



Figure S1. Metabolic data obtained from ^1H HRMAS spectra with a TE= 144 ms from tumor and contralateral regions of GBM rats and ipsilateral and contralateral regions of Sham rats. Metabolic concentrations are expressed relative to phosphocreatine + creatine (PCr + Cr). A. Ala: alanine. B. Lac: lactate. C. Cho+GPC+PCh: choline + glycerophosphocholine + phosphocholine. D. Tau: taurine. E. NAA: N-acetylaspartic acid. F. GPC: glycerophosphocholine, G. mI: myo-inositol. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ and **** $p < 0.0001$.

Table S1. Metabolite concentrations (mean \pm SEM) obtained from *ex vivo* ^1H HRMAS (TE= 144 ms) spectra from different regions of the studied groups. Metabolic concentrations are expressed relative to phosphocreatine + creatine (PCr + Cr).

[Metabolite]/ [PCr + Cr]	GBM		Sham	
	Tumor	Contralateral	Ipsilateral	Contralateral
Ala	0.32 \pm 0.06	0.05 \pm 0.02	0.09 \pm 0.01	0.08 \pm 0.01
Lac	0.49 \pm 0.11	0.28 \pm 0.07	0.25 \pm 0.03	0.25 \pm 0.04
Cho+GPC+PCh	0.34 \pm 0.05	0.20 \pm 0.04	0.12 \pm 0.01	0.12 \pm 0.02
Tau	0.96 \pm 0.15	0.43 \pm 0.16	0.34 \pm 0.05	0.42 \pm 0.03
NAA	0.63 \pm 0.08	1.33 \pm 0.13	1.47 \pm 0.05	1.58 \pm 0.04
GPC	0.13 \pm 0.02	0.12 \pm 0.02	0.07 \pm 0.01	0.06 \pm 0.01
mI	0.74 \pm 0.04	0.79 \pm 0.12	0.34 \pm 0.02	0.40 \pm 0.05

SEM: standard error of mean, TE: echo time, PCr+Cr: phosphocreatine + creatine, Ala: alanine, Lac: lactate, Cho+GPC+PCh: choline + glycerophosphocholine + phosphocholine, Tau: taurine, NAA: N-acetylaspartic acid, GPC: glycerophosphocholine. mI: myo-inositol.