

**On-line Table 1: Summary of DSC-PWI pulse-sequence parameters**

DSC sequence	Date (range)	No.	Pulse Sequence Parameters		
			FA	TE (ms)	TR (ms)
A	January 2005 to July 2007	24	45°	30	398–507
B	July 2007 to April 2015	122	7°	25–30	16–20
C <sup>a</sup>	August 2013 to October 2019	87	75°	40	1522–1771
All		233			

**Note:**—FA indicates flip angle.

<sup>a</sup> Parameters in a single case of this group (corresponding to a training subset PCNSL) were FA, 60°; TE, 21 ms; TR, 2000 ms.

**On-line Table 2: Summary of DSC-PWI pulse-sequence parameter distribution into the study subgroups<sup>a</sup>**

	Distribution by Tumor Diagnosis on Histology				
	PCNSL	GB	AA	MET	MEN
<b>Training</b>					
DSC sequence					
A	3	4	5	3	4
B	18	16	13	18	17
C	12	15	11	15	15
All	33	35	29	36	36
<b>Test</b>					
DSC sequence					
A	1	1	1	1	1
B	7	9	7	8	9
C	6	3	2	4	4
All	14	13	10	13	14

**Note:**—GB indicates glioblastoma; AA, anaplastic astrocytoma; MET, metastasis; MEN, meningioma.

<sup>a</sup> No significant differences in the distribution of the sequences into the study subgroups were found ( $P = .98$ ;  $\chi^2$ ).

**On-line Table 3: Demographics**

	Cases	Men	Women	Age (range)
				(yr)
PCNSL	50	33	17	61 (31–82)
Glioblastoma	50	32	18	60 (18–78)
Anaplastic astrocytoma	45	28	17	53 (18–85)
Metastasis	50	25	25	60 (26–80)
Meningioma	50	15	35	57 (34–82)
Total	245	133	112	59 (18–85)

**On-line Table 4: Classifier algorithms<sup>a</sup>**

PCNSL vs Glioblastoma		PCNSL vs Anaplastic Astrocytoma	
Model_Variables	Model_Coefficients	Model_Variables	Model_Coefficients
(Intercept)	−6.14	(Intercept)	−1.87
1 <sub>i</sub>	−4.72	1 <sub>i</sub>	−2.31
2 <sub>i</sub>	21.43	1.8 <sub>i</sub>	3.89
2.2 <sub>i</sub>	−42.32	2.6 <sub>i</sub>	−49.37
2.4 <sub>i</sub>	16.35	2.8 <sub>i</sub>	59.61
3.6 <sub>i</sub>	2.69	3.2 <sub>i</sub>	−15.2

<sup>a</sup> The classifier algorithms, with the intercept and the relative power (coefficient) for each selected normalized time point to apply on the formula: (Intercept)<sub>i</sub> +  $\sum$  (model\_variable, model\_coefficient). The model\_variables correspond to the normalized intensity value for each concrete normalized time point.

**On-line Table 5: Classifier algorithms<sup>a</sup>**

PCNSL vs Metastasis		PCNSL vs Meningioma	
Model_Variables	Model_Coefficients	Model_Variables	Model_Coefficients
(Intercept)	0.2	(Intercept)	-26.68
1.8 <sub>i</sub>	7.62	0.2 <sub>i</sub>	57.74
2 <sub>i</sub>	-14.08	1 <sub>i</sub>	-8.48
3.6 <sub>i</sub>	-20.51	2 <sub>i</sub>	-31.42
3.8 <sub>i</sub>	27.46	4.2 <sub>i</sub>	187.42
4.8 <sub>i</sub>	-3.97	4.4 <sub>i</sub>	-167.38

<sup>a</sup> The classifier algorithms, with the intercept and the relative power (coefficient) for each selected normalized time point to apply on the formula: (Intercept) +  $\sum$  (model\_variable<sub>i</sub> model\_coefficient<sub>i</sub>). The model\_variables correspond to the normalized intensity value for each concrete normalized time point.

**On-line Table 6: Diagnostic performance of conventional mean rCBV in the study population**

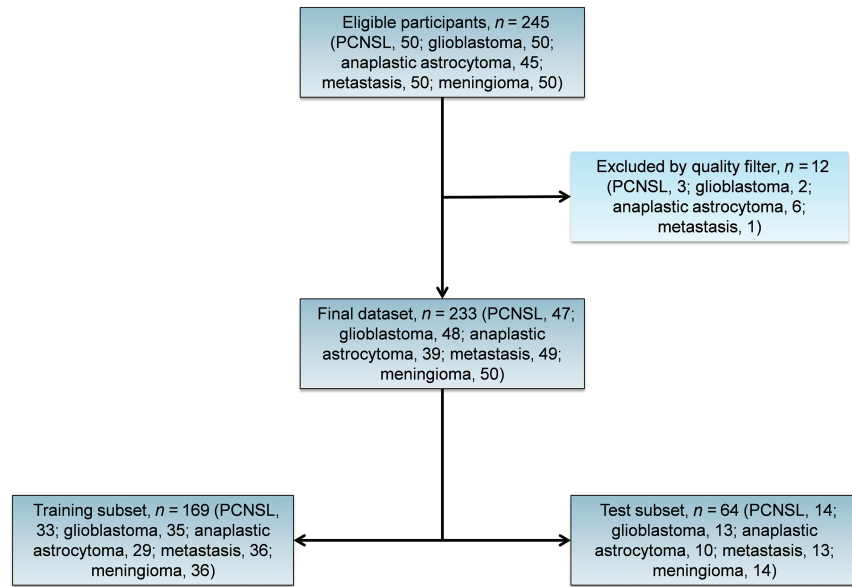
Mean rCBV	Threshold	AUC	Accuracy	Sensitivity	Specificity
PCNSL vs GB	2.41				
Training		0.85	82% (56/68)	85% (28/33)	80% (28/35)
Test		0.89	81% (22/27)	93% (13/14)	69% (9/13)
PCNSL vs AA	2.62				
Training		0.63	65% (40/62)	91% (30/33)	34% (10/29)
Test		0.53	67% (16/24)	100% (14/14)	20% (2/10)
PCNSL vs MET	2.63				
Training		0.53	59% (41/69)	91% (30/33)	31% (11/36)
Test		0.76	78% (21/27)	100% (14/14)	54% (7/13)
PCNSL vs MEN	2.58				
Training		0.89	86% (59/69)	88% (29/33)	83% (30/36)
Test		0.96	89% (25/28)	93% (13/14)	86% (12/14)

**Note:**—GB indicates glioblastoma; AA, anaplastic astrocytoma; MET, metastasis; MEN, meningioma; AUC, area under the curve.

**On-line Table 7: Diagnostic performance of conventional mean PSR in the study population**

Mean PSR	Threshold	AUC	Accuracy	Sensitivity	Specificity
PCNSL vs GB	123.46%				
Training		0.83	79% (54/68)	72% (24/33)	86% (30/35)
Test		0.94	89% (24/27)	93% (13/14)	85% (11/13)
PCNSL vs AA	125.36%				
Training		0.75	73% (45/62)	70% (23/33)	76% (22/29)
Test		0.85	83% (20/24)	93% (13/14)	70% (7/10)
PCNSL vs MET	124.20%				
Training		0.86	78% (54/69)	70% (23/33)	86% (31/36)
Test		0.99	96% (26/27)	93% (13/14)	100% (13/13)
PCNSL vs MEN	130.43%				
Training		0.76	72% (50/69)	67% (22/33)	78% (28/36)
Test		0.92	79% (22/28)	86% (12/14)	71% (10/14)

**Note:**—GB indicates glioblastoma; AA, anaplastic astrocytoma; MET, metastasis; MEN, meningioma; AUC, area under the curve.



**ON-LINE FIGURE.** Study participants' flow diagram.