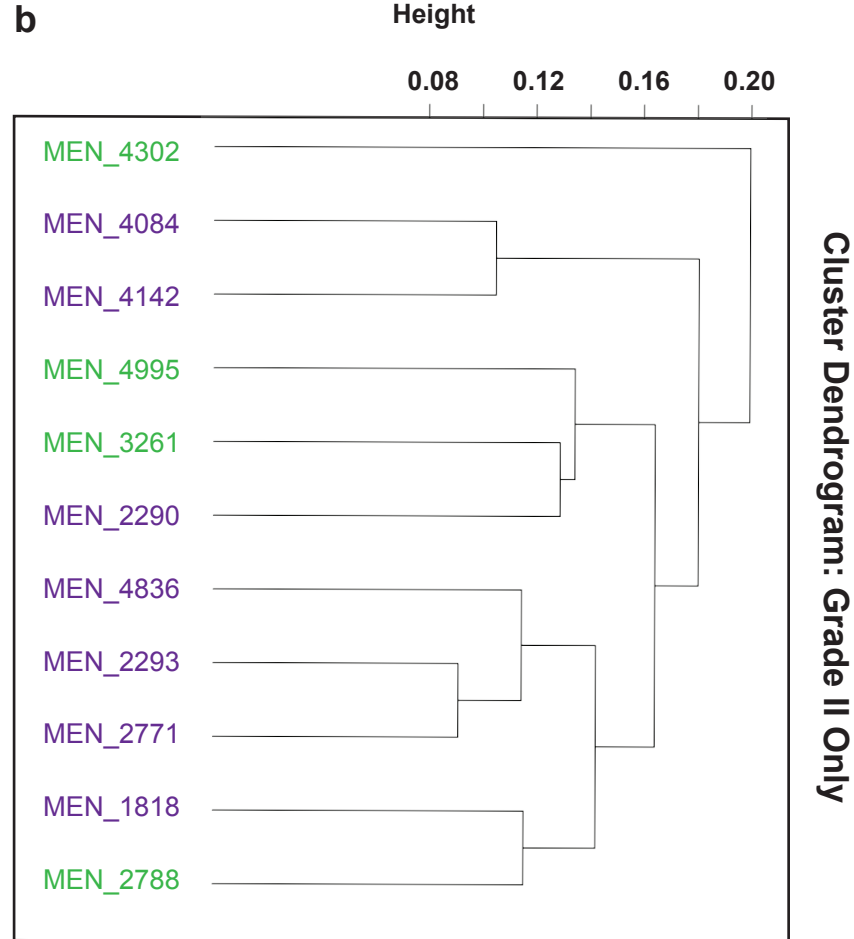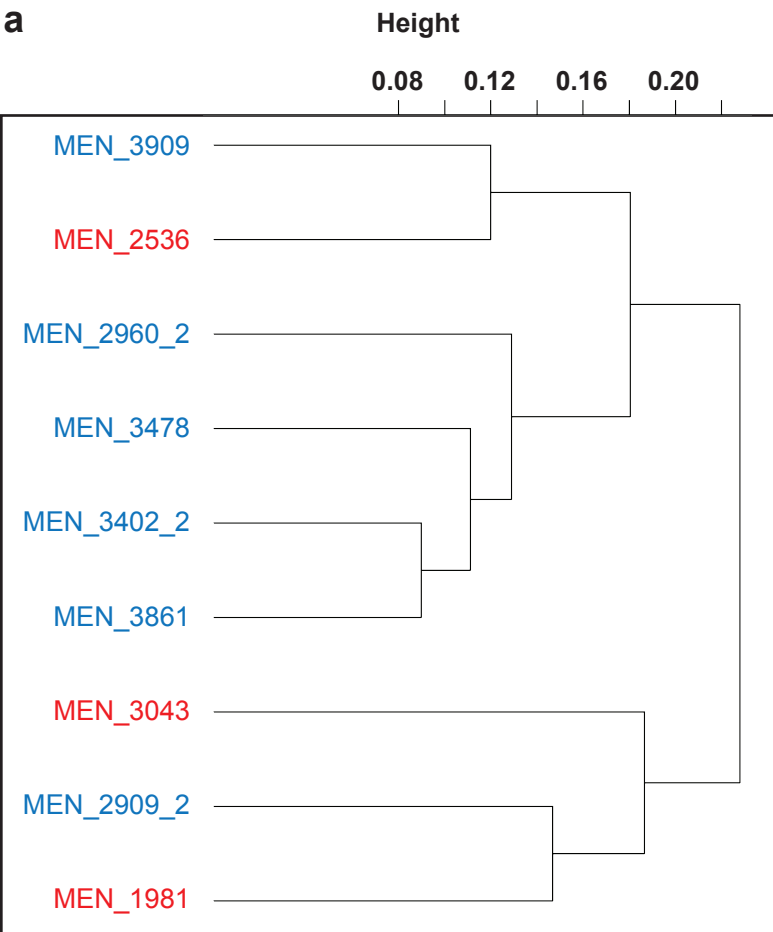**Supplementary Material**

Supplementary Table 1: List of significantly differentially expressed genes between grade INP and IP meningiomas, as identified by RNA-seq.

Supplementary Table 2: List of significantly differentially expressed genes between all grade I and all grade II meningiomas, as identified by RNA-seq.

Supplementary Table 3: List of significantly differentially expressed genes between all grade I and all grade III meningiomas, as identified by RNA-seq.
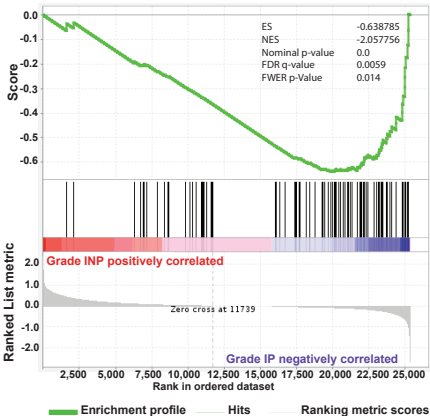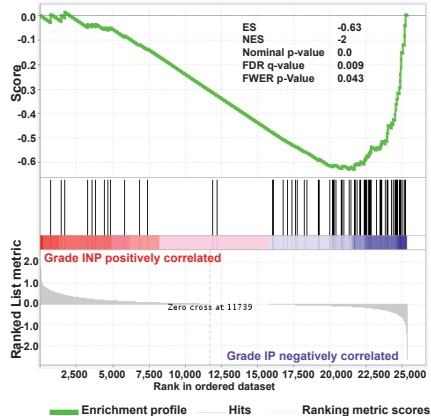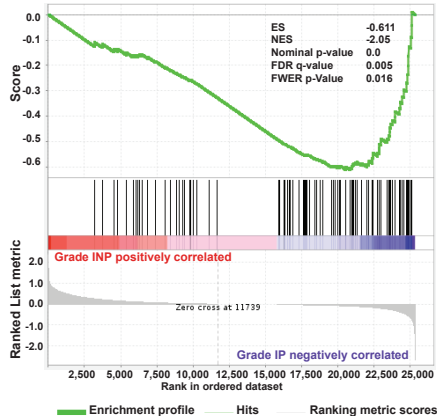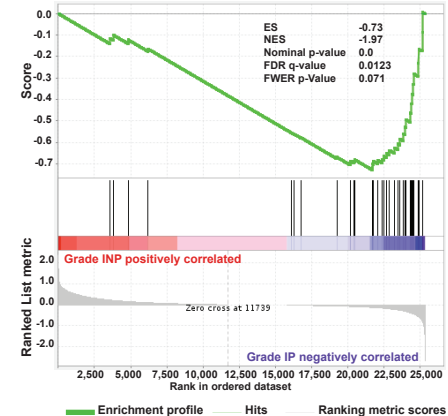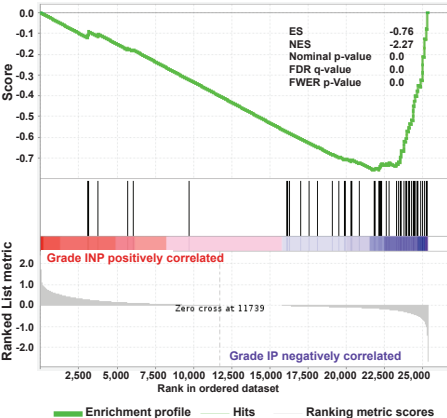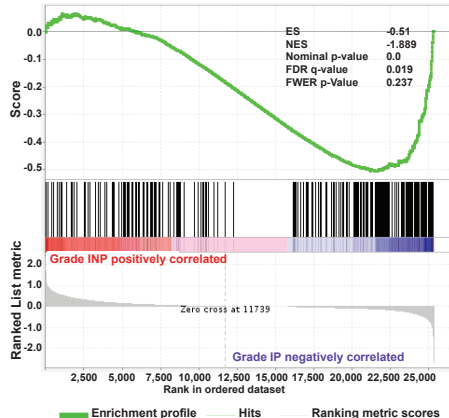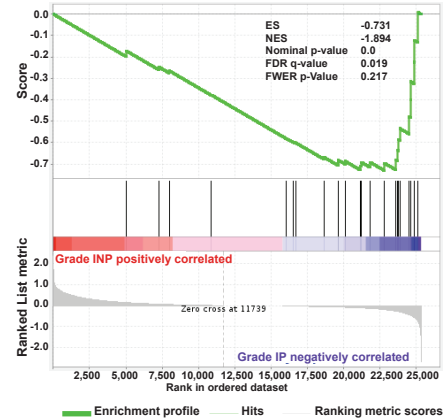
Supplementary Table 4: List of significantly differentially expressed genes between all grade I and grade II and III meningiomas, as identified by RNA-seq.

Supplementary Table 5: List of significantly differentially expressed genes between grade II S. and II DN meningiomas, as identified by RNA-seq.

a

Height

0.08 0.12 0.16 0.20

MEN_3909
MEN_2536
MEN_2960_2
MEN_3478
MEN_3402_2
MEN_3861
MEN_3043
MEN_2909_2
MEN_1981

Cluster Dendrogram: Grade I Only

b

Height

0.08 0.12 0.16 0.20

MEN_4302
MEN_4084
MEN_4142
MEN_4995
MEN_3261
MEN_2290
MEN_4836
MEN_2293
MEN_2771
MEN_1818
MEN_2788

Cluster Dendrogram: Grade II Only

— Grade INP (never progressed)
— Grade IP (progressed)
— Grade II S. ("secondary" grade II)
— Grade II DN ("de novo" grade II)

Supplementary Figure 1

Supplementary Figure 2