

	Total
Grade II	
Astrocytoma	9
Oligodendroglioma/mixed	9
Grade III	
Anaplastic Astrocytoma	10
Anaplastic Oligoastrocytoma	8
Grade IV	
Glioblastoma	28
Giant Cell	1
Gliosarcoma	4

Table S1

Table S2

"Anabolic"

1-stearoylglycerophosphoethanolamine
2-aminoacidate
2-aminobutyrate
2-hydroxyppalmitate
3-aminoisobutyrate
3-phosphoglycerate
5-6-dihydrouracil
6-phosphogluconate
7-alpha-hydroxy-3-oxo-4-cholestenolate
acetyl carnitine
adrenate (22:4n6)
alanine
alpha-tocopherol
asparagine
beta-alanine
butyrylcarnitine
carnitine
cysteine sulfenic acid
deoxycarnitine
docosahexaenolate
docosapentaenolate
docosapentaenolate
eicosenolate
fumarate
gluconate
glycine
glycylglycine
hexanoylcarnitine
hypotaurine
kynurenine
leucine
linoleate
lysine
maltose
margarate
methyl palmitate
myristoleate
N-acetylglucosamine 6-phosphate
N-acetylglycine
ornithine
palmitate
phenylacetylglutamine
phenylalanine
phosphoenolpyruvate (PEP)
phosphoethanolamine
proline
propionylcarnitine
serine
threonine
tiglyl carnitine
trans-4-hydroxyproline
tryptophan
tyrosine
uracil
urate

"Energetic"

3-(4-hydroxyphenyl)lactate
1,3-dihydroxyacetone
3-phosphoserine
4-acetamidobutanoate
7-alpha-hydroxycholesterol
allo-threonine
arabinose
arabitol
arabonate
cystathionine
dehydroascorbate
dihydroxyacetone phosphate
erythronate
fructose 1-phosphate
fructose-6-phosphate
glucose-6-phosphate (G6P)
glycerol 3-phosphate (G3P)
glycerophosphoethanolamine
glycerophosphorylcholine (GPC)
homocarnosine
mannose-6-phosphate
myo-inositol
scyllo-inositol
sedoheptulose-7-phosphate
sorbitol
spermidine
succinylcarnitine
xylonate

"Phospholipid Catabolism"

1-myristoylglycerophosphocholine
1-oleoylglycerophosphocholine
1-oleoylglycerophosphoethanolamine
1-palmitoleoylglycerophosphocholine
1-palmitoylglycerophosphocholine
2-oleoylglycerophosphocholine
2-oleoylglycerophosphoethanolamine
2-palmitoleoylglycerophosphocholine
2-palmitoleoylglycerophosphoethanolamine
2-palmitoylglycerophosphocholine
2-palmitoylglycerophosphoethanolamine
cholesterol
cis-vaccenate
dimethylallyl pyrophosphate
docosatrienolate
mead acid
methylphosphate
palmitoyl ethanolamide
sphinganine
sphingosine
stearoylcarnitine
valeryl carnitine