Appendix 1 to Chen Z, Du M, Zhao Y, et al. Voxel-wise meta-analyses of brain blood flow and local synchrony abnormalities in medication-free patients with major depressive disorder. *J Psychiatry Neurosci* 2015.

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Table S1: Quality assessment checklist (score 0/0.5/1 per item; total score out of 10)*

Category 1: Participants

1. Patients were evaluated prospectively, specific diagnostic criteria were applied, and demographic data were reported.
2. Healthy comparison participants were evaluated prospectively, psychiatric and medical illnesses were excluded.
3. Important variables (e.g., age, sex, illness duration, onset, medication status, comorbidity, severity of illness) were checked either by stratification or statistically.
4. Sample size per group > 10.

Category 2: Methods for image acquisition and analysis

5. Whole brain analysis was automated with no a priori regional selection.
6. Coordinates reported in a standard space.
7. The imaging technique used was clearly described so that it could be reproduced.
8. Measurements were clearly described so that they could be reproduced.

Category 3: Results and conclusions

9. Statistical parameters for significant and important nonsignificant differences were provided.
10. Conclusions were consistent with the results obtained and the limitations were discussed.

*When criteria were partially met, 0.5 points were awarded.

Table S2: Regional differences between medication-free patients with MDD and controls in the subgroup meta-analyses of rCBF studies using ES-SDM (part 1 of 2)

Region	Talairach coordinates			SDM *z* score	*p* value	No. voxels	Cluster breakdown (no. voxels)
	x	*y*	*z*				
rCBF studies excluding ASL							
MDD > control							
Right thalamus, ventral anterior nucleus	12	–6	10	2.055	< 0.001	626	R thalamus, ventral anterior nucleus (113) R thalamus, anterior nucleus (54) R thalamus, ventral lateral nucleus (35) L thalamus, pulvinar (197) L thalamus, lateral posterior nucleus (96) L thalamus, medial dorsal nucleus (38) R lentiform nucleus, putamen (66) R lentiform nucleus, lateral globus pallidus (20) R lentiform nucleus, medial globus pallidus (7)
R caudate	6	2	4	1.472	< 0.001	214	R caudate, caudate body (203) R caudate, caudate head (11)
MDD < control							
R anterior cingulate	6	20	–6	–1.995	< 0.001	216	Bilateral anterior cingulate (99) L subcallosal gyrus (50) R caudate, caudate head (27) Bilateral medial frontal gyrus (40)
R anterior cingulate	4	28	20	–1.467	0.001	145	Bilateral anterior cingulate (123) Bilateral cingulate gyrus (22)
L insula	–38	16	8	–1.865	< 0.001	156	L insula (156)
L superior temporal gyrus	–48	10	–4	–1.914	< 0.001	89	L superior temporal gyrus (89)
L precentral gyrus	–50	14	8	–2.057	<0.001	313	L precentral gyrus (58) L inferior frontal gyrus (255)

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Table S2: Regional differences between medication-free patients with MDD and controls in the subgroup meta-analyses of rCBF studies using ES-SDM (part 2 of 2)

Region	Talairach coordinates			SDM *z* score	*p* value	No. voxels	Cluster breakdown (no. voxels)
	x	*y*	*z*				
PET studies							
MDD > control							
Right thalamus, ventral anterior nucleus	12	–8	12	2.327	< 0.001	652	R thalamus, ventral anterior nucleus (126) R thalamus, anterior nucleus (28) R thalamus, ventral lateral nucleus (48) L thalamus, pulvinar (201) L thalamus, lateral posterior nucleus (92) L thalamus, medial dorsal nucleus (47) R lentiform nucleus, putamen (59) R lentiform nucleus, lateral globus pallidus (33) R lentiform nucleus, medial globus pallidus (18)
R caudate	6	2	2	1.554	< 0.001	161	R caudate, caudate body (147) R caudate, caudate head (14)
MDD < control							
L middle frontal gyrus	–44	50	–2	–1.522	< 0.001	448	L middle frontal gyrus (408) L inferior frontal gyrus (40)
R anterior cingulate	6	26	16	–1.472	< 0.001	151	Bilateral anterior cingulate (131) R cingulate gyrus (20)

ASL = arterial spin labelling; ES-SDM = effect-size signed differential mapping; L = left; MDD = major depressive disorder; PET = positron emission tomography; R = right; rCBF = regional cerebral blood flow.

Table S3: Heterogeneity of rCBF and regional homogeneity changes in medication-free patients with MDD (part 1 of 2)

Region	Talairach coordinates			SDM *z* score	*p* value	No. voxels
	x	*y*	*z*			
Meta-analysis of rCBF studies						
R thalamus, ventral anterior nucleus	10	8	12	4.281	< 0.001	183
L insula	–42	–26	–2	3.885	< 0.001	41
R posterior cingulate	4	–46	12	3.641	< 0.001	61
L cingulate gyrus	–2	–22	26	3.633	< 0.001	77
L middle frontal gyrus	–38	24	32	2.894	0.002	56
Meta-analysis of regional homogeneity studies						
L middle frontal gyrus	–10	–10	66	5.917	< 0.001	186
L uncus	–20	4	–34	2.679	< 0.001	30
R superior frontal gyrus	30	62	–4	2.645	< 0.001	63
L declive	–32	–74	–20	2.334	0.002	71
L culmen	–34	–36	–24	1.912	0.003	46
R angular gyrus	52	–70	30	1.865	0.003	15
L superior temporal gyrus	–50	–26	8	1.828	0.003	14
Subgroup meta-analysis of rCBF studies excluding ASL						
R caudate, caudate body	10	8	12	4.541	< 0.001	183
L insula	–42	–26	–2	4.202	< 0.001	41
R posterior cingulate	4	–46	12	3.935	< 0.001	62
L cingulate gyrus	–2	–22	26	3.927	< 0.001	78
L middle frontal gyrus	–38	24	32	3.223	0.002	59
L insula	–42	16	0	2.745	0.003	42

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Table S3: Heterogeneity of rCBF and regional homogeneity changes in medication-free patients with MDD (part 2 of 2)

Region	Talairach coordinates			SDM *z* score	*p* value	No. voxels
	x	*y*	*z*			
Subgroup meta-analysis of PET studies						
R caudate, caudate body	10	8	12	5.295	< 0.001	170
L insula	–42	–26	–2	5.090	< 0.001	53
R posterior cingulate	4	–46	12	4.751	< 0.001	63
L cingulate gyrus	–2	–22	26	4.751	< 0.001	83
L middle frontal gyrus	–38	24	32	4.139	0.002	66
R inferior frontal gyrus	48	34	10	3.433	0.004	17

ASL = arterial spin labelling; L = left; MDD = major depressive disorder; PET = positron emission tomography; R = right; rCBF = regional cerebral blood flow.