

Table 5. Severity modifier considerations for One Wales (OWMAG)/AWMSG

AWMSG criteria for applying a severity modifier weight	Nivolumab considerations
<p>AWMSG can:</p> <ul style="list-style-type: none">• apply a QALY weight of 1 if the medicine is indicated for patients with a condition associated with an absolute QALY shortfall < 12 and/or a proportional QALY shortfall < 0.85.• apply a QALY weight of 1.2 if the medicine is indicated for patients with a condition associated with an absolute QALY shortfall ranging between 12 and 18 and/or a proportional QALY shortfall ranging between 0.85 and 0.95.• apply a QALY weight of 1.7 if the medicine is indicated for patients with a condition associated with an absolute QALY shortfall >18 and/or a proportional QALY shortfall ≥ 0.95.	<p>A standard approach was used to compare the expected total QALY estimates for patients being treated with chemotherapy and the expected QALYs general population without the condition⁴⁸. The general population expected total QALY estimates are a function of age and the percentage of females in the population, these are informed by the Checkmate 649 trial cohort as 62 and 28% respectively²³. Mortality within the general population is sourced from pooled life tables, this is used in conjunction with age and sex based QoL to offer overall QALYs.^{49,50}.</p> <p>Expected QALYs for people with oesophageal and gastric cancer were identified using a targeted literature approach. Utility estimates for people with Stage IV oesophageal cancer were used in the base case⁵¹. The EQ-5D score of 0.72 is used in conjunction with the Checkmate 649 trial overall survival figure of 11.1 months to offer a QALY estimate of 0.67^{23,51}. An annual discount rate of 3.5% has been used to calculate QALY shortfall estimates.</p> <p>AWTTC considers the most plausible absolute QALY loss to be around 11.28 with a proportional QALY shortfall of 0.94 (intervention QALY estimate 0.67 compared to absence of disease of 11.95, representing a 94% reduction in expected QALYs). Given this proportional shortfall estimate, a QALY weight of 1.2 is applicable for the evaluation of nivolumab as monotherapy as a first-line treatment in the target population.</p> <p>A plausible alternative quality of life figure of 0.742 was calculated by weighting the QoL figures for stage IV oesophageal cancer by the 28% female population from Checkmate 649^{23,52}. This approach was used to assess the robustness of the QALY shortfall finding to the QoL estimate, the appropriate modifier remained the same.</p>
QALY: quality-adjusted life-year	