

Background Results from De-ESCALaTE HPV confirmed the dominance of cisplatin over cetuximab chemoradiotherapy for tumour control in patients with HPV+OPC. We report a comparison of QoL, resource use and healthcare costs in both arms, as well as updated 24 month survival and recurrence. **Methods** At various intervals from baseline to 24 months post treatment (PT), patient reported QoL and resource use were assessed through the EQ-5D-5L and a trial-specific resource use questionnaire supplemented by case report forms. Healthcare costs were estimated by applying UK-based unit cost to resource use items. Missing data were imputed. Differences in mean EQ-5D-5L utility index and adjusted cumulative QALYs were compared using the Wilcoxon signed-rank test and linear regression respectively. Mean resource usage and costs were compared though two-sample t-tests. **Results** 334 patients were randomised to cisplatin (n = 166) or cetuximab (n = 168). EQ-5D-5L utility index scores showed substantially lower mean QoL at the end of treatment for both study arms compared to baseline, before both recovering by 12 months PT. No significant differences between arms were detected at any time point. The difference in cumulative quality-adjusted survival, adjusted for baseline QoL, gender and comorbidities, widened over time and became significant at 6 months PT. By 24 months PT, mean difference was 0.107 QALYs in favour of cisplatin (95% CI: 0.029 to 0.186, p = 0.007), driven by the higher rate of mortality in the cetuximab arm. We found no statistically significant differences in the mean number or cost of hospital inpatient days, day case/outpatient visits, A&E visits, or primary/community care contacts. The cost of cetuximab-based chemoradiotherapy was, however, £7780 (P < 0.001) more expensive. Total costs at 24 months PT averaged £13517 (SE: £345) per patient for cisplatin and £21064 (SE: £400) for cetuximab. Treatment with cetuximab therefore significantly increased total cost per patient by £7547 (95% CI: £6512 to £8582). **Conclusions** When added to radiotherapy, cisplatin chemotherapy provided more QALYs and was less costly than cetuximab. Clinical trial identification NCT01874171. Legal entity responsible for the study Hisham Mohamed Mehanna. Funding Cancer Research UK. **Disclosure** H. Mehanna: Leadership role, Shareholder / Stockholder / Stock options, Full / Part-time employment, Spouse / Financial dependant: Warwickshire Head and Neck Clinic; Speaker Bureau / Expert testimony, Research grant / Funding (institution), Travel / Accommodation / Expenses: MSD; Speaker Bureau / Expert testimony, Research grant / Funding (institution), Travel / Accommodation / Expenses: Sanofi Pasteur; Speaker Bureau / Expert testimony, Travel / Accommodation / Expenses: Merck; Honoraria (self), Research grant / Funding (self): AstraZeneca; Research grant / Funding (institution): GlaxoSmithKline; Research grant / Funding (institution): Silence Therapeutics. All other authors have declared no conflicts of interest.