment: gray matter |
| 154 | leftbasalforebrain | Left basal forebrain (µl) Hemisphere: Left Tissue Segment: gray matter |
| 155 | rightbasalforebrain | Right basal forebrain (µl) Hemisphere: Right Tissue Segment: gray matter |
| 156 | frontallobewmright | Frontal lobe wm right (µl) Hemisphere: Right Tissue Segment: white matter |
| 157 | frontallobewmleft | Frontal lobe wm left (µl) Hemisphere: Left Tissue Segment: white matter |
| 158 | occipitallobewmright | Occipital lobe wm right (µl) Hemisphere: Right Tissue Segment: white matter |
| 159 | occipitallobewmleft | Occipital lobe wm left (µl) Hemisphere: Left Tissue Segment: white matter |
| 160 | parietallobewmright | Parietal lobe wm right (µl) Hemisphere: Right Tissue Segment: white matter |
| 161 | parietallobewmleft | Parietal lobe wm left (µl) Hemisphere: Left Tissue Segment: white matter |
| 162 | temporallobewmright | Temporal lobe wm right (µl) Hemisphere: Right Tissue Segment: white matter |
| 163 | temporallobewmleft | Temporal lobe wm left (µl) Hemisphere: Left Tissue Segment: white matter |
| 164 | fornixright | Fornix right (µl) Hemisphere: Right Tissue Segment: white matter |
| 165 | fornixleft | Fornix left (µl) Hemisphere: Left Tissue Segment: white matter |
| 166 | anteriorlimbinternalcapsuleright | Anterior limb of internal capsule right (µl) Hemisphere: Right Tissue Segment: white matter |
| 167 | anteriorlimbinternalcapsuleleft | Anterior limb of internal capsule left (µl) Hemisphere: Left Tissue Segment: white matter |
| 168 | postlimbofintcapscerebpedright | Posterior limb of internal capsule inc. cerebral peduncle right (µl) Hemisphere: Right Tissue Segment: white matter |
| 169 | postlimbofintcapscerebpedleft | Posterior limb of internal capsule inc. cerebral peduncle left (µl) Hemisphere: Left Tissue Segment: white matter |
| 170 | corpuscallosum | Corpus callosum (µl) Hemisphere: Both Tissue Segment: white matter |
| 171 | rightacgganteriorcingulategyrus | Right anterior cingulate gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 172 | leftacgganteriorcingulategyrus | Left anterior cingulate gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 173 | rightainsanteriorinsula | Right anterior insula (µl) Hemisphere: Right Tissue Segment: gray matter |
| 174 | leftainsanteriorinsula | Left anterior insula (µl) Hemisphere: Left Tissue Segment: gray matter |
| 175 | rightaorganteriororbitalgyrus | Right anterior orbital gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 176 | leftaorganteriororbitalgyrus | Left anterior orbital gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 177 | rightangangulargyrus | Right angular gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 178 | leftangangulargyrus | Left angular gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 179 | rightcalccalcarinecortex | Right calcarine cortex (µl) Hemisphere: Right Tissue Segment: gray matter |
| 180 | leftcalccalcarinecortex | Left calcarine cortex (µl) Hemisphere: Left Tissue Segment: gray matter |
| 181 | rightcocentraloperculum | Right central operculum (µl) Hemisphere: Right Tissue Segment: gray matter |
| 182 | leftcocentraloperculum | Left central operculum (µl) Hemisphere: Left Tissue Segment: gray matter |
| 183 | rightcuncuneus | Right cuneus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 184 | leftcuncuneus | Left cuneus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 185 | rightententorhinalarea | Right entorhinal area (µl) Hemisphere: Right Tissue Segment: gray matter |
| 186 | leftententorhinalarea | Left entorhinal area (µl) Hemisphere: Left Tissue Segment: gray matter |
| 187 | rightfofrontaloperculum | Right frontal operculum (µl) Hemisphere: Right Tissue Segment: gray matter |
| 188 | leftfofrontaloperculum | Left frontal operculum (µl) Hemisphere: Left Tissue Segment: gray matter |
| 189 | rightfrpfrontalpole | Right frontal pole (µl) Hemisphere: Right Tissue Segment: gray matter |
| 190 | leftfrpfrontalpole | Left frontal pole (µl) Hemisphere: Left Tissue Segment: gray matter |
| 191 | rightfugfusiformgyrus | Right fusiform gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 192 | leftfugfusiformgyrus | Left fusiform gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 193 | rightgregyrusrectus | Right gyrus rectus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 194 | leftgregyrusrectus | Left gyrus rectus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 195 | rightioginferioroccipitalgyrus | Right inferior occipital gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 196 | leftioginferioroccipitalgyrus | Left inferior occipital gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 197 | rightitginferiortemporalgyrus | Right inferior temporal gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 198 | leftitginferiortemporalgyrus | Left inferior temporal gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 199 | rightliglingualgyrus | Right lingual gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 200 | leftliglingualgyrus | Left lingual gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 201 | rightlorglateralorbitalgyrus | Right lateral orbital gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 202 | leftlorglateralorbitalgyrus | Left lateral orbital gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 203 | rightmcggmiddlecingulategyrus | Right middle cingulate gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 204 | leftmcggmiddlecingulategyrus | Left middle cingulate gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 205 | rightmfcmedialfrontalcortex | Right medial frontal cortex (µl) Hemisphere: Right Tissue Segment: gray matter |
| 206 | leftmfcmedialfrontalcortex | Left medial frontal cortex (µl) Hemisphere: Left Tissue Segment: gray matter |
| 207 | rightmfgmiddlefrontalgyrus | Right middle frontal gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 208 | leftmfgmiddlefrontalgyrus | Left middle frontal gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 209 | rightmogmiddleoccipitalgyrus | Right middle occipital gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 210 | leftmogmiddleoccipitalgyrus | Left middle occipital gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 211 | rightmorgmedialorbitalgyrus | Right medial orbital gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 212 | leftmorgmedialorbitalgyrus | Left medial orbital gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 213 | rightmpogpostcentralgyrusmedseg | Right postcentral gyrus medial segment (µl) Hemisphere: Right Tissue Segment: gray matter |
| 214 | leftmpogpostcentralgyrusmedseg | Left postcentral gyrus medial segment (µl) Hemisphere: Left Tissue Segment: gray matter |
| 215 | rightmprgprecentralgyrusmedseg | Right precentral gyrus medial segment (µl) Hemisphere: Right Tissue Segment: gray matter |
| 216 | leftmprgprecentralgyrusmedseg | Left precentral gyrus medial segment (µl) Hemisphere: Left Tissue Segment: gray matter |
| 217 | rightmsfgsuperfrontgyrusmedseg | Right superior frontal gyrus medial segment (µl) Hemisphere: Right Tissue Segment: gray matter |
| 218 | leftmsfgsuperfrontgyrusmedseg | Left superior frontal gyrus medial segment (µl) Hemisphere: Left Tissue Segment: gray matter |
| 219 | rightmtgmiddletemporalgyrus | Right middle temporal gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 220 | leftmtgmiddletemporalgyrus | Left middle temporal gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 221 | rightocpoccipitalpole | Right occipital pole (µl) Hemisphere: Right Tissue Segment: gray matter |
| 222 | leftocpoccipitalpole | Left occipital pole (µl) Hemisphere: Left Tissue Segment: gray matter |
| 223 | rightofugoccipitalfusiformgyrus | Right occipital fusiform gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 224 | leftofugoccipitalfusiformgyrus | Left occipital fusiform gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 225 | rightopifgoperpartinffrontgyrus | Right opercular part of the inferior frontal gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 226 | leftopifgoperpartinffrontgyrus | Left opercular part of the inferior frontal gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 227 | rightorifgorbitalinffrontalgyrus | Right orbital part of the inferior frontal gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 228 | leftorifgorbitalinffrontalgyrus | Left orbital part of the inferior frontal gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 229 | rightpcggposteriorcingulategyrus | Right posterior cingulate gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 230 | leftpcggposteriorcingulategyrus | Left posterior cingulate gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 231 | rightpcuprecuneus | Right precuneus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 232 | leftpcuprecuneus | Left precuneus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 233 | rightphgparahippocampalgyrus | Right parahippocampal gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 234 | leftphgparahippocampalgyrus | Left parahippocampal gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 235 | rightpinsposteriorinsula | Right posterior insula (µl) Hemisphere: Right Tissue Segment: gray matter |
| 236 | leftpinsposteriorinsula | Left posterior insula (µl) Hemisphere: Left Tissue Segment: gray matter |
| 237 | rightpoparietaloperculum | Right parietal operculum (µl) Hemisphere: Right Tissue Segment: gray matter |
| 238 | leftpoparietaloperculum | Left parietal operculum (µl) Hemisphere: Left Tissue Segment: gray matter |
| 239 | rightpogpostcentralgyrus | Right postcentral gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 240 | leftpogpostcentralgyrus | Left postcentral gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 241 | rightporgposteriororbitalgyrus | Right posterior orbital gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 242 | leftporgposteriororbitalgyrus | Left posterior orbital gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 243 | rightppplanumpolare | Right planum polare (µl) Hemisphere: Right Tissue Segment: gray matter |
| 244 | leftppplanumpolare | Left planum polare (µl) Hemisphere: Left Tissue Segment: gray matter |
| 245 | rightprgprecentralgyrus | Right precentral gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 246 | leftprgprecentralgyrus | Left precentral gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 247 | rightptplanumtemporale | Right planum temporale (µl) Hemisphere: Right Tissue Segment: gray matter |
| 248 | leftptplanumtemporale | Left planum temporale (µl) Hemisphere: Left Tissue Segment: gray matter |
| 249 | rightscasubcallosalarea | Right subcallosal area (µl) Hemisphere: Right Tissue Segment: gray matter |
| 250 | leftscasubcallosalarea | Left subcallosal area (µl) Hemisphere: Left Tissue Segment: gray matter |
| 251 | rightsfgsuperiorfrontalgyrus | Right superior frontal gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 252 | leftsfgsuperiorfrontalgyrus | Left superior frontal gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 253 | rightsmcsupplementarymotorcortex | Right supplementary motor cortex (µl) Hemisphere: Right Tissue Segment: gray matter |
| 254 | leftsmcsupplementarymotorcortex | Left supplementary motor cortex (µl) Hemisphere: Left Tissue Segment: gray matter |
| 255 | rightsmgsupramarginalgyrus | right supramarginal gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 256 | leftsmgsupramarginalgyrus | Left supramarginal gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 257 | rightsogsuperioroccipitalgyrus | Right superior occipital gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 258 | leftsogsuperioroccipitalgyrus | Left superior occipital gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 259 | rightsplsuperiorparietallobule | Right superior parietal lobule (µl) Hemisphere: Right Tissue Segment: gray matter |
| 260 | leftsplsuperiorparietallobule | Left superior parietal lobule (µl) Hemisphere: Left Tissue Segment: gray matter |
| 261 | rightstgsuperiortemporalgyrus | Right superior temporal gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 262 | leftstgsuperiortemporalgyrus | Left superior temporal gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 263 | righttmptemporalpole | Right temporal pole (µl) Hemisphere: Right Tissue Segment: gray matter |
| 264 | lefttmptemporalpole | Left temporal pole (µl) Hemisphere: Left Tissue Segment: gray matter |
| 265 | righttrifgtripartinffrontgyrus | Right triangular part of the inferior frontal gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 266 | lefttrifgtripartinffrontgyrus | Left triangular part of the inferior frontal gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 267 | rightttgtransversetemporalgyrus | Right transverse temporal gyrus (µl) Hemisphere: Right Tissue Segment: gray matter |
| 268 | leftttgtransversetemporalgyrus | Left transverse temporal gyrus (µl) Hemisphere: Left Tissue Segment: gray matter |
| 269 | bmri\_roi\_vol\_exam | Exam of ancillary AS253 brain MRI |