

**Supplementary Table S3.** Association of survival with clinical characteristics.

	<b>Association</b>	
	<b>OS since IDx</b>	<b>OS since R/M</b>
<b>Sex (Male vs Female)</b>	P=0.105	P=0.445
<b>Smoking (Yes vs No)</b>	P=0.319	P=0.445
<b>Primary tumor (PNS vs SG vs OP vs Larynx)</b>	P=0.463	P=0.129
<b>Stage IDx (II vs IVA vs IVB vs IVC)</b>	P=0.387	P=0.438
<b>Ki67 (&lt; 90 vs ≥90)</b>	P=0.356	P=0.246
<b>Chromogranin (positive vs negative)</b>	P=0.193	P=0.808
<b>Synaptophysin (positive vs negative)</b>	P=0.157	P=0.445
<b>Neuronal specific enolase</b>	P=0.480	P=0.317

IDx: initial diagnosis, P= p-value, PNS: paranasal sinus, R/M: recurrent/metastatic, SG: salivary gland, OP: oropharynx