

## Supplemental Data

### Prognostic and Predictive factors associated with PRRT in Meningiomas

Several factors have been evaluated as potential predictors of outcome in patients affected by heavy pre-treated meningiomas and treated with  $^{90}\text{Y}$ - and  $^{177}\text{Lu}$  PRRT.

Age ( $\leq 64$  years 0.71, 95% CI 0.50-0.86 vs  $>64$  years 0.39, 95% CI 0.19-0.63,  $p=0.06$ ), in G1 grade (G1 0.64, 95% CI 0.33-0.86 vs G2-G3 0.50, 95% CI 0.32-0.68,  $p=0.50$ ), in patients with moderate tumor burden (moderate 0.75, 95% CI 0.48-0.91 vs extended 0.46, 95% CI 0.27-0.66,  $p=0.10$ ), in those who were little pre-treated (no surgery or one surgery 0.71, 95% CI 0.45-0.88 vs more than one surgeries 0.48, 95% CI 0.29-0.67,  $p=0.21$ ), in those who were less clinically involved without specific therapy (no therapies 0.80, 95% CI 0.45-0.95 vs specific therapy 0.50, 95% CI 0.33-0.67,  $p=0.15$ ), and in ECOG 0 (ECOG 0 0.65, 95% CI 0.42-0.83 vs ECOG 1-2 0.50, 95% CI 0.30-0.70,  $p=0.37$ ).

None of the abovementioned difference, however, reached the statistical significance.

In the cohort under analysis younger patients had better mPFS ( $\leq 64$  years 17.5 months, 95% CI 6.2-26.2 vs  $>64$  years 16 months, 95% CI 4.6-21.5) and mOS ( $\leq 64$  years 65.1 months, 95% CI 19.7-103.8 vs  $>64$  years 27.7 months, 95% CI 17-43.3), but the differences were not statistically significant ( $p=0.55$ ,  $p=0.31$ , respectively). Analogous results were found in the group of patients carrying a moderate tumor burden (PFS: moderate 17.5 months, 95% CI 13.1-34.2 vs extended 8.7 months, 95% CI 4.7-19.7; OS: moderate 42.4 months, 95% CI 17.1-103.8 vs extended 32.9 months, 95% CI 22.5-71) and in those with a better ECOG (PFS: ECOG 0 16.6 months, 95% CI 5.7-26.2 vs ECOG 1-2 15 months, 95% CI 7.5-27.7; OS: ECOG 0 71 months, 95% CI 22.5-not reached [NR] vs ECOG 1-2 27.7 months, 95% CI 16.3-44), although again not reaching a statistical significance (PFS:  $p=0.43$ ,  $p=0.95$ ; OS:  $p=0.90$ ,  $p=0.10$ , respectively).

Median OS for G1 patients was 43.3 months (95% CI 4.2-NR) vs 32.9 months (95% CI 18.3-44) for G2 patients ( $p=0.32$ );