Appendix I – Health Economics Evidence Tables

Study, population, country and quality	Data sources	Other comments	Results			Conclusions	Uncertainty
			Cos	Effect			
Patrice (2017) Cost-utility study (Partitioned Survival Model) Patients with Extensive-Stage Small Cell Lung Cancer (ES-SCLC) (as per the CREST RCT) United States **Partially Applicable** [a] **Minor Limitations** [b]	**Effects** A single-study estimate of effectiveness was used - CREST RCT (Nederlands Trial Register, number NTR1527). n=498. Patients who demonstrated any response to induction chemotherapy to receive Thoracic Radiation Therapy (TRT) and Prophylactic Cranial Irradiation (PCI) or PCI alone. **Costs and resource use** TRT costs were obtained from the 2016 Centers for Medicare & Medicaid Services Physician Fee Schedule (CMSPFS) national payment amount. Post-treatment surveillance costs associated with the PFS health state were obtained from the 2016 CMSPFS. Costs were inflated to 2016 US dollars using the medical care component of the US Chained Consumer Price Index.	A discount rate of 3% was used for costs and outcomes beyond the first year. The analysis used a US health care payer perspective. The base case analysis took a 24 month time horizon, matching that of CREST. The second analysis took a patient lifetime horizon. Patient lifetime horizon's ICER was in excess of $100,000 per QALY due to the high cost of salvage therapy regimens.	***Incremental comparison of TRT compared to Standard Therapy*** ***24 month analysis***			"By use of the actual follow-up interval reported in the CREST, adding TRT to chemotherapy and PCI strongly dominates a strategy of chemotherapy and PCI alone in patients with ES SCLC. Since the long-term incremental survival benefit of TRT is small relative to ongoing incremental costs to manage progressive metastatic disease, the ICER of TRT is less favorable and situated near the upper boundary of contemporary thresholds for cost-effectiveness	24 months one-way deterministic sensitivity analysis found that the TRT ICER was most sensitive to changes in the parameters of the TRT and ST PFS and OS distributions. Patient lifetime one-way deterministic sensitivity analysis, the use of alternative PFS distributions resulted in the TRT ICERs ranging from $79,291 to $381,264. For the 24-month time horizon probabilistic sensitivity analysis, TRT was expected to be cost-effective and preferred over the ST strategy in 68%, 81%, and 96% of the simulations at
			-$538	0.049 QALYs	Dominant		
			Incremental comparison of TRT compared to Standard Therapy ***Lifetime Analysis***				
			$17,583	0.090 QALYs	$194,726/QALYs		

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	Utility Patient preferences for the PFS and PPS health states associated with metastatic lung cancer were obtained from the literature and were elicited from members of the general public using standard gamble techniques (Nafees, 2008). Utility values for metastatic non-SCLC were used as a proxy for the comparable ES-SCLC health states based on available data					when evaluating a lifetime scenario."	willingness-to-pay thresholds of $50,000/QALY, $100,000/QALY, and 200,000/QALY, respectively. In contrast, when a lifetime horizon was assumed, ST was expected to be cost-effective and preferred over the TRT strategy in 89%, 82%, and 55% of the simulations at willingness-to-pay thresholds of $50,000/QALY, $100,000/QALY, and 200,000/QALY, respectively.

a) US Study.

b) Not clear if the unit costs of resources from the best available sources.