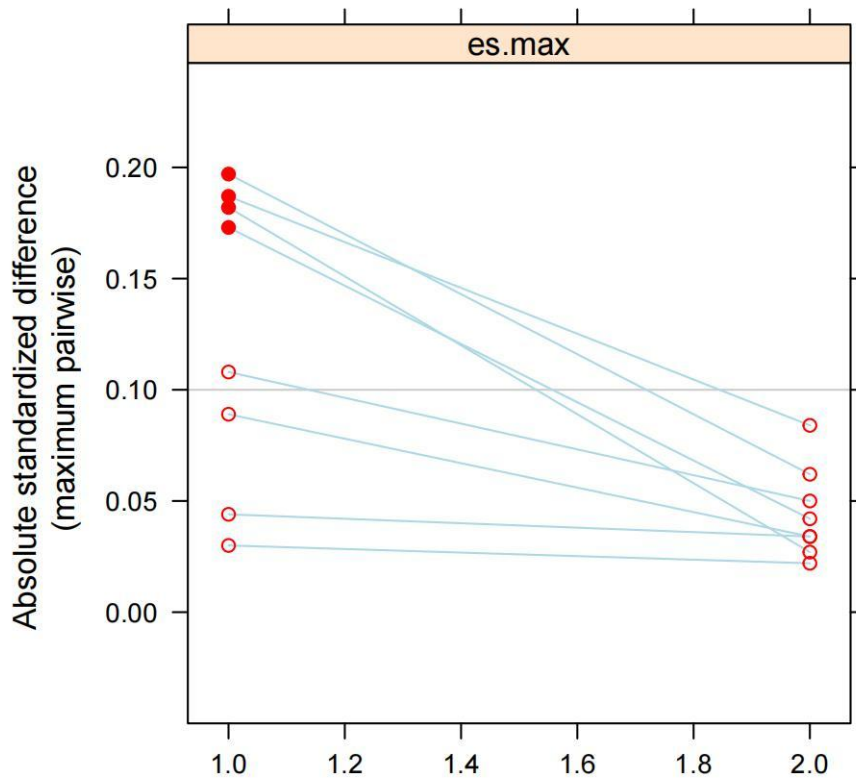
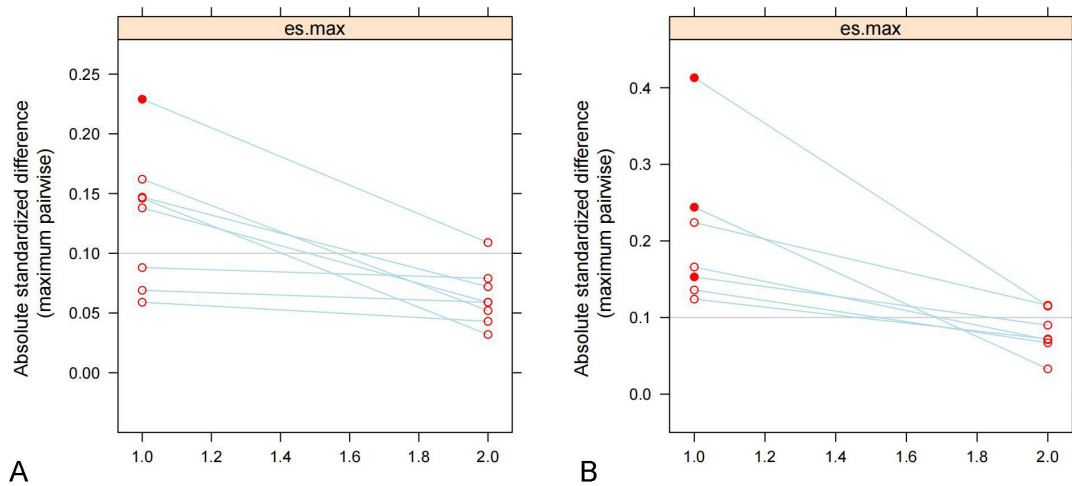


Supplement Figure 1: The absolute standardized mean difference values (maximum pairwise) of variables in 4 treatment groups (GTR no-PORT group, GTR with PORT group, STR no-PORT group, and STR with PORT group) before (left points) and after (right points) inverse probability weighting.



Supplement Figure 2: The absolute standardized mean difference values of variables before (left points) and after (right points) inverse probability weighting for subgroups, including patients with age < 60 years old (A) and with age \geq 60 years old (B).



Supplement Note 1:

Since the SEER database does not record the “SEER cause-specific death classification” for patients with atypical meningioma, we defined atypical meningioma-specific death based on 3 different definitions.

Definition A: “COD to site recode” recorded as “in situ, benign or unknown behavior neoplasm.”

Definition B: “COD to site recode” recorded as “Brain and Other Nervous System.”

Definition C: “COD to site recode” recorded as “in situ, benign or unknown behavior neoplasm” or “Brain and Other Nervous System.”