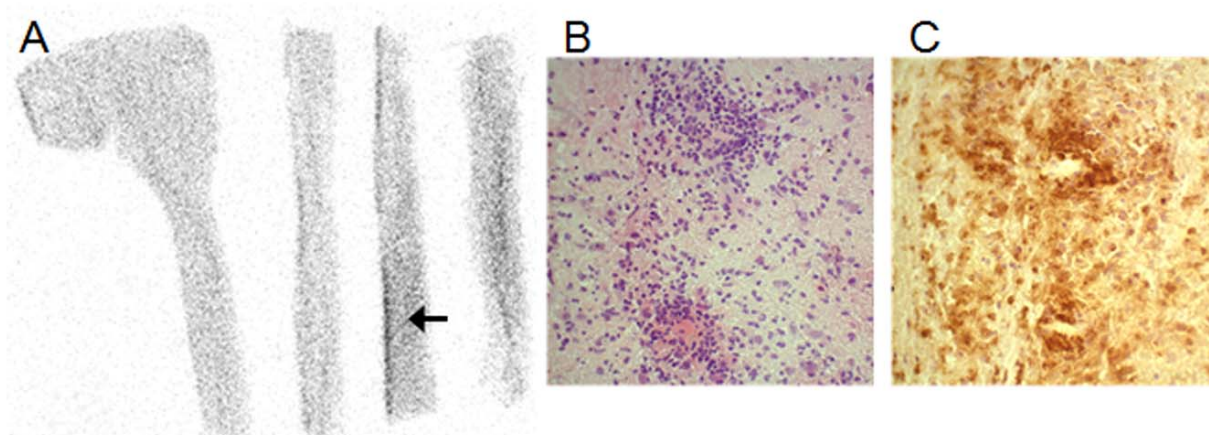


Supplemental Figure 1: [^{18}F]FLT ex vivo autoradiography of an EAE diseased rat. Immediately after the PET scan brainstem, cerebellum and spinal cord were cut into 12 μm sagittal sections. The same sections which had been used for autoradiography (1A) were stained with HE (1B) to assess inflammation. In adjacent sections immunohistochemistry of CD68 positive cells (1C) was performed. Increased [^{18}F]FLT uptake was observed in severely affected tissue. The lesion of which histology is shown is marked with an arrow. Original magnification of histological sections x 10.



Supplemental Figure 2: [^{18}F]FET ex vivo autoradiography of an EAE diseased rat. Immediately after the PET scan brainstem, cerebellum and spinal cord were cut into 12 μm sagittal sections. The same sections which had been used for autoradiography (2A) were stained with HE (2B) to assess inflammation. In adjacent sections immunohistochemistry of CD68 positive cells (2C) was performed. Increased [^{18}F]FET uptake was observed in severely affected tissue. The lesion of which histology is shown is marked with an arrow. Original magnification of histological sections x 10.

Supplemental Table 1: Multiple pairwise comparisons were performed for each category of histologically determined cellular infiltrates and z-scores of all image modalities (autoradiography, PET, T1 after contrast, and T2). Post-hoc pairwise tests of all possible group contrasts were corrected by the Holm-Bonferroni method. To warrant a global alpha error level of 5%, only adjusted two-sided p-values less than 0.05 were considered to indicate statistical significance.

HC= healthy control, No = no histologically determined cellular infiltrate, mild = mild histologically determined cellular infiltrate, moderate = moderate histologically determined cellular infiltrate, severe = severe histologically determined cellular infiltrate.

comparison		Holm-Bonferroni adjusted p-values multiple group comparisons			
group1	group2	Autoradiography	PET	T1 after contrast	T2
No	HC	>0.99	>0.99	>0.99	>0.99
Mild	HC	>0.99	>0.99	>0.99	>0.99
Mild	No	>0.99	>0.99	>0.99	>0.99
Moderate	HC	>0.99	>0.99	>0.99	>0.99
Moderate	No	>0.99	>0.99	>0.99	>0.99
Moderate	Mild	>0.99	>0.99	>0.99	>0.99
Severe	HC	0,100	>0.99	missing	>0.99
Severe	No	0,013	>0.99	missing	>0.99
Severe	Mild	0,0499	>0.99	missing	>0.99

Severe	Moderate	0,601	>0.99	missing	>0.99
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comparison		unadjusted p-values multiple group comparisons			
group1	group2	Autoradiography	PET	T1 after contrast	T2
No	HC	0,388	0,106	0,329	0,099
Mild	HC	0,885	0,242	0,243	0,337
Mild	No	0,369	0,424	0,747	0,294
Moderate	HC	0,486	0,997	0,254	0,236
Moderate	No	0,147	0,079	0,728	0,743
Moderate	Mild	0,374	0,177	0,875	0,673
Severe	HC	0,00294	0,750	missing	0,859
Severe	No	0,00035	0,080	missing	0,308
Severe	Mild	0,00143	0,156	missing	0,596
Severe	Moderate	0,01820	0,706	missing	0,388