

**Supplemental Table 9.** Differences in prediction accuracies of ANN classes SPLX and SPL-sham depending on the exclusion of variables and their combinations, along with the results of the t-test. The ANN was trained using a dataset with all days after a stroke, except the 2nd and 4th days. Values in the table are sorted based on the differences in mean accuracy predictions of classes SPLX and SPL-sham.

“Out” variable	“In” variable	Mean accuracy of SPLX – Mean accuracy of SPL-sham	t-test P-value	Statistically significant difference in the prediction of SPLX and SPL-sham
Day_nr-MRI_IPSI-MRI_CONTRA-WEIGHT-NS-BLI_max_radiance	BLI_max_flux	0.2346	0.0000	YES
Day_nr-MRI_IPSI-MRI_CONTRA-WEIGHT-BLI_max_radiance	NS-BLI_max_flux	0.2027	0.0000	YES
Day_nr-MRI_CONTRA-WEIGHT-NS-BLI_max_radiance	MRI_IPSI-BLI_max_flux	0.1702	0.0000	YES
Day_nr-MRI_IPSI-MRI_CONTRA-WEIGHT-NS-BLI_max_flux	BLI_max_radiance	0.1386	0.0000	YES
MRI_CONTRA-WEIGHT-NS-BLI_max_radiance	Day_nr-MRI_IPSI-BLI_max_flux	0.1308	0.0000	YES
MRI_IPSI-MRI_CONTRA-WEIGHT-NS-BLI_max_radiance	Day_nr-BLI_max_flux	0.1261	0.0000	YES
Day_nr-MRI_CONTRA-WEIGHT-BLI_max_radiance	MRI_IPSI-NS-BLI_max_flux	0.1203	0.0000	YES
Day_nr-MRI_IPSI-WEIGHT-NS-BLI_max_radiance	MRI_CONTRA-BLI_max_flux	0.1202	0.0000	YES
MRI_IPSI-WEIGHT-NS-BLI_max_flux	Day_nr-MRI_CONTRA-BLI_max_radiance	0.1187	0.0000	YES
WEIGHT-NS-BLI_max_flux	Day_nr-MRI_IPSI-MRI_CONTRA-	0.1185	0.0000	YES

	BLI_max_radiance			
Day_nr-MRI_CONTRA-WEIGHT-NS-BLI_max_flux	MRI_IPSI-BLI_max_radiance	0.1181	0.0000	YES
Day_nr-MRI_IPSI-WEIGHT-BLI_max_radiance	MRI_CONTRA-NS-BLI_max_flux	0.1136	0.0000	YES
Day_nr-MRI_IPSI-MRI_CONTRA-BLI_max_radiance	WEIGHT-NS-BLI_max_flux	0.1131	0.0000	YES
Day_nr-WEIGHT-NS-BLI_max_flux	MRI_IPSI-MRI_CONTRA-BLI_max_radiance	0.1124	0.0000	YES
MRI_CONTRA-WEIGHT-NS-BLI_max_flux	Day_nr-MRI_IPSI-BLI_max_radiance	0.1121	0.0000	YES
MRI_IPSI-MRI_CONTRA-WEIGHT-NS-BLI_max_flux	Day_nr-BLI_max_radiance	0.1078	0.0000	YES
MRI_IPSI-MRI_CONTRA-NS-BLI_max_flux	Day_nr-WEIGHT-BLI_max_radiance	0.1052	0.0000	YES
Day_nr-MRI_IPSI-WEIGHT-NS-BLI_max_flux	MRI_CONTRA-BLI_max_radiance	0.1033	0.0000	YES
Day_nr-MRI_IPSI-MRI_CONTRA-NS-BLI_max_radiance	WEIGHT-BLI_max_flux	0.1031	0.0000	YES
MRI_IPSI-MRI_CONTRA-WEIGHT-BLI_max_radiance	Day_nr-NS-BLI_max_flux	0.1022	0.0000	YES
MRI_CONTRA-NS-BLI_max_flux	Day_nr-MRI_IPSI-WEIGHT-BLI_max_radiance	0.1013	0.0000	YES
Day_nr-MRI_IPSI-MRI_CONTRA-WEIGHT-BLI_max_flux-BLI_max_radiance	NS	0.1004	0.0000	YES
MRI_CONTRA-WEIGHT-BLI_max_flux	Day_nr-MRI_IPSI-NS-BLI_max_radiance	0.1003	0.0000	YES
Day_nr-MRI_CONTRA-NS-BLI_max_flux	MRI_IPSI-WEIGHT-BLI_max_radiance	0.1002	0.0000	YES
Day_nr-MRI_CONTRA-	MRI_IPSI-NS-	0.0983	0.0000	YES

WEIGHT-BLI_max_flux	BLI_max_radiance			
MRI_IPSI-NS-BLI_max_flux	Day_nr-MRI_CONTRA-WEIGHT-BLI_max_radiance	0.0974	0.0000	YES
Day_nr-MRI_CONTRA-BLI_max_flux	MRI_IPSI-WEIGHT-NS-BLI_max_radiance	0.0942	0.0000	YES
Day_nr-MRI_IPSI-MRI_CONTRA-BLI_max_flux	WEIGHT-NS-BLI_max_radiance	0.0940	0.0000	YES
Day_nr-MRI_IPSI-MRI_CONTRA-NS-BLI_max_flux	WEIGHT-BLI_max_radiance	0.0935	0.0000	YES
Day_nr-MRI_IPSI-BLI_max_flux	MRI_CONTRA-WEIGHT-NS-BLI_max_radiance	0.0934	0.0000	YES
Day_nr-MRI_IPSI-MRI_CONTRA-WEIGHT-BLI_max_flux	NS-BLI_max_radiance	0.0927	0.0000	YES
Day_nr-MRI_CONTRA-NS	MRI_IPSI-WEIGHT-BLI_max_flux-BLI_max_radiance	0.0920	0.0000	YES
NS-BLI_max_flux	Day_nr-MRI_IPSI-MRI_CONTRA-WEIGHT-BLI_max_radiance	0.0908	0.0000	YES
Day_nr-WEIGHT-BLI_max_flux	MRI_IPSI-MRI_CONTRA-NS-BLI_max_radiance	0.0907	0.0000	YES
Day_nr-MRI_IPSI-MRI_CONTRA-NS	WEIGHT-BLI_max_flux-BLI_max_radiance	0.0907	0.0000	YES
MRI_CONTRA-WEIGHT-BLI_max_radiance	Day_nr-MRI_IPSI-NS-BLI_max_flux	0.0904	0.0000	YES
Day_nr-NS-BLI_max_flux	MRI_IPSI-MRI_CONTRA-WEIGHT-BLI_max_radiance	0.0904	0.0000	YES
MRI_CONTRA-BLI_max_flux	Day_nr-MRI_IPSI-WEIGHT-NS-BLI_max_radiance	0.0896	0.0000	YES

MRI_IPSI-WEIGHT-BLI_max_flux	Day_nr-MRI_CONTRA-NS-BLI_max_radiance	0.0885	0.0000	YES
MRI_IPSI-MRI_CONTRA-BLI_max_flux	Day_nr-WEIGHT-NS-BLI_max_radiance	0.0882	0.0000	YES
Day_nr-MRI_IPSI-NS-BLI_max_flux	MRI_CONTRA-WEIGHT-BLI_max_radiance	0.0878	0.0000	YES
MRI_IPSI-MRI_CONTRA-WEIGHT-BLI_max_flux	Day_nr-NS-BLI_max_radiance	0.0874	0.0000	YES
Day_nr-MRI_CONTRA-WEIGHT	MRI_IPSI-NS-BLI_max_flux-BLI_max_radiance	0.0869	0.0000	YES
Day_nr-NS	MRI_IPSI-MRI_CONTRA-WEIGHT-BLI_max_flux-BLI_max_radiance	0.0864	0.0000	YES
WEIGHT-BLI_max_flux	Day_nr-MRI_IPSI-MRI_CONTRA-NS-BLI_max_radiance	0.0863	0.0000	YES
WEIGHT-NS	Day_nr-MRI_IPSI-MRI_CONTRA-BLI_max_flux-BLI_max_radiance	0.0845	0.0000	YES
Day_nr-MRI_IPSI-WEIGHT-BLI_max_flux	MRI_CONTRA-NS-BLI_max_radiance	0.0845	0.0000	YES
Day_nr-WEIGHT	MRI_IPSI-MRI_CONTRA-NS-BLI_max_flux-BLI_max_radiance	0.0839	0.0000	YES
MRI_CONTRA-WEIGHT	Day_nr-MRI_IPSI-NS-BLI_max_flux-BLI_max_radiance	0.0838	0.0000	YES
Day_nr-MRI_CONTRA-WEIGHT-NS	MRI_IPSI-BLI_max_flux-BLI_max_radiance	0.0818	0.0000	YES
MRI_CONTRA	Day_nr-MRI_IPSI-WEIGHT-NS-BLI_max_flux-BLI_max_radiance	0.0815	0.0000	YES
Day_nr-BLI_max_flux	MRI_IPSI-MRI_CONTRA-	0.0810	0.0000	YES

	WEIGHT-NS- BLI_max_radiance			
Day_nr-MRI_IPSI-WEIGHT	MRI_CONTRA-NS- BLI_max_flux- BLI_max_radiance	0.0804	0.0000	YES
Day_nr-MRI_IPSI- MRI_CONTRA-WEIGHT- NS	BLI_max_flux- BLI_max_radiance	0.0803	0.0000	YES
Day_nr	MRI_IPSI-MRI_CONTRA- WEIGHT-NS- BLI_max_flux- BLI_max_radiance	0.0790	0.0000	YES
Day_nr-MRI_IPSI-NS	MRI_CONTRA-WEIGHT- BLI_max_flux- BLI_max_radiance	0.0778	0.0000	YES
BLI_max_flux	Day_nr-MRI_IPSI- MRI_CONTRA-WEIGHT- NS-BLI_max_radiance	0.0778	0.0000	YES
MRI_IPSI-MRI_CONTRA	Day_nr-WEIGHT-NS- BLI_max_flux- BLI_max_radiance	0.0773	0.0000	YES
Day_nr-MRI_CONTRA	MRI_IPSI-WEIGHT-NS- BLI_max_flux- BLI_max_radiance	0.0765	0.0000	YES
MRI_IPSI-WEIGHT	Day_nr-MRI_CONTRA-NS- BLI_max_flux- BLI_max_radiance	0.0765	0.0000	YES
Day_nr-MRI_IPSI- MRI_CONTRA-WEIGHT	NS-BLI_max_flux- BLI_max_radiance	0.0761	0.0000	YES
MRI_CONTRA-NS	Day_nr-MRI_IPSI- WEIGHT-BLI_max_flux- BLI_max_radiance	0.0760	0.0000	YES
Day_nr-MRI_IPSI- MRI_CONTRA	WEIGHT-NS- BLI_max_flux- BLI_max_radiance	0.0756	0.0000	YES
MRI_CONTRA-WEIGHT- NS	Day_nr-MRI_IPSI- BLI_max_flux-	0.0755	0.0000	YES

	BLI_max_radiance			
MRI_IPSI-BLI_max_flux	Day_nr-MRI_CONTRA-WEIGHT-NS-BLI_max_radiance	0.0754	0.0000	YES
WEIGHT	Day_nr-MRI_IPSI-MRI_CONTRA-NS-BLI_max_flux-BLI_max_radiance	0.0748	0.0000	YES
MRI_IPSI-MRI_CONTRA-WEIGHT	Day_nr-NS-BLI_max_flux-BLI_max_radiance	0.0741	0.0000	YES
Day_nr-WEIGHT-NS	MRI_IPSI-MRI_CONTRA-BLI_max_flux-BLI_max_radiance	0.0734	0.0000	YES
MRI_IPSI-MRI_CONTRA-NS	Day_nr-WEIGHT-BLI_max_flux-BLI_max_radiance	0.0730	0.0000	YES
MRI_IPSI-WEIGHT-NS	Day_nr-MRI_CONTRA-BLI_max_flux-BLI_max_radiance	0.0728	0.0000	YES
Day_nr-MRI_CONTRA-NS-BLI_max_radiance	MRI_IPSI-WEIGHT-BLI_max_flux	0.0714	0.0000	YES
None	Day_nr-MRI_IPSI-MRI_CONTRA-WEIGHT-NS-BLI_max_flux-BLI_max_radiance	0.0706	0.0000	YES
Day_nr-MRI_IPSI-WEIGHT-NS	MRI_CONTRA-BLI_max_flux-BLI_max_radiance	0.0705	0.0000	YES
Day_nr-MRI_CONTRA-BLI_max_radiance	MRI_IPSI-WEIGHT-NS-BLI_max_flux	0.0698	0.0000	YES
MRI_IPSI-NS	Day_nr-MRI_CONTRA-WEIGHT-BLI_max_flux-BLI_max_radiance	0.0675	0.0000	YES
Day_nr-MRI_IPSI	MRI_CONTRA-WEIGHT-NS-BLI_max_flux-BLI_max_radiance	0.0672	0.0000	YES

MRI_IPSI	Day_nr-MRI_CONTRA-WEIGHT-NS-BLI_max_flux-BLI_max_radiance	0.0665	0.0000	YES
NS	Day_nr-MRI_IPSI-MRI_CONTRA-WEIGHT-BLI_max_flux-BLI_max_radiance	0.0660	0.0000	YES
Day_nr-WEIGHT-NS-BLI_max_radiance	MRI_IPSI-MRI_CONTRA-BLI_max_flux	0.0644	0.0000	YES
MRI_IPSI-MRI_CONTRA-WEIGHT-NS	Day_nr-BLI_max_flux-BLI_max_radiance	0.0626	0.0000	YES
Day_nr-MRI_CONTRA-WEIGHT-BLI_max_flux-BLI_max_radiance	MRI_IPSI-NS	0.0611	0.0002	YES
MRI_IPSI-WEIGHT-NS-BLI_max_radiance	Day_nr-MRI_CONTRA-BLI_max_flux	0.0608	0.0001	YES
MRI_IPSI-MRI_CONTRA-WEIGHT-BLI_max_flux-BLI_max_radiance	Day_nr-NS	0.0587	0.0000	YES
Day_nr-WEIGHT-BLI_max_radiance	MRI_IPSI-MRI_CONTRA-NS-BLI_max_flux	0.0488	0.0008	YES
MRI_IPSI-MRI_CONTRA-NS-BLI_max_radiance	Day_nr-WEIGHT-BLI_max_flux	0.0477	0.0001	YES
WEIGHT-NS-BLI_max_radiance	Day_nr-MRI_IPSI-MRI_CONTRA-BLI_max_flux	0.0475	0.0029	YES
MRI_CONTRA-NS-BLI_max_radiance	Day_nr-MRI_IPSI-WEIGHT-BLI_max_flux	0.0444	0.0001	YES
MRI_IPSI-MRI_CONTRA-WEIGHT-NS-BLI_max_flux-BLI_max_radiance	Day_nr	0.0398	0.4693	NO
Day_nr-BLI_max_radiance	MRI_IPSI-MRI_CONTRA-WEIGHT-NS-BLI_max_flux	0.0376	0.0030	YES
MRI_CONTRA-WEIGHT-	Day_nr-MRI_IPSI-NS	0.0351	0.0127	YES

BLI_max_flux- BLI_max_radiance				
MRI_IPSI-WEIGHT- BLI_max_radiance	Day_nr-MRI_CONTRA-NS- BLI_max_flux	0.0335	0.0135	YES
Day_nr-NS- BLI_max_radiance	MRI_IPSI-MRI_CONTRA- WEIGHT-BLI_max_flux	0.0328	0.0069	YES
MRI_IPSI-MRI_CONTRA- BLI_max_radiance	Day_nr-WEIGHT-NS- BLI_max_flux	0.0304	0.0131	YES
MRI_IPSI-NS- BLI_max_radiance	Day_nr-MRI_CONTRA- WEIGHT-BLI_max_flux	0.0223	0.0468	YES
NS-BLI_max_radiance	Day_nr-MRI_IPSI- MRI_CONTRA-WEIGHT- BLI_max_flux	0.0215	0.0356	YES
Day_nr-MRI_CONTRA- WEIGHT-NS- BLI_max_flux- BLI_max_radiance	MRI_IPSI	0.0204	0.2527	NO
WEIGHT-BLI_max_radiance	Day_nr-MRI_IPSI- MRI_CONTRA-NS- BLI_max_flux	0.0177	0.0864	NO
MRI_CONTRA- BLI_max_radiance	Day_nr-MRI_IPSI- WEIGHT-NS-BLI_max_flux	0.0151	0.2110	NO
Day_nr-MRI_IPSI-NS- BLI_max_radiance	MRI_CONTRA-WEIGHT- BLI_max_flux	0.0151	0.2416	NO
MRI_CONTRA-WEIGHT- NS-BLI_max_flux- BLI_max_radiance	Day_nr-MRI_IPSI	0.0125	0.4799	NO
MRI_CONTRA-NS- BLI_max_flux- BLI_max_radiance	Day_nr-MRI_IPSI-WEIGHT	0.0090	0.5240	NO
MRI_IPSI-MRI_CONTRA- NS-BLI_max_flux- BLI_max_radiance	Day_nr-WEIGHT	0.0044	0.7353	NO
WEIGHT-BLI_max_flux- BLI_max_radiance	Day_nr-MRI_IPSI- MRI_CONTRA-NS	0.0029	0.8320	NO



MRI_IPSI- BLI_max_radiance	Day_nr-MRI_CONTRA- WEIGHT-NS-BLI_max_flux	0.0010	0.9264	NO
Day_nr-MRI_CONTRA- BLI_max_flux- BLI_max_radiance	MRI_IPSI-WEIGHT-NS	0.0006	0.9666	NO
BLI_max_radiance	Day_nr-MRI_IPSI- MRI_CONTRA-WEIGHT- NS-BLI_max_flux	-0.0004	0.9705	NO
Day_nr-MRI_CONTRA-NS- BLI_max_flux- BLI_max_radiance	MRI_IPSI-WEIGHT	-0.0055	0.7145	NO
Day_nr-WEIGHT- BLI_max_flux- BLI_max_radiance	MRI_IPSI-MRI_CONTRA- NS	-0.0062	0.6074	NO
MRI_IPSI-WEIGHT- BLI_max_flux- BLI_max_radiance	Day_nr-MRI_CONTRA-NS	-0.0089	0.5309	NO
Day_nr-MRI_IPSI- BLI_max_radiance	MRI_CONTRA-WEIGHT- NS-BLI_max_flux	-0.0124	0.3780	NO
MRI_CONTRA- BLI_max_flux- BLI_max_radiance	Day_nr-MRI_IPSI- WEIGHT-NS	-0.0146	0.2741	NO
NS-BLI_max_flux- BLI_max_radiance	Day_nr-MRI_IPSI- MRI_CONTRA-WEIGHT	-0.0177	0.1425	NO
MRI_IPSI-MRI_CONTRA- BLI_max_flux- BLI_max_radiance	Day_nr-WEIGHT-NS	-0.0188	0.1046	NO
Day_nr-MRI_IPSI- WEIGHT-BLI_max_flux- BLI_max_radiance	MRI_CONTRA-NS	-0.0201	0.1992	NO
Day_nr-MRI_IPSI- MRI_CONTRA- BLI_max_flux- BLI_max_radiance	WEIGHT-NS	-0.0260	0.0856	NO
MRI_IPSI-NS- BLI_max_flux- BLI_max_radiance	Day_nr-MRI_CONTRA- WEIGHT	-0.0275	0.0334	YES

BLI_max_flux- BLI_max_radiance	Day_nr-MRI_IPSI- MRI_CONTRA-WEIGHT- NS	-0.0283	0.0173	YES
Day_nr-BLI_max_flux- BLI_max_radiance	MRI_IPSI-MRI_CONTRA- WEIGHT-NS	-0.0304	0.0096	YES
MRI_IPSI-BLI_max_flux- BLI_max_radiance	Day_nr-MRI_CONTRA- WEIGHT-NS	-0.0328	0.0076	YES
Day_nr-NS-BLI_max_flux- BLI_max_radiance	MRI_IPSI-MRI_CONTRA- WEIGHT	-0.0513	0.0000	YES
Day_nr-MRI_IPSI- MRI_CONTRA-NS- BLI_max_flux- BLI_max_radiance	WEIGHT	-0.0529	0.0003	YES
Day_nr-MRI_IPSI- BLI_max_flux- BLI_max_radiance	MRI_CONTRA-WEIGHT- NS	-0.0538	0.0001	YES
Day_nr-MRI_IPSI-NS- BLI_max_flux- BLI_max_radiance	MRI_CONTRA-WEIGHT	-0.0548	0.0001	YES
Day_nr-WEIGHT-NS- BLI_max_flux- BLI_max_radiance	MRI_IPSI-MRI_CONTRA	-0.1037	0.0000	YES
WEIGHT-NS- BLI_max_flux- BLI_max_radiance	Day_nr-MRI_IPSI- MRI_CONTRA	-0.1046	0.0000	YES
MRI_IPSI-WEIGHT-NS- BLI_max_flux- BLI_max_radiance	Day_nr-MRI_CONTRA	-0.1240	0.0000	YES
Day_nr-MRI_IPSI- WEIGHT-NS- BLI_max_flux- BLI_max_radiance	MRI_CONTRA	-0.1314	0.0000	YES

ANN - artificial neural network; SPLX - splenectomized mice group; SPL-sham - sham-operated mice group; SD - standard deviation; MRI\_CONTRA - volume of the contralateral hemisphere measured by MRI; MRI\_IPSI - volume of the ipsilateral hemisphere measured by MRI; BLI\_max\_radiance - surface area of peak radiation measured by bioluminescence method; BLI\_max\_flux - surface area of peak growth measured by bioluminescence method; WEIGHT -

animal weight; Day\_nr - day from the middle carotid artery occlusion (MCAO) procedure; NS - scoring of phenotypic neurological assessment.