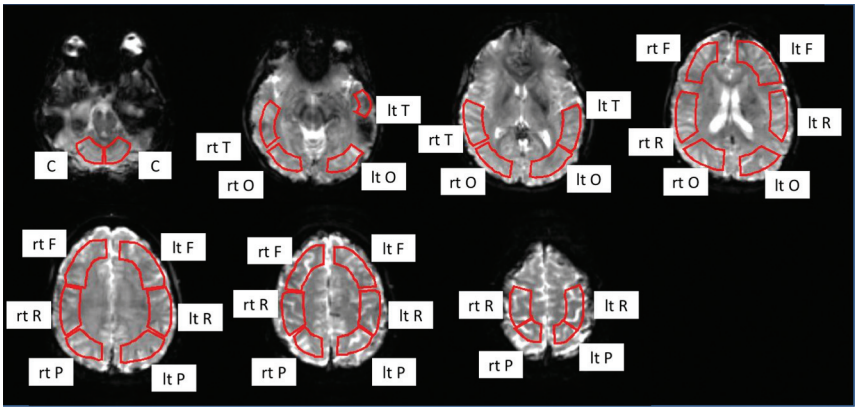
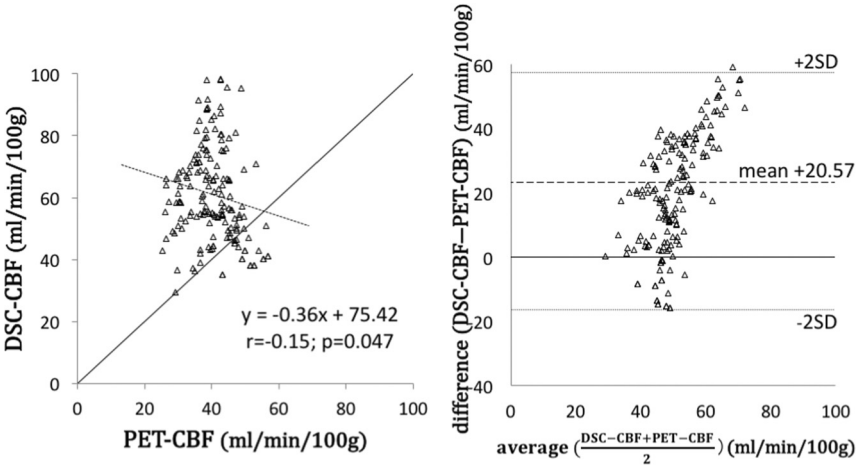
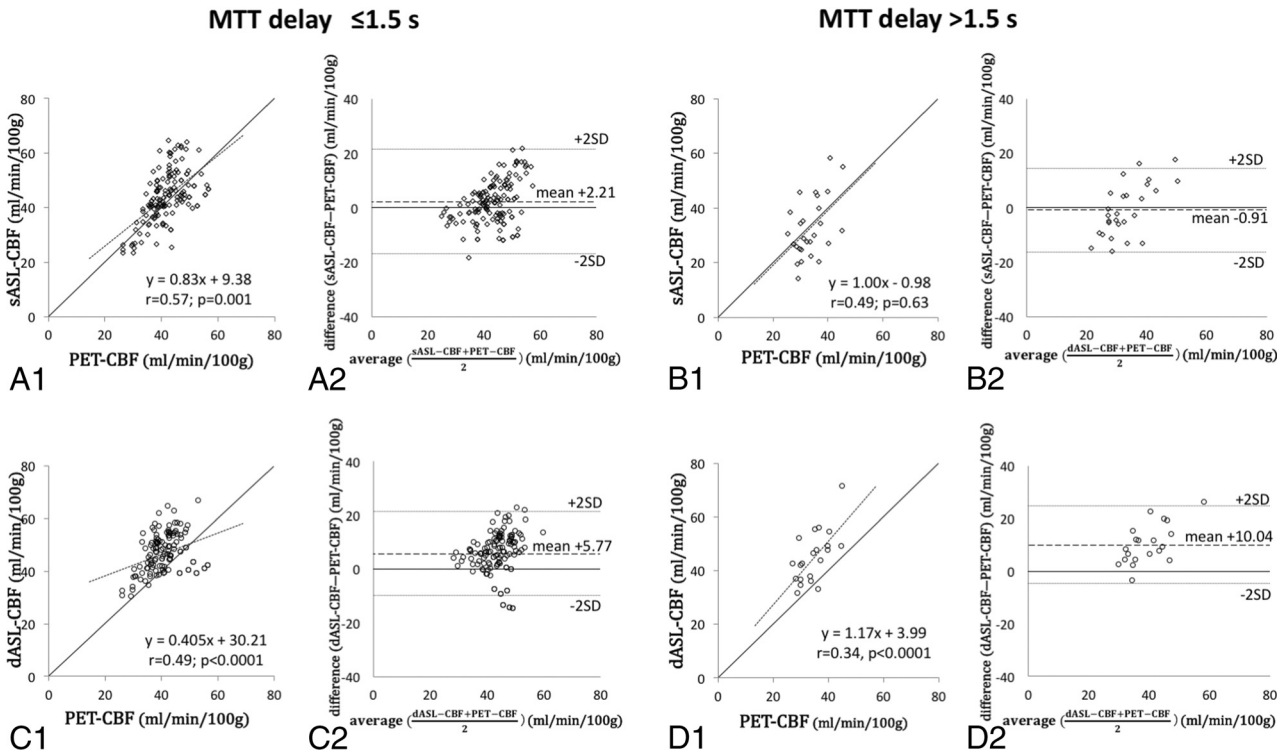


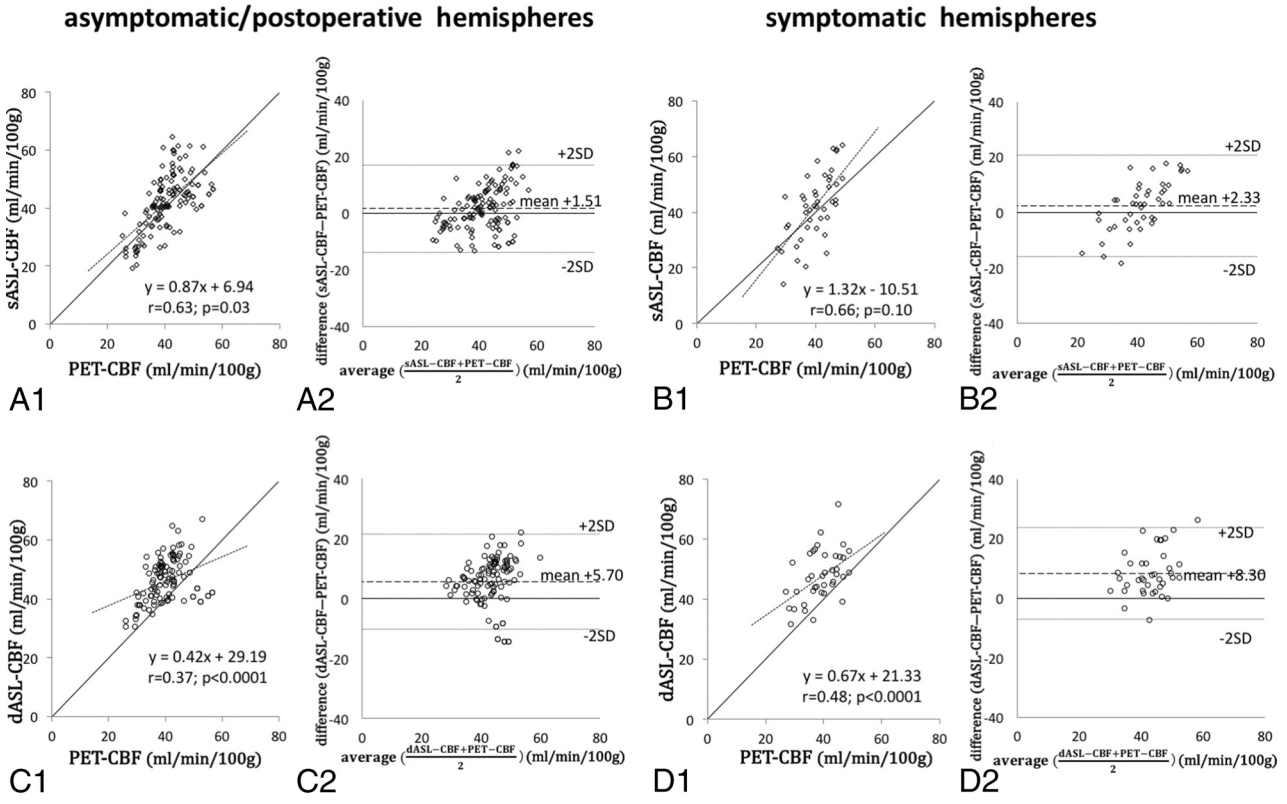
ON-LINE FIG 1. Examples of ROIs used for analysis of the same patient in Fig 1. C indicates cerebellum; F, frontal; lt, left; O, occipital; P, parietal; R, rolandic; rt, right; and T, temporal.



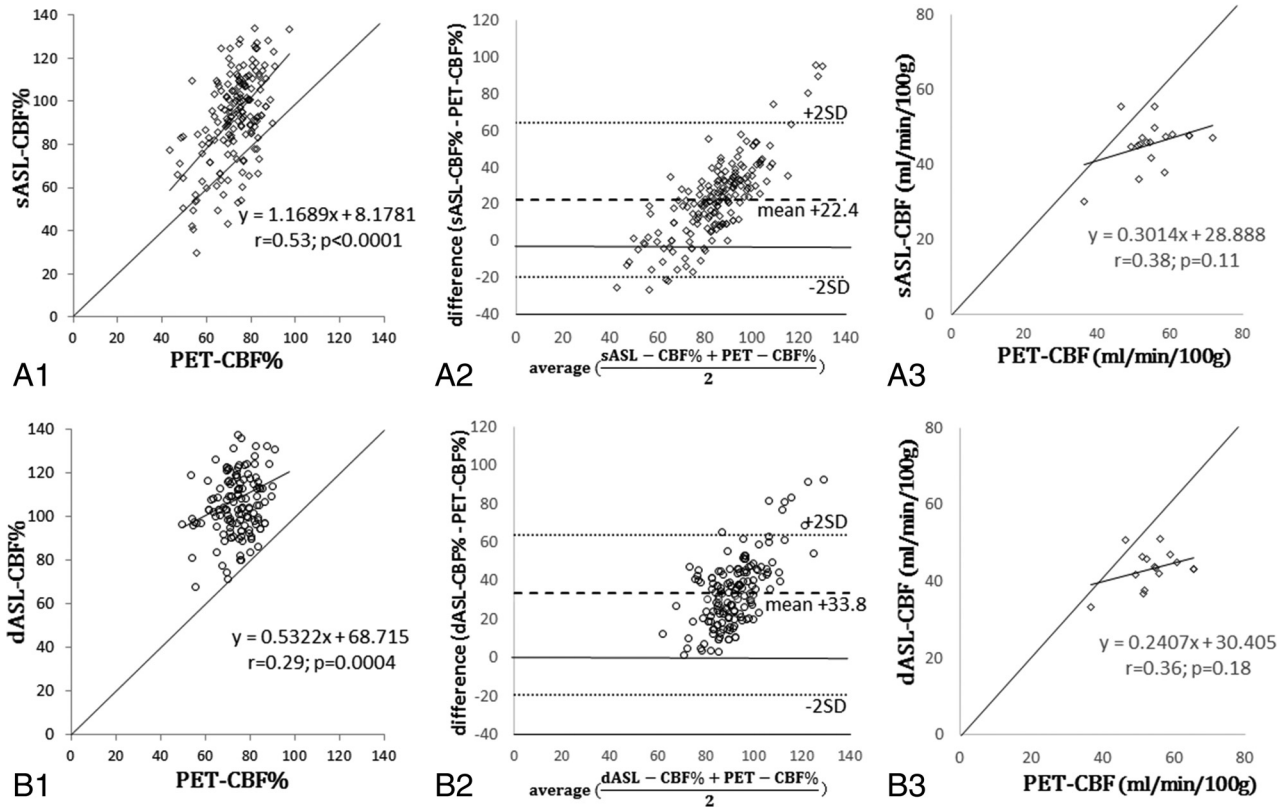
ON-LINE FIG 2. The correlation between DSC-CBF and PET-CBF is poor.



ON-LINE FIG 3. The correlation between ASL-CBF and PET-CBF is determined at an MTT delay cutoff of 1.5 seconds. Short ASL-CBF significantly correlates with PET-CBF when the MTT delay is ≤1.5 seconds (*A1–A2*).



ON-LINE FIG 4. The correlation between CBF values of ASL and PET in asymptomatic/postoperative hemispheres and symptomatic sides. CBF values of sASL and PET correlate well in asymptomatic/postoperative hemispheres (*A1*). Delayed ASL-CBF overestimates PET-CBF (*C2*, *D2*), but the correlation is better in symptomatic hemispheres (*D1*).



ON-LINE FIG 5. The relationship between normalized CBF values of PET and ASL. Both sASL-CBF and dASL-CBF almost overestimate the true CBF. Note that the differences between normalized ASL-CBF and normalized PET-CBF were larger than those between absolute ASL-CBF and absolute PET-CBF (Fig 2).

On-line Table 1: Summary of patient characteristics

Patient No.	Age (yrs)	Sex	Category of the Hemisphere		Details of S Category of the Hemisphere	MRA Score		MRA Stage		Unilateral Disease	Interval between MRI and PET (days)	ROIs Excluded from Analysis
			Right	Left		Right	Left	Right	Left			
1	36	F	S	A	Left hand paresthesia, dysphagia	7	0	3	0	Yes	16	
2	33	M	A	A		7	7	3	3		16	
3	38	F	S	A	Left arm weakness	5	4	3	2		34	
4	41	M	A	A		4	4	2	2		20	
5	31	F	A	A		4	4	2	2		20	
6	21	F	A	S	Right hand weakness	7	5	3	3		6	
7	42	F	A	PO	Right hemiparesis	0	7	0	3	Yes	41	Lt P
8	37	M	PO	PO	Right hand weakness	8	8	4	4		34	Lt O, Lt P, Lt T
9	45	F	S	A	Left leg weakness	8	7	4	3		18	
10	32	F	PO	PO		7	7	3	3		29	
11	55	F	S	A	Left leg weakness	6	2	3	1		15	
12	55	F	PO	PO		8	8	4	4		34	Lt T, Lt O, Rt O
13	26	F	S	PO	Left hand weakness	6	8	3	4		19	
14	35	M	A	S	Right hand weakness, dysphagia	0	4	0	2	Yes	41	
15	30	M	S	A	Left hand weakness	6	6	3	3		20	Rt F
16	34	F	A	A		1	2	0	1		23	
17	42	F	S	A	Left hemiparesis	4	7	2	3		20	
18	30	F	A	A		7	7	3	3		20	

Note:—A indicates asymptomatic; F, frontal; Lt, left; O, occipital; P, parietal; PO, postoperative; Rt, right; S, symptomatic; T, temporal.

On-line Table 2: Quantitative CBF values of ASL and PET

	sASL-CBF (mL/min/100 g)		dASL-CBF (mL/min/100 g)		PET-CBF (mL/min/100 g)	
	Mean	95% CI	Mean	95% CI	Mean	95% CI
All cortical regions	42.19	40.62–43.76	46.58	45.32–47.84	40.47	39.43–41.51
Tmax (s)						
≤6.0	44.30	42.63–45.97	46.84	45.40–48.29	41.49	40.29–42.68
>6.0	34.99	31.93–38.05	45.79	43.11–48.47	37.01	35.23–38.80
TTP (s)						
≤4.0	43.27	41.76–44.78	47.08	45.85–48.32	41.06	40.00–42.11
>4.0	28.99	22.65–35.33	41.45	35.04–47.85	33.30	30.41–36.19
MTT (s)						
≤4.0	44.89	43.25–46.52	47.34	45.87–48.79	42.35	41.18–43.52
>4.0	36.30	33.30–39.31	45.00	42.56–47.43	36.36	34.70–38.02
MTT delay (s)						
≤1.5	43.98	42.45–45.51	48.87	45.57–52.17	41.77	40.73–42.81
>1.5	32.60	28.22–36.96	44.87	40.49–49.25	33.51	31.36–35.66
≤2.0	43.00	41.45–44.55	46.86	45.61–48.10	41.01	39.97–42.05
>2.0	30.40	23.51–37.30	42.38	33.42–51.43	32.60	28.96–36.24
Asymptomatic/postoperative	42.20	40.46–43.93	46.22	44.80–47.65	40.68	39.43–41.95
Symptomatic	42.17	38.55–45.79	47.56	44.83–50.28	39.84	38.04–41.65
Cerebellum	45.57	42.50–48.63	43.44	40.75–46.12	55.33	51.42–59.24

On-line Table 3: Summary of the statistical analysis between CBF values of sASL and PET[a]

sASL-CBF vs PET-CBF	Correlation Coefficient (*r*)	*P* Value (Correlation)	*z* Value[c]	Difference (sASL-CBF Minus PET-CBF) (mL/min/100 g)		*P* Value (Paired *t* Test)
				Mean	95% CI	
All cortical areas	0.63	.01[b]		1.72	0.50 to 2.94	
Tmax (s)						
≤6.0	0.61	<.0001[b]	0.82	2.82	1.48 to 4.16	.002[b]
>6.0	0.50	.93		−2.02	−4.68 to 0.63	
TTP (s)						
≤4.0	0.58	.001[b]	0.80	2.21	0.97 to 3.46	.01[b]
>4.0	0.73	.07		−4.31	−8.99 to 0.38	
MTT (s)						
≤4.0	0.54	.001[b]	0.53	2.53	1.13 to 3.94	.07
>4.0	0.60	.96		−0.06	−2.46 to 2.35	
MTT delay (s)						
≤1.5	0.57	.001[b]	0.46	2.21	0.94 to 3.28	.12
>1.5	0.49	.63		−0.91	−4.81 to 2.89	
≤2.0	0.59	.002[b]	0.56	1.95	−3.50 to 7.75	.10
>2.0	0.70	.35		−2.90	−6.01 to 4.47	
Asymptomatic/postoperative	0.63	.03[b]	0.30	1.51	0.15 to 2.87	.60
Symptomatic	0.66	.10		2.33	−0.45 to 5.11	

[a] See the Materials and Methods for details of sASL, Tmax, and MTT delay.
[b] $P < .05$ regarded to be significant.
[c] $z > 1.96$ regarded to be significant.

On-line Table 4: Summary of the statistical analysis between CBF values of dASL and PET[a]

dASL-CBF vs PET-CBF	Correlation Coefficient (*r*)	*P* Value (Correlation)	*z* Value	Difference (dASL-CBF Minus PET-CBF) (mL/min/100 g)		*P* Value (Paired *t* Test)
				Mean	95% CI	
All cortical areas	0.39	<.0001[b]		6.39	5.10–7.67	
Tmax (s)						
≤6.0	0.34	<.0001[b]	1.42	5.48	3.95–7.00	.01[b]
>6.0	0.56	<.0001[b]		9.16	6.92–11.40	
TTP (s)						
≤4.0	0.30	<.0001[b]	2.54[c]	7.94	4.85–7.58	.38
>4.0	0.82	.002[b]		8.24	3.77–12.52	
MTT (s)						
≤4.0	0.20	<.0001[b]	3.60	5.56	3.86–7.27	.04[b]
>4.0	0.70	<.0001[b]		8.12	6.37–9.87	
MTT delay (s)						
≤1.5	0.34	<.0001[b]	1.64	5.77	4.39–7.16	.02[b]
>1.5	0.65	<.0001[b]		10.04	6.67–13.41	
≤2.0	0.33	<.0001[b]	2.80[c]	6.24	4.90–7.57	.37
>2.0	0.91	.008[b]		8.64	2.98–14.30	
Asymptomatic/postoperative	0.37	<.0001[b]	0.72	5.70	4.19–7.21	.08
Symptomatic	0.48	<.0001[b]		8.27	5.79–10.75	

[a] See the Materials and Methods for details of dASL, Tmax, and MTT delay.

[b] $P < .05$ regarded to be significant.

[c] $z > 1.96$ regarded to be significant.