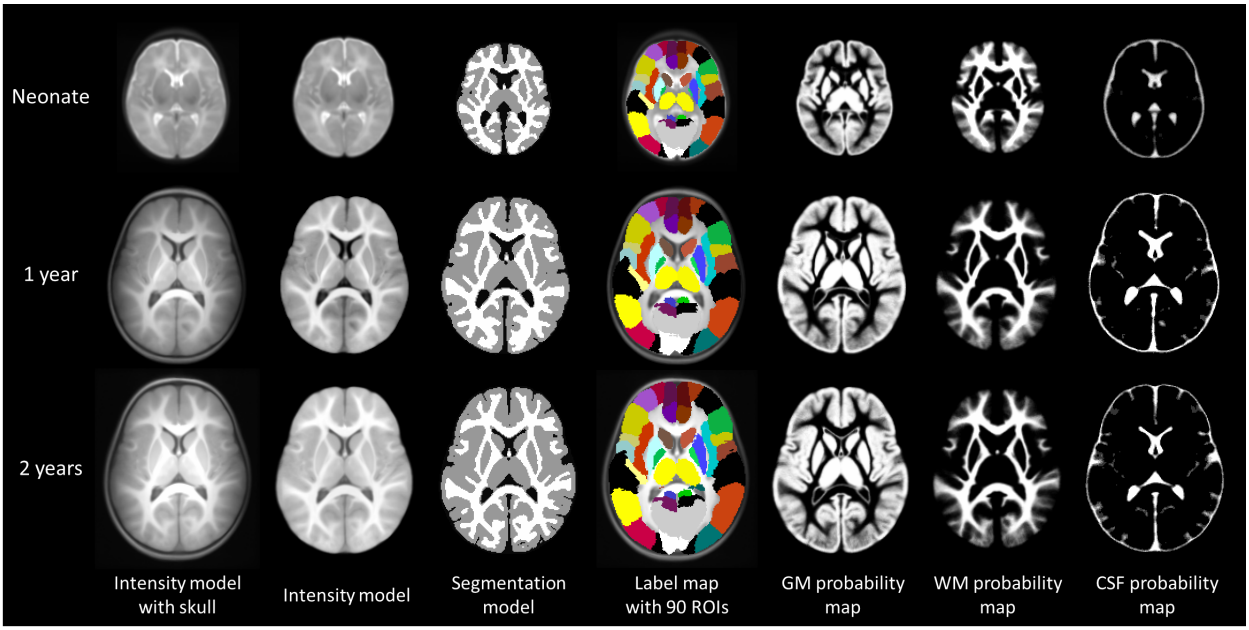
UNC Infant 0-1-2 Atlases



Brain atlases of neonates, 1-year-olds, and 2-year-olds

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Content

File	Description
infant-{neo,1yr,2yr}.nii.gz	Intensity image - average of 95 registered images
infant-{neo,1yr,2yr}-withSkull.nii.gz	Intensity image with skull
infant-{neo,1yr,2yr}-withCerebellum.nii.gz	Intensity image with cerebellum
infant-{neo,1yr,2yr}-seg.nii.gz	Segmentation map
infant-{neo,1yr,2yr}-seg-gm.nii.gz	Gray matter tissue probability map
infant-{neo,1yr,2yr}-seg-wm.nii.gz	White matter tissue probability map
infant-{neo,1yr,2yr}-seg-csf.nii.gz	Cerebrospinal fluid probability map
infant-{neo,1yr,2yr}-aal.nii.gz	ROI label map

Regions of Interest

Index L,R	Region	Abbreviation	Index L,R	Region	Abbreviation
1,2	Precentral gyrus	PreCG-L/R	47,48	Lingual gyrus	LING-L/R
3,4	Superior frontal gyrus (dorsal)	SFGdor-L/R	49,50	Superior occipital gyrus	SOG-L/R
5,6	Orbitofrontal cortex (superior)	ORBsupb-L/R	51,52	Middle occipital gyrus	MOG-L/R
7,8	Middle frontal gyrus	MFG-L/R	53,54	Inferior occipital gyrus	IOG-L/R
9,10	Orbitofrontal cortex (middle)	ORBmid-L/R	55,56	Fusiform gyrus	FFG-L/R
11,12	Inferior frontal gyrus (opercular)	IFGoperc-L/R	57,58	Postcentral gyrus	PoCG-L/R
13,14	Inferior frontal gyrus (triangular)	IFGtriang-L/R	59,60	Superior parietal gyrus	SPG-L/R
15,16	Orbitofrontal cortex (inferior)	ORBinf-L/R	61,62	Inferior parietal lobule	IPL-L/R
17,18	Rolandic operculum	ROL-L/R	63,64	Supramarginal gyrus	SMG-L/R
19,20	Supplementary motor area	SMA-L/R	65,66	Angular gyrus	ANG-L/R
21,22	Olfactory	OLF-L/R	67,68	Precuneus	PCUN-L/R
23,24	Superior frontal gyrus (medial)	SFGmed-L/R	69,70	Paracentral lobule	PCL-L/R
25,26	Orbitofrontal cortex (medial)	ORBmed-L/R	71,72	Caudate	CAU-L/R
27,28	Rectus gyrus	REC-L/R	73,74	Putamen	PUT-L/R
29,30	Insula	INS-L/R	75,76	Pallidum	PAL-L/R
31,32	Anterior cingulate gyrus	ACG-L/R	77,78	Thalamus	THA-L/R
33,34	Middle cingulate gyrus	MCG-L/R	79,80	Heschl gyrus	HES-L/R
35,36	Posterior cingulate gyrus	PCG-L/R	81,82	Superior temporal gyrus	STG-L/R
37,38	Hippocampus	HIP-L/R	83,84	Temporal pole (superior)	TPOsup-L/R
39,40	ParaHippocampal gyrus	PHG-L/R	85,86	Middle temporal gyrus	MTG-L/R
41,42	Amygdala	AMYG-L/R	87,88	Temporal pole (middle)	TPOmid-L/R
43,44	Calcarine cortex	CAL-L/R	89,90	Inferior temporal gyrus	ITG-L/R
45,46	Cuneus	CUN-L/R			

Acknowledgment

Please cite

F. Shi, P.-T. Yap, G. Wu, H. Jia, J.H. Gilmore, W. Lin, D. Shen, “Infant Brain Atlases from Neonates to 1- and 2-Year-Olds," PLoS ONE, vol. 6, no. 4, pp. e18746, 2011. doi.org/10.1371/journal.pone.0018746

Contact

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Change Log

Date	Change
2020/08/27	(i) Added license information. (ii) Updated documentation. (iii) Compressed files.
2014/03/25	Fixed 2-year-old infant atlases - cerebellum appeared slightly tilted.
2013/03/07	(i) Atlases converted to NIFTI format. (ii) Origin is set at the anterior commissure (AC) with voxel coordinates (90, 126, 72). (iii) Atlases included in AFNI, thanks to Daniel Glen.
2012/02/20	Label coverage is enlarged beyond the brain region for better coverage of individual brains after alignment. To calculate ROI volumes, use individual segmentation images as masks to trim the labels.
2011/11/08	Atlases updated using (a) new tissue segmentation maps (Wang et al., 2013) and (b) group-wise registration using GLIRT (http://www.nitrc.org/projects/glirt/). L. Wang, F. Shi, P.--T. Yap, W. Lin, J. H. Gilmore, and D. Shen, "Longitudinally Guided Level Sets for Consistent Tissue Segmentation of Neonates," Human Brain Mapping, vol. 34, no. 4, pp. 956-972, 2013. doi: 10.1002/hbm.21486.