

	Cost containment of global monoclonal antibody drugs and cancer clinical trials via LLM focused reasoning	
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	Traceability Part A TRA Human-in-the-Loop Verification, Scope = Financial Verifications of 3.5 Sonnet LLM Reports.	
	The content is available under CC BY 4.0. Refer to manuscript Table 2 for article references. (Pages 1-34)	
	<u>Article 01: Patient Out-of-Pocket Costs for Biologic Drugs After Biosimilar Competition, Feng K. et al. 2024</u>	
	Article Quote	
1	“mean OOP costs were lower for biosimilars (\$707) than reference biologics (\$911)”	
	LLM Quote	
	“Pre-biosimilar reference product mean OOP cost: “\$911””	
Y	In-Context	
	Article Quote	
2	“mean OOP costs were lower for biosimilars (\$707) than reference biologics (\$911)”	
	LLM Quote	
	“Post-biosimilar mean OOP cost: “\$707””	
Y	In-Context	
	<u>Article 02: Reduction of biologic pricing following biosimilar introduction: Analysis across 57 countries and regions, 2012–19, Chen H. et al. 2024</u>	
	Article Quote	
3	“the average price per dose of biologic product was immediately reduced by \$438 for trastuzumab, \$112 for infliximab, and \$110 for bevacizumab”	
	LLM Quote	
	“Bevacizumab: “\$110” per dose reduction”	
Y	In-Context	
	Article Quote	
4	“the average price per dose of biologic product was immediately reduced by \$438 for trastuzumab”	
	LLM Quote	
	“Trastuzumab: “\$438” per dose reduction”	
Y	In-Context	
	Article Quote	
5	“further reductions in price per dose every year: by \$49 for adalimumab, \$290 for filgrastim, \$21 for infliximab, and \$189 for trastuzumab”	
	LLM Quote	
	“Trastuzumab: “\$189” reduction per year”	
Y	In-Context	
	Article Quote	
6	“The average prices of biologics per unit of standardized dose sold before the introduction of biosimilars were \$273.2, \$266.7, \$733.8, \$36.3, \$25.2, \$347.1, \$867.8, and \$515.8 for adalimumab, bevacizumab”	
	LLM Quote	
	“Bevacizumab - Pre-biosimilar average price: “\$266.70” per standard dose”	
Y	In-Context	
	Article Quote	
7	“The average prices of biologics weighted by the quantity of active pharmaceutical ingredients sold after the introduction of biosimilars were \$176.7, \$235.7, \$260.5, \$25.4, \$21.9, \$324.0, \$1,026.1, and \$457.7 for adalimumab, bevacizumab”	
	LLM Quote	
	“Post-biosimilar average price: “\$235.70” per standard dose”	
Y	In-Context	
	Article Quote	
8	“Table 2: Bevacizumab: Interruption, Point Estimate (USD) -110.52”	
	LLM Quote	
	“Immediate price reduction: “\$110.52””	

Y	In-Context	
		Article Quote
9	“Table 2: Bevacizumab: Interaction, Point Estimate (USD) -17.73”	
		LLM Quote
	“Annual slope change: "\$17.73" additional decrease per year”	
Y	In-Context	
		Article Quote
10	“The average prices of biologics per unit of standardized dose sold before the introduction of biosimilars were \$273.2, \$266.7, \$733.8, \$36.3, \$25.2, \$347.1, \$867.8, and \$515.8 for adalimumab, bevacizumab, epoetin, etanercept, filgrastim, infliximab, pegfilgrastim, and trastuzumab”	
		LLM Quote
	“Trastuzumab - Pre-biosimilar average price: "\$515.80" per standard dose”	
Y	In-Context	
		Article Quote
11	“The average prices of biologics weighted by the quantity of active pharmaceutical ingredients sold after the introduction of biosimilars were \$176.7, \$235.7, \$260.5, \$25.4, \$21.9, \$324.0, \$1,026.1, and \$457.7 for adalimumab, bevacizumab, epoetin, etanercept, filgrastim, infliximab, pegfilgrastim, and trastuzumab”	
		LLM Quote
	“Post-biosimilar average price: "\$457.70" per standard dose”	
Y	In-Context	
		Article Quote
12	“Immediate price reduction: "\$438.37””	
		LLM Quote
	“Table 2: Trastuzumab: Interruption, Point Estimate (USD) -438.37”	
Y	In-Context	
		Article Quote
13	“Table 2: Trastuzumab: Interaction, Point Estimate (USD) -189.33”	
		LLM Quote
	“Annual slope change: "\$189.33" additional decrease per year”	
Y	In-Context	
	<u>Article 03: The impact of financial incentives promoting biosimilar products in oncology: A quasiexperimental study using administrative data, Itoshima H. et al. 2024</u>	
		Article Quote
14	“Eligible hospitals may receive an additional fee of 1,500 JPY (\approx 10.4 US dollars: USD, 9.5 Euro: EUR) per patient per month for up to three months (i.e., eligible hospitals could get an additional fee of 4,500 JPY maximum (\approx 31.2 USD, 28.4 EUR) per patient)”	
		LLM Quote
	“The financial incentive of "\$10.4" per patient per month for up to 3 months (maximum "\$31.2" per patient)”	
Y	In-Context	
		Article Quote
15	“Price of bevacizumab 400 mg; reference 121,608 JPY (\approx 843.4 USD, 766.1 EUR), biosimilar 54,403 JPY (\approx 377.3 USD, 342.7 EUR))”,	
		LLM Quote
	“(e.g., bevacizumab 400mg biosimilar at "\$377.3" vs reference at "\$843.4”)”	
Y	In-Context	
		Article Quote
16	“Eligible hospitals may receive an additional fee of 1,500 JPY (\approx 10.4 US dollars: USD, 9.5 Euro: EUR) per patient per month”	
		LLM Quote
	“- Financial incentive structure: - "\$10.4" per patient per month””	
Y	In-Context	
		Article Quote
17	“(i.e., eligible hospitals could get an additional fee of 4,500 JPY maximum (\approx 31.2 USD, 28.4 EUR) per patient)”	
		LLM Quote
	“Total potential incentive: "\$31.2" per patient”	
Y	In-Context	
		Article Quote
18	“(e.g., Price of bevacizumab 400 mg; reference 121,608 JPY (\approx 843.4 USD, 766.1 EUR))”,	
		LLM Quote

	"Example (400mg dose): - Bevacizumab reference: "\$843.4""
Y	In-Context
	Article Quote
19	"Eligible hospitals may receive an additional fee of 1,500 JPY (\approx 377.3 USD, 342.7 EUR)"
	LLM Quote
	"Bevacizumab biosimilar: "\$377.3""
Y	In-Context, Repetition
	Article Quote
20	"(i.e., eligible hospitals could get an additional fee of 4,500 JPY maximum (\approx 31.2 USD, 28.4 EUR) per patient)"
	LLM Quote
	"Direct incentive costs relatively modest ("31.2" maximum per patient)"
Y	In-Context, Repetition
	Article Quote
21	"Eligible hospitals may receive an additional fee of 1,500 JPY (\approx 10.4 US dollars: USD, 9.5 Euro: EUR) per patient per month"
	LLM Quote
	"("\$10.4" per patient monthly)"
Y	In-Context, Repetition
	Article Quote
22	"The mean insurer costs for intravenous Herceptin® and subcutaneous Herceptin® are €1718.27 (s.e.=721.12) and €1620.66 (s.e.=334.77), respectively. Biosimilars have mean costs of €987.97 (s.e. = 462.25)."
	LLM Quote
	"Mean costs were "€1,718.27" for IV Herceptin®, "€1,620.66" for subcutaneous Herceptin®, and "€987.97" for biosimilars"
Y	In-Context
	Article Quote
23	"Based on reimbursement costs in the claims dataset, the strategy could have generated in the Netherlands a revenue of an additional €28 million for Roche after biosimilar introduction."
	LLM Quote
	"the evergreening strategy resulted in approximately "€28 million" in additional healthcare costs in the Netherlands after biosimilar introduction"
Y	In-Context
	Article Quote
24	"intravenous trastuzumab treatment costs per patient in the period 2013–2017 of €31,170.10 for intravenous Herceptin®, €32,353.43 for subcutaneous Herceptin® and €16,081.65 for biosimilars per patient in the period 2019–2020."
	LLM Quote
	"- Average treatment costs per patient: - IV Herceptin® (2013-2017): "€31,170.10" - Subcutaneous Herceptin®: "€32,353.43" - Biosimilars (2019-2020): "€16,081.65""
Y	In-Context
	Article Quote
25	"Treatment cost for trastuzumab has been continuously diminished, from the private price of US\$3500/440 mg to the first negotiated price of US\$1100/440 mg and the current renewed price of US\$800/440 mg for the originator. Current prices are US\$240/150 mg and US\$120/60 mg for biosimilars."
	LLM Quote
	"- Original trastuzumab pricing declined from "\$3,500/440mg" to "\$800/440mg" after negotiations - Biosimilar pricing averaged "\$240/150mg" and "\$120/60mg""
Y	In-Context
	Article Quote
26	"Shifting to biosimilars could potentially lead to an average cost saving of US\$421.11 per treatment course for HER2-positive breast cancer patients."
	LLM Quote
	"Switching to biosimilars led to average cost savings of "\$421.11" per treatment course for HER2-positive breast cancer patients"
Y	In-Context
	Article Quote
27	"Treatment cost for trastuzumab has been continuously diminished, from the private price of US\$3500/440 mg to the first negotiated price of US\$1100/440 mg and the current renewed price of US\$800/440 mg for the originator. Current prices are US\$240/150 mg and US\$120/60 mg for biosimilars."

	LLM Quote
	“- Original trastuzumab: - Initial private price: "\$3,500/440mg" - First negotiated price: "\$1,100/440mg" - Current renewed price: "\$800/440mg" - Biosimilar pricing: - "\$240/150mg" - "\$120/60mg”"
Y	In-Context, Repetition
	<u>Article 06: Cost-Effectiveness Analysis of Bevacizumab Biosimilars Versus Originator Bevacizumab for Metastatic Colorectal Cancer: A Comparative Study Using Real-World Data, Lu B. et al. 2024</u>
	Article Quote
28	“Bevacizumab biosimilars were associated with an incremental cost of -\$6379 (95%CI: -9417, -3537) (ie, cost saving)”
	LLM Quote
	“Mean total one-year cost savings of "\$6,379" per patient with biosimilars”
Y	In-Context
	Article Quote
29	“Incremental net monetary benefit and INHB estimates were \$6331 (95% CI: 6245, 6417) and 0.127 LY (95% CI: 0.125, 0.128), respectively, at a willingness-to-pay threshold of \$50 000/life year gained”
	LLM Quote
	“Positive incremental net monetary benefit of "\$6,331" at a \$50,000/life-year gained willingness-to-pay threshold”
Y	In-Context
	Article Quote
30	“Bevacizumab biosimilars were associated with a mean total cost of \$84 162 versus \$90 541 incurred by patients receiving originator bevacizumab, resulting in a 1-year incremental cost of -\$6379 (95% CI: -9417, -3537) (ie, cost saving).”
	LLM Quote
	“* Biosimilar group: "\$84,162" per patient * Originator group: "\$90,541" per patient * Incremental cost savings: "\$6,379" (95% CI: "\$9,417" to "\$3,537”)”
Y	In-Context
	Article Quote
31	“Incremental net monetary benefit and INHB estimates were \$6331 (95% CI: 6245, 6417)”
	LLM Quote
	“Incremental net monetary benefit: "\$6,331" (95% CI: "\$6,245" to "\$6,417”)”
Y	In-Context
	Article Quote
32	“MVASI 83 890 0.86 0.63 -6552”
	LLM Quote
	“MVASI cohort: - Mean total cost: "\$83,890" - Incremental cost savings: "\$6,552””, Quote 5 Article: “MVASI 83 890 0.86 0.63 -6552””
Y	In-Context
	Article Quote
33	“Zirabev 85 772 0.92 0.66 -5372”
	LLM Quote
	“Zirabev cohort: - Mean total cost: "\$85,772" - Incremental cost savings: "\$5,372””
Y	In-Context
	Article Quote
34	“2-year mean total costs were \$120 819 and \$134 112 for the biosimilar and originator groups, respectively (Table 2). Bevacizumab biosimilars were associated with an incremental cost of -\$13 293”
	LLM Quote
	“- Mean total costs: * Biosimilar group: "\$120,819" * Originator group: "\$134,112" - Incremental cost savings: "\$13,293””
Y	In-Context
	Article Quote
35	“1-year population-level gain of \$4 729 257 and 95 LYs since the introduction of bevacizumab biosimilars in Ontario.”
	LLM Quote
	“- At the Ontario population level, the introduction of biosimilars translated to: * Annual monetary gain of "\$4,729,257””
Y	In-Context

	<u>Article 07: Return on investment in science: twenty years of European Commission funded research in Alzheimer’s dementia, breast cancer and prostate cancer, Jakovljevic M. et al. 2024</u>	
	Article Quote	
36	Table 2 “BC 54.31 247.22 334.97 345.40”	
	LLM Quote	
	“- Substantial EC funding increases over 20 years for cancer research, particularly in BC which rose from €54.31M to €345.40M between FP5 and H2020 programs”	
Y	In-Context	
	Article Quote	
37	Table 2 “BC 54.31 247.22 334.97 345.40”	
	LLM Quote	
Y	“- BC funding increased from €54.31M in FP5 to €345.40M in H2020”	
	In-Context, Repetition	
	Article Quote	
38	“PC 15.14 52.51 68.65 77.40”	
	LLM Quote	
	“- PC funding grew from €15.14M to €77.40M over the same period”	
Y	In-Context	
	Article Quote	
39	Table 3 “Total volume of projects (million euros) 987.91 978.90 213.71”, “EC contribuon (million euros) 716.83 804.91 178.83”	
	LLM Quote	
	“- Total volume reached €978.90M for BC research with €804.91M from EC contribution - PC research received €213.71M total with €178.83M EC contribution”	
Y	In-Context	
	<u>Article 08: Cost minimization analysis of treatments for metastatic HER2-positive breast cancer in Peru: Fixed-dose combination of pertuzumab and trastuzumab for subcutaneous injections, Figallo M. et al. 2024</u>	
	Article Quote	
40	“As a result of the analysis, a total saving of US\$999 in non-drug consumables per patient was estimated.”	
	LLM Quote	
	“- 62% reduction in non-drug consumables costs, saving "\$999" per patient annually”	
Y	In-Context	
	Article Quote	
41	“A 5% increase in the price of PH FDC SC would reduce total savings in 34%, going from US\$ 5,727 to US\$ 3,759 per patient.”	
	LLM Quote	
	“- Total annual savings of "\$5,727" per patient when including all direct and indirect costs”	
	In-Context	
	Article Quote	
42	“As a result of the analysis, a total saving of US\$999 in non-drug consumables per patient was estimated.”	
	LLM Quote	
	“- Annual savings of "\$999" per patient”	
Y	In-Context, Repetition	
	Article Quote	
43	“• Short double-lumen catheter (US\$ 812) • Venoclysis equipment (US\$ 91) • Trifurcated equipment (US\$ 68)”	
	LLM Quote	
	“- Short double-lumen catheters ("812") - Venoclysis equipment ("91") - Trifurcated equipment ("68")”	
Y	In-Context	
	Article Quote	
44	“As a result, a total saving of \$1,314 in healthcare professionals’ costs was estimated.”	
	LLM Quote	
	“- Annual savings of "\$1,314" per patient”	
	In-Context	
	Article Quote	
45	“Drug costs US\$ 332”	

		LLM Quote
		“Drug costs: - Annual savings of "\$332" per patient”
Y	In-Context	
		Article Quote
46		“Indirect costs US\$ 3,082”
		LLM Quote
		“Indirect costs: - Annual savings of "\$3,082" per patient”
Y	In-Context	
		<u>Article 09: Cost-Utility Analysis of Trastuzumab-Emtansine Versus Trastuzumab for the Treatment of Residual Invasive HER-2-Positive Breast Cancer in Iran, Hemati H. et al. 2024</u>
		Article Quote
47		“The model indicated that treatment with TDM1 resulted in a 1.59 quality-adjusted life year (QALY) increase, with an additional cost of 1408\$. This was deemed cost-effective, considering Iran’s pharmacoeconomic threshold of 1085\$ (calculated ICER: 886\$ per QALY gained)”
		LLM Quote
		“- TDM1 provided an incremental 1.59 quality-adjusted life years (QALYs) at an additional cost of "\$1,408" compared to trastuzumab - The incremental cost-effectiveness ratio (ICER) was "\$886" per QALY gained, below Iran's threshold of "\$1,085" per QALY”
Y	In-Context	
		Article Quote
48		“The budget impact analysis revealed that the additional budget required for TDM1 treatment over a three-year period was 1,120,546\$ compared to trastuzumab.”
		LLM Quote
Y		“- Three-year budget impact analysis showed additional required funding of "\$1,120,546" for TDM1 vs trastuzumab”
	In-Context	
		Article Quote
49		“Trastuzumab (150 mg vial) 71\$ Trastuzumab (440 mg vial) 182\$ TDM1 (one vial) 180\$ Docetaxel (20 mg vial) 8\$ Docetaxel (80 mg vial) 31\$”
		LLM Quote
		“- Drug acquisition: - Trastuzumab 150mg vial: "\$71" - Trastuzumab 440mg vial: "\$182" - TDM1 vial: "\$180" - Docetaxel 20mg vial: "\$8" - Docetaxel 80mg vial: "\$31””
Y	In-Context	
		Article Quote
50		“Trastuzumab/TDM1 13\$ Docetaxel 6\$”
		LLM Quote
		“- Monitoring costs: - Trastuzumab/TDM1: "\$13" per session - Docetaxel: "\$6" per session”
Y	In-Context	
		Article Quote
51		“The total costs associated with the trastuzumab and TDM1 treatment arms were 9,968\$ and 11,376\$, respectively.”
		LLM Quote
		“- Total costs: - Trastuzumab arm: "\$9,968" - TDM1 arm: "\$11,376””
Y	In-Context	
		Article Quote
52		“The model indicated that treatment with TDM1 resulted in a 1.59 quality-adjusted life year (QALY) increase, with an additional cost of 1408\$.”
		LLM Quote
		“- Incremental cost: "\$1,408””
Y	In-Context	
		Article Quote
53		“This was deemed cost-effective, considering Iran’s pharmacoeconomic threshold of 1085\$ (calculated ICER: 886\$ per QALY gained)”
		LLM Quote
		“- ICER of "\$886" per QALY gained falls below Iran's threshold, indicating cost-effectiveness”
Y	In-Context	
		Article Quote

54	<p>“When the cost of TDM1 was varied by $\pm 20\%$, the ICER ranged from 215\$ to 1,557\$. Similarly, varying the cost of trastuzumab by $\pm 20\%$ resulted in ICER values between 552\$ and 1,220\$.”</p> <p style="text-align: center;">LLM Quote</p> <p>“ - TDM1 cost (ICER range: "\$215" to "\$1,557") - Trastuzumab cost (ICER range: "\$552" to "\$1,220")”</p> <p>Y In-Context</p>
	Article Quote
55	<p>“Years Budget Impact (\$) 1 195,762 2 578,804 3 1,120,546”</p> <p style="text-align: center;">LLM Quote</p> <p>“- Three-year cumulative additional costs: - Year 1: "\$195,762" - Year 2: "\$578,804" - Year 3: "\$1,120,546””</p> <p>Y In-Context</p>
	Article Quote
	<p><u>Article 10: Subcutaneous versus intravenous administration of Trastuzumab: a minimization cost analysis with real world data from a reference cancer centre in Peru, Otoyá I. et al. 2024</u></p> <p style="text-align: center;">Article Quote</p>
56	<p>“During our study, we examined real data to compare the expenses of administering 18 cycles of intravenous versus SC-TZM to patients with adjuvant HER2-positive BC. Our findings indicate that SC application reduces total treatment costs by approximately S/15,049.09, approximately 4,071.72 USD.”</p> <p style="text-align: center;">LLM Quote</p> <p>“The analysis demonstrates that SC administration reduces total treatment costs by approximately \$4,071.72 over a full 18-cycle treatment course compared to IV administration.”</p> <p>Y In-Context</p>
	Article Quote
57	<p>“SC-TZM gives a total of S/.75,816 while IV-TZM amounts to S/.82,612 (Table 1). There is a saving of S/.6,796 in favour of SC-TZM.”</p> <p style="text-align: center;">LLM Quote</p> <p>“1. Drug Costs: - SC: S/.75,816 (\$20,491) - IV: S/.82,612 (\$22,327) - Difference: S/.6,796 (\$1,836) savings with SC”</p> <p>Y In-Context</p>
	Article Quote
58	<p>“The total cost for this category regarding SC-TZM is S/.20.70, meanwhile in IV-TZM is S/.399.96 (Table 3). The saving equals S/.379.26 in favour of SC-TZM.”</p> <p style="text-align: center;">LLM Quote</p> <p>“2. Materials for Preparation: - SC: S/.20.70 (\$5.59) - IV: S/.399.96 (\$108.10) - Difference: S/.379.26 (\$102.51) savings with SC”</p> <p>Y In-Context</p>
	Article Quote
59	<p>“this translates to a saving of S/ 1,060.38 (S/.1,094.40 versus S/.34.02, respectively”</p> <p style="text-align: center;">LLM Quote</p> <p>“3. Administration Supplies: - SC: S/.34.02 (\$9.19) - IV: S/.1,094.40 (\$295.78) - Difference: S/.1,060.38 (\$286.59) savings with SC”</p> <p>Y In-Context</p>
	Article Quote
60	<p>“Total (18 cycles) S/ 18.00 S/ 702.00”</p> <p style="text-align: center;">LLM Quote</p> <p>“4. Chair Time Costs: - SC: S/.18.00 (\$4.86) - IV: S/.702.00 (\$189.73)”</p> <p>Y In-Context</p>
	Article Quote
61	<p>“Cost of drug preparation time (pharmaceutical chemist) - S/. 693.90”</p> <p style="text-align: center;">LLM Quote</p> <p>“- SC: S/.0 - IV: S/.693.90 (\$187.54)”</p> <p>Y In-Context</p>
	Article Quote

62	“The cost associated with these times, using the calculation of the salary per minute of a licensed nurse, is S/. 732.45 for SC-TZM and S/.6 168.0 for IV-TZM (Table 11), giving a saving of S/. 5,435.55.”
	LLM Quote
	“- Administration (Nurse): - SC: S/.732.45 (\$197.96) - IV: S/.6,168.00 (\$1,667.03) - Difference: S/.5,435.55 (\$1,469.07) savings with SC”
Y	In-Context
	Article Quote
63	“Real data indicate that SC administration reduces treatment costs by approximately S/15,049.09.”
	LLM Quote
	“- Overall savings of S/.15,049.09 (\$4,071.72) per treatment course with SC administration”
Y	In-Context
	<u>Article 11: Applying a cost-based pricing model for innovative cancer treatments subject to indication expansion: A case study for pembrolizumab and daratumumab, Heine R. et al. 2024</u>
	Article Quote
64	“The yearly cumulative cost-based prices (CBPs) ranged from €52 to €885 for pembrolizumab per vial and €823 to €31,941 for daratumumab per vial.”,
	LLM Quote
	“- Calculated cost-based prices were significantly lower than current list prices for pembrolizumab, ranging from "\$52 to \$885" per vial compared to list prices of "\$2,861" in the Netherlands and "\$5,350" in the US - For daratumumab, cost-based prices ranged from "\$823 to \$31,941" per vial compared to list prices of "\$4,766" in the Netherlands and "\$8,735" in the US”
Y	In-Context
	Article Quote
65	“Cost of manufacturing per gram of mAbs €55”
	LLM Quote
	“- Manufacturing costs were estimated at "\$55" per gram of antibody in the base case”
Y	In-Context, similar exchange rates, quoted USD not EUR
	Article Quote
66	“R&D costs associated with the development of antineoplastic and immunomodulating agents, capitalized and risk adjusted. Unadjusted for inflation and currency change. €4937.4 million Wouters et al. (2020) [17] Cost of manufacturing per gram of mAbs €55 Ou Yang et al. (2019) [24] R&D costs associated with each new indication. €347 million Nosengo (2016) [18]”,
	LLM Quote
	“- Initial R&D costs of "\$4.94 billion" for antineoplastic/immunomodulating agents - Manufacturing costs of "\$55" per gram of monoclonal antibody - New indication R&D costs of "\$347 million" per indication”
Y	In-Context, similar exchange rates, quoted USD not EUR
	Article Quote
67	“€3446.4 million–€6641.9 million”
	LLM Quote
	“- R&D costs: "\$3.45-6.64 billion" range”
Y	In-Context, similar exchange rates, quoted USD not EUR
	Article Quote
68	“A lower bound of €33 and an upper bound of €174 informed by Kelly (2009)”
	LLM Quote
	“- Manufacturing: "\$33-174" per gram range”
Y	In-Context, similar exchange rates, quoted USD not EUR
	<u>Article 12: Effect of alternative dosing strategies of pembrolizumab and nivolumab on health-care emissions in the Netherlands: a carbon footprint analysis, Malmberg R. et al. 2024</u>
	Article Quote
69	“in the Erasmus University Medical Center were 445 tons of CO ₂ e, averaging 94 kg of CO ₂ e per dose.”
	LLM Quote
	“- Average emissions per dose were 94 kg CO ₂ e”
Y	In-Context
	Article Quote
70	“ Implementation of ADS might result in reduction of carbon emissions by 21–26% (428–557 kg of CO ₂ e) for pembrolizumab and 9–11% (352–400 kg of CO ₂ e) for nivolumab.”
	LLM Quote
	“- ADS implementation could reduce emissions by up to 557 kg CO ₂ e per patient for pembrolizumab and 400 kg CO ₂ e for nivolumab over a 2-year treatment course”
Y	In-Context

	Article Quote
71	“Prescribing pembrolizumab instead of nivolumab would decrease carbon emissions from 3226 kg of CO ₂ e to 1603 kg of CO ₂ e for the full 2-year treatment duration of one patient.”
	LLM Quote
	“- Switching from nivolumab to pembrolizumab with ADS could decrease emissions from 3,226 kg to 1,603 kg CO ₂ e per patient treatment course”
Y	In-Context
	Article Quote
72	“In this scenario, total treatment-related carbon emissions for fixed dosing would range from 2038 kg of CO ₂ e for pembrolizumab every 6 weeks to 2141 kg of CO ₂ e for pembrolizumab every 3 weeks, and from 3634 kg of CO ₂ e for nivolumab every 4 weeks to 3694 kg of CO ₂ e for nivolumab every 3 weeks, and 3789 kg of CO ₂ e for nivolumab every 2 weeks”
	LLM Quote
	“Pembrolizumab fixed dosing: - Every 3 weeks: 2,141 kg CO ₂ e - Every 6 weeks: 2,038 kg CO ₂ e Nivolumab fixed dosing: - Every 2 weeks: 3,789 kg CO ₂ e - Every 3 weeks: 3,694 kg CO ₂ e - Every 4 weeks: 3,634 kg CO ₂ e”
Y	In-Context
	Article Quote
73	“3 Implementation of ADS might result in reduction of carbon emissions by 21–26% (428–557 kg of CO ₂ e) for pembrolizumab and 9–11% (352–400 kg of CO ₂ e) for nivolumab.”
	LLM Quote
	“ADS Implementation Impact: - Pembrolizumab: 21-26% reduction (428-557 kg CO ₂ e) - Nivolumab: 9-11% reduction (352-400 kg CO ₂ e)”
Y	In-Context
	Article 13: Cost of illness of breast cancer in lowand middle-income countries: a systematic review, Yeong S. et al. 2024
	Article Quote
74	“Annual costs per patient varied from \$195 to \$11,866 direct medical costs, \$201 to \$2233 direct non-medical costs and \$332 to \$26,390 productivity losses were reported.”
	LLM Quote
	“The review found significant variation in direct medical costs ranging from "\$195" to "\$11,866", direct non-medical costs from "\$201" to "\$2,233", and productivity losses from "\$332" to "\$26,390" per patient annually.”
Y	In-Context
	Article Quote
75	“Direct medical costs ranged from \$195 (range: 171–297) (O’Neill et al. [20], Haiti) to \$11,866”
	LLM Quote
	“Direct Medical Costs: - Lowest reported: "\$195" (Haiti) - Highest reported: "\$11,866" (Iran, private hospital setting)”
Y	In-Context
	Article Quote
76	“ In the same study, the direct cost was reported as \$4676 in public hospitals, a difference of 61% between the two settings. Hospitalisation consisted of the most costs in both settings. According to studies conducted by Pakseresht et al. (India) [21] and Lan et al. (Vietnam), medications accounted for 44–78% of the direct medical costs.”
	LLM Quote
	“- Public hospital costs in Iran: "\$4,676" - Medication costs represented 44-78% of direct medical costs in some studies”
Y	In-Context
	Article Quote
77	“\$332 to \$26,390 productivity losses were reported”
	LLM Quote
	“Indirect Costs (Productivity Loss): - Range: "\$332" to "\$26,390””
Y	In-Context
	Article 14: ‘Financial fallout’ in the US biopharmaceutical industry: Maximizing shareholder value, regulatory capture, and the consequences for patients, Whitacre R. et al. 2024
	Article Quote
78	“2021 \$17.321 B Keytruda +” “Given the high costs of the drug, which amounts to \$175,000 annually, no CMS spending suggests that no more than 1860 US residents accessed Keytruda for an annual pre-prescription that year”
	LLM Quote

	“- Keytruda (pembrolizumab) generated revenue of "\$17.321 billion" in 2021, with the cost per patient reaching "\$175,000" per year”
Y	In-Context
	Article Quote
79	“In 2020, CMS spent just \$326 million to cover the cost of Keytruda.”
	LLM Quote
	“- Limited Medicare/Medicaid coverage, with CMS spending only "\$326 million" on Keytruda in 2020”
	In-Context
	Article Quote
80	“2014 \$5.5 million (M) Melanoma 2015 \$56.6 M NSCLC/expanded Melanoma 2016 \$1.402 billion (B) Head and neck cancer/first line NSCLC 2017 \$1.30 B cHL/NSCLC combination/urothelial carcinoma/solid tumor with genetic feature/gastric or gastroesophageal cancer 2018 \$7.171 B Cervical cancer/PMBCL/nonsquamous NSCLC/squamous NSCLC/HCC/Merkel cell carcinoma 2019 \$11.084 B Melanoma with lymph nodes/monotherapy first line NSCLC/Keytruda + Inlyta RCC/head and neck squamous cell carcinoma/SCLC/esophageal cancer/endometrial carcinoma 2020 \$14.4 B Bladder cancer/second biomarker indication/cSCC/ squamous cell colon cancer/unresectable colon cancer/ relapsed cHL/TNBC 2021 \$17.321 B”
	LLM Quote
	“The study tracked Keytruda's revenue growth: - 2014: "\$5.5 million" - 2015: "\$56.6 million" - 2016: "\$1.402 billion" - 2017: "\$1.30 billion" - 2018: "\$7.171 billion" - 2019: "\$11.084 billion" - 2020: "\$14.4 billion" - 2021: "\$17.321 billion”
Y	In-Context
	Article Quote
81	“Sales of the top 10 highest grossing mAbs amount range from \$4 billion and \$19.8 billion annually”
	LLM Quote
Y	“Analysis of the top 10 mAbs in 2020 showed annual revenues ranging from "\$4 billion" to "\$19.832 billion”.
	In-Context
	Article Quote
82	“Humira Abbvie 80-Sept-03 (31-Dec-02) \$19.832 B (\$16.112 B)”, “Stelara J&J 15-Jan-09 (25-Sept-09) \$7.707 B(\$5.240 B)”, “Opdivo BMS 19-June-15 (22-Dec14) \$6.992 B (\$3.945 B)”
	LLM Quote
	“- Humira: "\$19.832 billion" global revenue ("\$16.112 billion" US) - Stelara: "\$7.707 billion" global ("\$5.240 billion" US) - Opdivo: "\$6.992 billion" global ("\$3.945 billion" US)”
Y	In-Context
	Article Quote
83	“In 2020, CMS spent just \$326 million to cover the cost of Keytruda.”
	LLM Quote
	“- 2020 CMS spending of "\$326 million" on Keytruda”
Y	In-Context, Repetitive
	Article 15: Healthcare Costs and Resource Utilisation of Italian Metastatic Non-Small Cell Lung Cancer Patients, Gentili N. et al. 2024
	Article Quote
84	“The mean per-patient total cost associated with post-1L IO is higher than those of pre-1L IO (+€ 11,497 in 1L).”
	LLM Quote
	“- First-line pembrolizumab treatment increased mean per-patient costs by EUR 11,497 compared to pre-immunotherapy chemotherapy”,
Y	In-Context
	Article Quote
85	“Total cost 3814 (100.0) 45,247 (100.0)”
	LLM Quote
	“Mutation-positive group: - Mean total cost per patient: EUR 45,247 - Monthly cost: EUR 3,814”
Y	In-Context
	Article Quote
86	“3318 (100.0) 7804 (100.0)”
	LLM Quote

	“Pre-immunotherapy group: - Mean total cost per patient: EUR 7,804 - Monthly cost: EUR 3,318”
Y	In-Context
	Article Quote
87	“3464 (100.0) 19,301 (100.0)”
	LLM Quote
	“Post-immunotherapy group: - Mean total cost per patient: EUR 19,301 - Monthly cost: EUR 3,464”
Y	In-Context
	Article Quote
88	“3673 (100.0) 70,985 (100.0)”
	LLM Quote
	“Mutation-positive group: - Mean total cost: EUR 70,985 - Monthly cost: EUR 3,673”
	In-Context
	Article Quote
89	Article: “3046 (100.0) 19,649 (100.0)”
	LLM Quote
	“Pre-immunotherapy group: - Mean total cost: EUR 19,649 - Monthly cost: EUR 3,046”
Y	In-Context
	Article Quote
90	“3238 (100.0) 29,111 (100.0)”
	LLM Quote
	“Post-immunotherapy group: - Mean total cost: EUR 29,111 - Monthly cost: EUR 3,238”
Y	In-Context
	Article 16: Atezolizumab plus bevacizumab and chemotherapy as first-line therapy for cervical cancer: a cost-effectiveness analysis in the US, Lin Y. et al. 2024
	Article Quote
91	“Our modeling results showed that the ICER of adding atezolizumab to standard BC therapy was higher than that of the pre-established WTP, both at 20 y and the clinical trial follow-up years (\$193,926.48/QALY, \$168,482.26/ QALY vs. \$150,000/QALY).”
	LLM Quote
	“- ABC therapy had an incremental cost-effectiveness ratio (ICER) of “\$193,926.48/QALY” over a 20-year horizon - This exceeded the US willingness-to-pay threshold of “\$150,000/QALY””
Y	In-Context
	Article Quote
92	“the likelihood of ABC being cost-effective increased to 58.6% when the price of atezolizumab was reduced by only 10% (ICER = \$121,531.24/ QALY).”
	LLM Quote
	“- A 10% reduction in atezolizumab price would make ABC therapy cost-effective at “\$121,531.24/QALY””
Y	In-Context
	Article Quote
93	“bevacizumab per cycle 8617.84”, “atezolizumab per cycle 10072.2”, “pembrolizumab per cycle 12186.56”, “cemiplimab per cycle 11178”, “Carboplatin per cycle 58.09”, “Cisplatin per cycle 31.9”, “paclitaxel per cycle 36.53”
	LLM Quote
	“Key Cost Inputs: - Atezolizumab per cycle: “\$10,072.20” - Bevacizumab per cycle: “\$8,617.84” - Pembrolizumab per cycle: “\$12,186.56” - Cemiplimab per cycle: “\$11,178” - Chemotherapy costs (per cycle): - Carboplatin: “\$58.09” - Cisplatin: “\$31.90” - Paclitaxel: “\$36.53””
Y	In-Context

	Article Quote
94	“Over 20y, patients in the BC arm paid \$2762013.43 and acquired 1.67 QALYs, whereas those in the ABC group paid \$2878199.88 and acquired 2.27 QALYs. With incremental costs of \$116186.4452”
	LLM Quote
	“Cost Results: - BC arm total cost: "\$2,762,013.43" - ABC arm total cost: "\$2,878,199.88" - Incremental cost: "\$116,186.45””
Y	In-Context
	<u>Article 17: Atezolizumab plus bevacizumab and chemotherapy versus bevacizumab plus chemotherapy for metastatic cervical cancer: a cost-effectiveness analysis, Cai H. et al. 2024</u>
	Article Quote
95	“The total costs of the atezolizumab group were \$128179.56, while the costs of chemotherapy group were \$42065.89. The atezolizumab group gained 3.52 QALYs, whereas the chemotherapy group gained 2.35 QALY. The atezolizumab regimen resulted in an increase of 1.17 QALYs at an incremental cost of \$86113.67. This led to an ICER of \$73601.43, which exceeds the willingness-to-pay (WTP) threshold of \$39855.79 in China.”
	LLM Quote
	“Key findings: - Total costs were "\$128,179.56" for atezolizumab combination therapy versus "\$42,065.89" for standard therapy - Atezolizumab therapy provided an incremental gain of 1.17 quality-adjusted life years (QALYs) at an additional cost of "\$86,113.67" - The incremental cost-effectiveness ratio (ICER) was "\$73,601.43" per QALY, exceeding China's willingness-to-pay threshold of "\$39,855.79””
Y	In-Context
	Article Quote
96	“Nevertheless, it is suggested that by reducing the price of atezolizumab by an additional 38% to \$1,764 per 1,200 mg, the treatment has the potential to attain cost-effectiveness when gauged against] the prevailing WTP threshold in China.”
	LLM Quote
	“- Price reduction of 38% (to "\$1,764" per 1,200mg) would be needed for atezolizumab to achieve cost-effectiveness”
Y	In-Context
	Article Quote
97	“Atezolizumab per mg 3.88”, “Bevacizumab per mg 1.60”, “Paclitaxel per mg 0.24”, “Cisplatin per mg 0.22”, “Carboplatin per mg 0.086”
	LLM Quote
	“Cost Inputs: - Drug costs per mg: - Atezolizumab: "\$3.88" - Bevacizumab: "\$1.60" - Paclitaxel: "\$0.24" - Cisplatin: "\$0.22" - Carboplatin: "\$0.086””
	In-Context
	Article Quote
98	“Best supportive care per cycle 337.50”, “Follow-up cost per cycle 55.6”, “Routine laboratory examinations per cycle 92.50”, “Abdominal CT per cycle 105.90”
	LLM Quote
	“- Other costs per cycle: - Best supportive care: "\$337.50" - Follow-up: "\$55.60" - Laboratory examinations: "\$92.50" - Abdominal CT: "\$105.90””
Y	In-Context
	Article Quote
99	“The atezolizumab regimen resulted in an increase of 1.17 QALYs at an incremental cost of \$86113.67.”
	LLM Quote
	“1. The substantial cost differential of "\$86,113.67" between treatment arms was primarily driven by the high acquisition cost of atezolizumab”
Y	In-Context, Repetitive
	Article Quote
100	“At a WTP threshold of \$39855.79, the probability of atezolizumab having a costeffectiveness advantage was only 0.10%.”
	LLM Quote
	“- At WTP threshold of "\$39,855.79", probability of cost-effectiveness was only 0.10%”
Y	In-Context
	<u>Article 18: Cost-effectiveness analysis of bevacizumab combined with lomustine in the treatment of progressive glioblastoma using a Markov model simulation analysis, Chen Z. et al. 2024</u>
	Article Quote

101	“The incremental cost-effectiveness ratio (ICER) was \$84,071.12. The cost-effectiveness curve indicates that within the willingness-to-pay (WTP) range of \$35,906 per QALY”
	LLM Quote
	“the incremental cost-effectiveness ratio (ICER) of "\$84,071.12" per quality-adjusted life year (QALY) exceeded China's willingness-to-pay threshold of "\$35,906" per QALY.”
Y	In-Context
	Article Quote
102	“Lomustine 3.25”, “Bevacizumab 209.50”
	LLM Quote
	“Cost Inputs (USD): - BEV cost: "\$209.50" per 100mg standard dose - LOM cost: "\$3.25" per dose”
Y	In-Context
	Article Quote
103	“Compared to LOM monotherapy, the total treatment cost for BEV+LOM combination therapy increased from \$2,646.70 to \$23,650.98”
	LLM Quote
	“- BEV+LOM: "\$23,650.98" - LOM alone: "\$2,646.70””
	In-Context
	Article Quote
104	“Incremental costs 21,004.28”
	LLM Quote
	“- Incremental cost: "\$21,004.28””
Y	In-Context
	Article Quote
105	“The incremental cost-effectiveness ratio (ICER) was \$84,071.12”
	LLM Quote
	“While BEV+LOM demonstrated improved progression-free survival, the ICER of "\$84,071.12" per QALY ”
Y	In-Context
	Article Quote
106	“Beverizumab 209.50”
	LLM Quote
	“2. The high cost of bevacizumab (" \$209.50" per 100mg dose)”
Y	In-Context, Repetitive
	Article Quote
107	“The incremental cost-effectiveness ratio (ICER) was \$84,071.12. The cost-effectiveness curve indicates that within the willingness-to-pay (WTP) range of \$35,906 per QALY”
	LLM Quote
	“with the ICER remaining above "\$35,906" per QALY across various parameter adjustments.”
Y	In-Context, Repetitive
	Article 19: Cost-effectiveness analysis of continuing bevacizumab plus chemotherapy versus chemotherapy alone after first progression of metastatic colorectal cancer, Li Y. et al. 2024
	Article Quote
	“Bevacizumab plus chemotherapy increased 0.12 QALYs and an incremental cost of \$22,761.62 compared with chemotherapy, resulting in an ICER of \$188,904.09 per QALY.”, “Compared with chemotherapy, bevacizumab plus chemotherapy had a 0% cost-effectiveness probability, and no cost-effectiveness in subgroups at the WTP threshold of \$38,201 per QALY. The scenario analysis\ found that bevacizumab biosimilar gained an ICER of \$126,397.38 per QALY when assuming the cost of drugs was calculated at the most affordable price.”
108	
	LLM Quote
	“Key findings: - Adding bevacizumab to second-line chemotherapy increased costs by "\$22,761.62" while providing a modest\ survival benefit of 0.12 quality-adjusted life years (QALYs) - The resulting incremental cost-effectiveness ratio (ICER) was "\$188,904.09" per QALY gained, substantially exceeding China's willingness-to-pay threshold of "\$38,201" per QALY”
Y	In-Context
	Article Quote
109	“the price of bevacizumab would need to be reduced from \$222.88 to \$87.49 (a reduction of 60.75%).”
	LLM Quote
	“- Even with biosimilar versions, bevacizumab would need a 60.75% price reduction from "\$222.88" to "\$87.49" per 100mg to become cost-effective”
Y	In-Context
	Article Quote

110	“Bevacizumab per 100mg 222.88”, “Irinotecan per 40mg 6.30”, “Oxaliplatin per 50mg 39.94”, “5-fluorouracil per 250mg 10.03”, “Folinate per 300mg 3.66”
	LLM Quote
	“- Base drug costs per unit: - Bevacizumab: "\$222.88" per 100mg - Irinotecan: "\$6.30" per 40mg - Oxaliplatin: "\$39.94" per 50mg - 5-fluorouracil: "\$10.03" per 250mg - Folinate: "\$3.66" per 300mg”
Y	In-Context
	Article Quote
111	“Cost, \$ 8027.41 30,789.03”
	LLM Quote
	“- Total costs: - Bevacizumab + chemotherapy: "\$30,789.03" - Chemotherapy alone: "\$8,027.41””
Y	In-Context
	Article Quote
112	“Bevacizumab plus chemotherapy increased 0.12 QALYs and an incremental cost of \$22,761.62”
	LLM Quote
	“- Incremental cost: "\$22,761.62””
Y	In-Context
	Article Quote
113	“and bevacizumab biosimilar would need to be reduced from \$149.78 to \$113.40 (a reduction of 24.29%) to be costeffective”
	LLM Quote
	“- Even biosimilar versions would require a 24.29% price reduction from "\$149.78" to "\$113.40" to achieve cost-effectiveness”
Y	In-Context
	<u>Article 20: Cost-effectiveness analysis of immune checkpoint inhibitors combined with targeted therapy and chemotherapy for HPV/HIV-related cervical cancer, Liang Y. et al. 2024</u>
	Article Quote
114	“The evaluation was from the US healthcare payer perspective, with the willingness-to-pay threshold set at \$100,000 to \$150,000.”
	LLM Quote
	“US healthcare payer perspective with a willingness-to-pay threshold of "\$100,000 to \$150,000" per QALY.”
Y	In-Context
	Article Quote
115	“Total costs were \$272,377 for BC, \$715,472 for ABC, and \$694,239 for PBC”
	LLM Quote
	“- Base treatment costs: - BC: "\$272,377" - ABC: "\$715,472" - PBC: "\$694,239””
Y	In-Context
	Article Quote
116	“The ICERs compared to BC were \$372,151/QALY for PBC and \$553,995/QALY for ABC.”
	LLM Quote
	“Incremental Cost-Effectiveness Ratios (ICERs) - ABC vs BC: "\$553,995" per QALY - PBC vs BC: "\$372,151" per QALY”
Y	In-Context
	Article Quote
117	“severe adverse event (SAE) costs were \$6189 for BC, \$7603.31 for ABC, and \$13,640 for PBC”
	LLM Quote
	“Severe adverse event (SAE) costs: - BC: "\$6,189" - ABC: "\$7,603" - PBC: "\$13,640””
Y	In-Context
	Article Quote
118	“severe adverse event (SAE) costs were \$6189 for BC, \$7603.31 for ABC, and \$13,640 for PBC”
	LLM Quote

	<p>“2. Safety Profile Considerations</p> <ul style="list-style-type: none"> - BC demonstrated the best safety profile with lowest SAE costs at "\$6,189" - ABC showed moderate SAE costs at "\$7,603" - PBC had the highest SAE costs at "\$13,640"
Y	In-Context, Repetitive
	<u>Article 21: Cost-effectiveness analysis of trifluridine/tipiracil combined with bevacizumab vs. monotherapy for third-line treatment of colorectal cancer, Huang, L. et al. 2024</u>
	Article Quote
119	“This ICER exceeds the willingness-to-pay threshold of ¥268,200.00”
	LLM Quote
	“- Willingness-to-pay threshold set at \$37,647 per QALY (¥268,200)”
Y	In-Context
	Article Quote
120	“The cost of trifluridine/tipiracil combined with bevacizumab treatment (¥838,492.74) was higher than that of trifluridine/tipiracil monotherapy (¥357,396.97)”
	LLM Quote
	<p>“Treatment costs per regimen:</p> <ul style="list-style-type: none"> - Combination therapy: \$117,674 (¥838,492.74) - Monotherapy: \$50,153 (¥357,396.97)”
Y	In-Context
	Article Quote
121	“with an incremental cost of ¥481,095.78”
	LLM Quote
	“- Incremental cost: \$67,521 (¥481,095.78)”
Y	In-Context
	Article Quote
122	“resulting in an ICER of ¥527,577.36/ QALY.”
	LLM Quote
	“- Calculated ICER: \$74,024 per QALY (¥527,577.36)”
Y	In-Context
	Article Quote
123	“showing that at a willingness-to-pay threshold of ¥494,000.00, the probability of the combined treatment being cost-effective was 50%.”
	LLM Quote
	“- 50% probability of being cost-effective at \$69,341 threshold (¥494,000)”
Y	In-Context
	<u>Article 22: Cost-effectiveness of immune checkpoint inhibitors as a first-line therapy for advanced hepatocellular carcinoma: a systematic review, Gong H. et al. 2024</u>
	Article Quote
124	“In our review, atezolizumab prices ranged from \$3,885.42 to \$9,419.16 per 1,200 mg in cost-effectiveness studies [32, 36]. In a study conducted from a US payer perspective using atezolizumab prices of approximately \$9,419.16 per 1,200 mg, atezolizumab treatment was not cost-effective [38]. In contrast, for sintilimab, most studies used prices of approximately \$166.57 to \$439.41 per 100 mg for analysis, but one study used a price of \$656 per 100 mg [34].”
	LLM Quote
	“The review found that atezolizumab plus bevacizumab prices ranged from "\$3,885.42" to "\$9,419.16" per 1,200 mg dose. Sintilimab was priced between "\$166.57" to "\$656" per 100 mg across studies.”
Y	In-Context
	Article Quote
125	“In one study, the threshold was set at 1 time per capita GDP in China and \$69,375 in the US [36]. In another study, the threshold was set at 3 times per capita GDP in China and \$150,000 in the US [37].”
	LLM Quote
	“- US studies used thresholds of "\$69,375" to "\$150,000" per QALY”
Y	In-Context
	Article Quote
126	“1* GDP: 11,101.70 per QALY gained”, “3* GDP: 37,653 per QALY gained”
	LLM Quote
	“- Chinese studies used 1-3x GDP per capita ("11,101" to "37,653" per QALY)”
Y	In-Context
	Article Quote

127	“\$133,775 per QALY gained in France [30], and \$4,678 per QALY gained in Thailand”
	LLM Quote
	“- French threshold: "\$133,775" per QALY - Thai threshold: "\$4,678" per QALY”
Y	In-Context
	Article Quote
128	“In our review, atezolizumab prices ranged from \$3,885.42 to \$9,419.16 per 1,200 mg in cost-effectiveness studies [32, 36]. In a study conducted from a US payer perspective using atezolizumab prices of approximately \$9,419.16 per 1,200 mg, atezolizumab treatment was not cost-effective [38]. In contrast, for sintilimab, most studies used prices of approximately \$166.57 to \$439.41 per 100 mg for analysis, but one study used a price of \$656 per 100 mg”
	LLM Quote
	“- Atezolizumab: "\$3,885.42" to "\$9,419.16" per 1,200 mg - Sintilimab: "\$166.57" to "\$656" per 100 mg”
Y	In-Context, Repetitive
	<u>Article 23: Cost-utility analysis of atezolizumab combined with bevacizumab for unresectable hepatocellular carcinoma in Thailand, Sriphoosanaphan S. et al. 2024</u>
	Article Quote
129	“In the probabilistic model, A+B treatment had the lifetime cost of \$48,669 and outcome of 1.2552 QALYs per person (Table 3). Treatment with BSC had the lifetime cost of \$3,313”
	LLM Quote
	- Lifetime treatment cost of "\$48,669" for A+B versus "\$3,313" for BSC
Y	In-Context
	Article Quote
130	“The ICER was \$54,589 per QALY gained.”
	LLM Quote
	“- Incremental cost-effectiveness ratio (ICER) of "\$54,589" per quality-adjusted life year (QALY) gained”
Y	In-Context
	Article Quote
131	“The projected budgetary requirements for implementing A+B in the respective first and fifth years would range from 8.2 to 27.9 million USD.”
	LLM Quote
	“- Required budget impact of "\$8.2 to \$27.9 million" over 5 years for implementation”
Y	In-Context
	Article Quote
132	“Atezolizumab combined with Bevacizumab cost per month* Gamma 6,135”, “Best supportive care cost per month Gamma 489”, “Drug administration of Atezolizumab combined with Bevacizumab cost per month (Cost of cytotoxic and administrative) Gamma 21”
	LLM Quote
	“- A+B monthly drug cost: "\$6,135" - BSC monthly cost: "\$489" - A+B administration cost per month: "\$21””
Y	In-Context
	Article Quote
133	“Travel cost Gamma 5”, “Additional food cost Gamma 2”, “Productivity loss of caregiver Gamma 3”
	LLM Quote
	“- Travel: "\$5" - Additional food: "\$2" - Caregiver productivity loss: "\$3””
Y	In-Context
	Article Quote
134	“The projected budgetary requirements for implementing A+B in the respective first and fifth years would range from 8.2 to 27.9 million USD.”
	LLM Quote
	“- Year 1 budget requirement: "\$8.2 million" - Year 5 budget requirement: "\$27.9 million””
Y	In-Context, Repetitive
	Article Quote
135	“In the Thai healthcare setting, a given technology or medicine would be considered as a cost-effective option if the ICER was less than the threshold of \$4,678 per QALY gained”
	LLM Quote
Y	“- Zero probability of being cost-effective at current Thai willingness-to-pay threshold of "\$4,678" per QALY”
	In-Context

	Article Quote
136	“Given Thailand has established the separate WTP threshold (\$60,819 per QALY gained) for the treatments of small patient populations which is higher than the ordinary threshold, A+B had a 60% probability of being cost-effective.”
	LLM Quote
	“- 60% probability of being cost-effective at higher threshold of "\$60,819" per QALY”
Y	In-Context
	Article Quote
137	“In the probabilistic model, A+B treatment had the lifetime cost of \$48,669 and outcome of 1.2552 QALYs per person (Table 3). Treatment with BSC had the lifetime cost of \$3,313”
	LLM Quote
	“- 15-fold higher lifetime cost for A+B compared to BSC ("48,669" vs "3,313")”
Y	In-Context
	Article Quote
138	“The projected budgetary requirements for implementing A+B in the respective first and fifth years would range from 8.2 to 27.9 million USD.”
	LLM Quote
	“- Substantial funding required for implementation ("8.2 to 27.9 million" over 5 years)”
Y	In-Context, Repetitive
	<u>Article 24: Monoclonal antibody biosimilars for cancer treatment, Broer L. et al. 2024</u>
	Article Quote
139	“However, the current development costs for an innovator company is not in line with what the system pays for a new drug, respectively 200–300 million vs. 2–3 billion US dollars as reported by Strategies in Regulated Markets.”
	LLM Quote
	“- Development costs estimated at "\$200-300 million" versus "\$2-3 billion" for originators (Strategies in Regulated Markets).”
	In-Context
	Article Quote
140	“Pembrolizumab’s patent duration is extended with 8 years, with estimated extra drug costs of \$137 billion.146 Pembrolizumab is expected to predominate the monoclonal antibody market by 2024, with a predicted \$18 billion global annual sales.”
	LLM Quote
	“- Estimated "\$137 billion" additional drug costs - Projected "\$18 billion" annual global sales by 2024”
Y	In-Context
	<u>Article 25: Sintilimab plus chemotherapy with or without bevacizumab biosimilar IBI305 in EGFRmutated non-squamous NSCLC patients who progressed on EGFR TKI therapy: A Chinabased cost-effectiveness analysis, Peng J. et al. 2024</u>
	Article Quote
141	“In the base-case analysis, sintilimab plus IBI305 and chemotherapy had an ICER of \$53,266.32/QALYs, exceeding the upper WTP threshold. Sintilimab plus chemotherapy had an ICER of \$15,329.11/QALY”
	LLM Quote
	“The study found that sintilimab plus chemotherapy was cost-effective with an incremental cost-effectiveness ratio (ICER) of "\$15,329.11" per quality-adjusted life year (QALY), while sintilimab plus IBI305 and chemotherapy exceeded cost-effectiveness thresholds with an ICER of "\$53,266.32" per QALY.”
Y	In-Context
	Article Quote
142	“willingness-to-pay (WTP) threshold range of \$15,289.34 to \$38,223.34 per quality-adjusted lifeyears (QALY).”
	LLM Quote
	“- Willingness-to-pay (WTP) threshold range: "\$15,289.34" to "\$38,223.34" per QALY”
Y	In-Context
	Article Quote
143	“Costs 21,322.48 27,287.22 42,036.20”
	LLM Quote
	“- Chemotherapy alone: "\$21,322.48" - Sintilimab + chemotherapy: "\$27,287.22" - Sintilimab + IBI305 + chemotherapy: "\$42,036.20””
Y	In-Context
	Article Quote
144	“Incremental costs (vs chemotherapy) NA 5,964.73 20,713.72”
	LLM Quote
	“- Sintilimab + chemotherapy: "\$5,964.73" - Sintilimab + IBI305 + chemotherapy: "\$20,713.72””
Y	In-Context

		Article Quote
145		"Importantly, throughout this WTP threshold range of \$0 to \$200,000 per QALY, the probability of sintilimab plus chemotherapy being cost-effectiveness consistently remains higher than the probability of sintilimab plus IBI305 and chemotherapy being cost-effectiveness as the WTP threshold increases."
		LLM Quote
		"- Higher probability of cost-effectiveness for sintilimab + chemotherapy vs sintilimab + IBI305 + chemotherapy across WTP thresholds from "\$0" to "\$200,000" per QALY"
Y	In-Context	
		Article Quote
146		"Sintilimab plus chemotherapy had an ICER of \$15,329.11/QALY, slightly above the lower WTP threshold."
		LLM Quote
		"- Sintilimab + chemotherapy provides good value at "\$15,329.11" per QALY"
Y	In-Context	
		Article Quote
147		"Costs 21,322.48 27,287.22 42,036.20"
		LLM Quote
		"- Significant cost difference between combinations ("27,287.22" vs "42,036.20")"
Y	In-Context, Repetitive	
		<u>Article 26: Cost-effectiveness of one-year adjuvant trastuzumab therapy in treatment for early-stage breast cancer patients with HER2+ in Vietnam, Nguyen A. et al. 2024</u>
		Article Quote
148		"HER2+ early-stage breast cancer patients incurred 22,845 US\$ per QALY gained, which exceeded the cost-effective threshold of 1-time GDP per capita (i.e., 3,600 US\$) by 6.3 times.", "We applied the current Vietnam cost-effectiveness threshold values of 83, and 249 million VND per QALY gained (roughly US\$ 3,600 and US\$ 10,800) that were widely accepted in Vietnam based on the value of one time and three times Gross Domestic Product (GDP)"
		LLM Quote
		"\$22,845" per quality-adjusted life year (QALY) gained according to Nguyen A.Q. et al. This exceeded Vietnam's cost-effectiveness threshold of 1x GDP per capita ("3,600")"
Y	In-Context	
		Article Quote
149		"Cost of trastumumab 787,384,650 (34,618)", "Cost of paclitaxel treatment alone 32,116,418 (1,412)", "Other direct medical costs (including para-clinical services, hospitalization, outpatient visits, consumable and other direct medical cost) 27,040,970 (1,188)", "Direct non-medical costs 5,724,180 (252)"
		LLM Quote
		"- One-year trastuzumab therapy cost per patient: "\$34,618" - Chemotherapy (paclitaxel) cost: "\$1,412" - Other direct medical costs: "\$1,188" - Direct non-medical costs: "\$252"
Y	In-Context	
		Article Quote
150		"One-year adjuvant trastuzumab therapy combined with chemotherapy compared to chemotherapy alone yielded an additional cost of 888,453,971VND (39,062 US\$)",
		LLM Quote
		"- Incremental cost per patient: "\$39,062"
Y	In-Context	
		Article Quote
151		"to incur an additional lifetime cost of 4,216,100 million VND (corresponding to 185,363,845 US\$, which equals 0.053% of total GDP in 2020 in Vietnam)"
		LLM Quote
		"- Total population incremental cost: "\$185,363,845"
Y	In-Context	
		Article Quote
152		"LY gained, or 519,616,972 VND (22,845 US\$) per QALY gained."
		LLM Quote
		"- ICER: "\$22,845" per QALY gained"
Y	In-Context	
		Article Quote
153		"The current price of Herceptin 150mg and 440mg vials are 15,550,710 VND (684 US\$) and 45,596,775 VND (2,005 US\$)."
		LLM Quote
		"- Current Herceptin prices: * 150mg vial: "\$684" * 440mg vial: "\$2,005"
Y	In-Context	

		Article Quote
154	“Price of trastuzumab 150mg vial 6,916,765 304 9,622,215 423”, “Price of trastuzumab 440mg vial 20,750,295 912 28,225,165 1,241”	
		LLM Quote
	“- Cost-effective prices at 3x GDP threshold: * 150mg vial: "\$423" * 440mg vial: "\$1,241”	
Y	In-Context	
	<u>Article 27: Cost-utility and budget impact analysis of neoadjuvant dual HER2 targeted therapy for HER2-positive breast cancer in Sri Lanka, Gunasekara A. et al. 2024</u>	
		Article Quote
155	“Strategy 2 11.03 2.16 9.13 1.86 LKR 5,373,317 2,033,819 942,990 1,090,863 837,756 USD 27,586 10,442 4,841 5,600”	
		LLM Quote
	“- Strategy with neoadjuvant pertuzumab+trastuzumab followed by adjuvant trastuzumab required "\$5,600" per QALY gained”	
Y	In-Context	
		Article Quote
156	“The value of one-time Gross Domestic Product (GDP) per capita for year 2021 [i.e., LKR758,680 (USD3,815)”	
		LLM Quote
	“- A 25% cost reduction in neoadjuvant treatment would be needed to make dual therapy cost-effective at Sri Lanka's GDP per capita threshold of "\$3,815”	
Y	In-Context	
		Article Quote
157	“The first-year incremental budget was LKR 161 million (USD 0.82 million) and LKR 482 million (USD 2.47 million) for strategy 3 and LKR 1145 million (USD 5.88 million) and LKR 3,435 million (USD 17.64 million)”	
		LLM Quote
	“- First-year budget impact ranged from "\$0.82 million" to "\$17.64 million" depending on coverage level and regimen”	
Y	In-Context	
		Article Quote
158	“strategy 2 (neoadjuvant PTC followed by adjuvant T) with LKR 1,074,254 or USD 5,515 per QALY gained from public healthcare system perspective and LKR 1,090,863 or USD 5,600 per QALY gained from societal perspective.”	
		LLM Quote
	“- Strategy 2 (neoadjuvant pertuzumab+trastuzumab followed by trastuzumab): - Incremental cost per QALY: "\$5,600”	
Y	In-Context	
		Article Quote
159	“The lowest ICER was for strategy 3 (neoadjuvant LTC followed by adjuvant T) with LKR 512,240 or USD2,630 per QALY gained from public healthcare system perspective, and LKR 529,117 or USD2,716 per QALY”	
		LLM Quote
	“- Strategy 3 (neoadjuvant lapatinib+trastuzumab followed by trastuzumab): - Incremental cost per QALY: "\$2,716”	
Y	In-Context	
		Article Quote
160	“ Strategy 4 12.75 3.87 10.62 3.35 LKR 11,249,495 7,909,997 2,041,367 2,362,104 3,958,902 USD 57,754 40,609 10,480 12,127”	
		LLM Quote
	“- Strategy 4 (dual therapy in both phases): - Highest health outcomes but also highest costs - Incremental cost per QALY: "\$12,127”	
Y	In-Context	
		Article Quote
161	“Strategy 2 LKR 1,145 254 243 235 230 USD 5.88”, “ Strategy 3 LKR 161 31 28 26 24 USD 0.82”, “ Strategy 4 LKR 4,337 1,008 984 966 951 USD 22.27”	
		LLM Quote
	“- At 20% coverage: - Strategy 2: "\$5.88 million" first year - Strategy 3: "\$0.82 million" first year - Strategy 4: "\$22.27 million" first year”	
Y	In-Context	
		Article Quote
162	“Strategy 2 LKR 3,435 761 728 706 691 USD 17.64 ”, “Strategy 3 LKR 482 92 83 77 73 USD 2.47”, “ Strategy 4 LKR 13,011 3024 2952 2897 2854 USD 66.80”	
		LLM Quote

	<p>“- At 60% coverage: - Strategy 2: "\$17.64 million" first year - Strategy 3: "\$2.47 million" first year - Strategy 4: "\$66.80 million" first year”</p>
Y	In-Context
	<u>Article 28: Economic evaluation of trastuzumab in HER2-positive early breast cancer in Indonesia: A cost-effectiveness analysis, Khoirunnisa S. et al. 2024</u>
	Article Quote
163	“In the base-case analysis, the results indicated that the lifetime costs for trastuzumab plus chemotherapy and chemotherapy alone were US\$33,744 and US\$22,720, respectively, resulting in substantial incremental savings of US\$11,024 per patient for the former”
	LLM Quote
	“- Base case analysis showed total lifetime costs of "\$33,744" for trastuzumab plus chemotherapy versus "\$22,720" for chemotherapy alone, with incremental cost of "\$11,024" per patient”
Y	In-Context
	Article Quote
164	“Trastuzumab plus chemotherapy also led to higher total quality-adjusted life years (QALYs) and life years gained (LYG), resulting in incremental cost-effectiveness ratios (ICERs) of US \$6,842 per QALY and US\$5,510 per LYG.”
	LLM Quote
	“- Treatment with trastuzumab resulted in higher quality-adjusted life years (QALYs) and life years gained (LYG), with incremental cost-effectiveness ratios (ICERs) of "\$6,842" per QALY and "\$5,510" per LYG”
Y	In-Context
	Article Quote
165	“The subgroup with an age at diagnosis <40 years had the lowest ICER of US\$4,912/QALY”
	LLM Quote
	“- Age-based subgroup analysis found trastuzumab was most cost-effective in patients <40 years old, with an ICER of "\$4,912" per QALY”
Y	In-Context
	Article Quote
166	“Trastuzumab was considered cost-effective when the ICER fell below the willingness-to-pay (WTP) threshold of three times GDP per capita, which is recommended for Indonesia [27]. The 2022 GDP per capita for Indonesia was US\$4,788 [23].
	LLM Quote
	“- At Indonesia's willingness-to-pay threshold of 3x GDP per capita (" \$4,788" x 3), trastuzumab plus chemotherapy was deemed cost-effective with 96% probability in sensitivity analyses”
Y	In-Context
	Article Quote
167	“The cost of trastuzumab per vial (US\$ 384/440mg vial)”
	LLM Quote
	“- Trastuzumab cost per vial: "\$384" per 440mg”
Y	In-Context
	Article Quote
168	“Disease free survival in 1st year 9,080”, “Disease free survival 2,550 ”, “Locoregional recurrence 3,416”, “Metastatic 3,356”
	LLM Quote
	<p>“* Disease-free (1st year): "\$9,080" * Disease-free (subsequent): "\$2,550" * Locoregional recurrence: "\$3,416" * Metastatic: "\$3,356””</p>
	In-Context
Y	
	Article Quote
169	“A scenario analysis, based on a treatment effect duration equal to the HERA trial follow-up time of 11 years, demonstrated a minimal impact on outcomes. Results show ICERs of US \$5,655 per LYG and US\$7,023 per QALY”
	LLM Quote
	“- Scenario analysis examining 11-year treatment effect duration yielded similar ICERs (" \$5,655" per LYG, "\$7,023" per QALY)”
Y	In-Context
	Article Quote
170	“The subgroup with an age at diagnosis <40 years had the lowest ICER of US\$4,912/QALY, with an incremental gain of 3.63 QALYs and an incremental cost of US\$17,853.”
	LLM Quote
	<p>“- Treatment most cost-effective in women <40 years old: * ICER: "\$4,912" per QALY * Incremental QALYs: 3.63 * Incremental cost: "\$17,853””</p>

Y	In-Context, Repetitive
	Article Quote
171	“Conversely, age at diagnosis >60 years old showed the highest ICER, with 1.80 QALYs gained, incremental cost of US\$11,453, and an ICER of US\$6,348 per QALY.”
	LLM Quote
	<p>“* Age >60: ICER "\$6,348" per QALY</p> <p>* Incremental QALYs: 1.80</p> <p>* Incremental cost: "\$11,453”</p>
Y	In-Context
	<u>Article 29: The burden of systemic therapy administration route in treating HER2-positive breast cancer (for patients, healthcare professionals, and healthcare system): a systematic literature review, Landeiro L. et al. 2024</u>
	Article Quote
172	“Brazilian private healthcare system for a period of 5 years and reported a significant cost-saving compared to IV administration route (cost-savings of up to USD 176,859,259.46 for HER-2 positive eBC and up to USD 6,307,656.20 for HER-2 positive metastatic breast cancer)”
	LLM Quote
	“- Kashiura et al. showed 5-year cost savings of up to "\$176,859,259.46" for early breast cancer and "\$6,307,656.20" for metastatic breast cancer in the Brazilian private healthcare system”
Y	In-Context
	<u>Article 30: Comparative cost-effectiveness of first-line pembrolizumab plus chemotherapy vs. chemotherapy alone in persistent, recurrent, or metastatic cervical cancer, Lin Y. et al. 2024</u>
	Article Quote
173	“This regimen increased the costs by US\$ 134,502.57, resulting in an ICER of US\$ 114,275.67 per QALY, relative to traditional treatment costs. The ICER for the pembrolizumab regimen was further calibrated to be US\$ 52,765.69 per QALY.”
	LLM Quote
	<p>“- Total incremental cost was "\$134,502.57"</p> <p>- Resulting incremental cost-effectiveness ratio (ICER) was "\$114,275.67" per QALY</p> <p>- Even with charitable pricing discount of 41.4%, the ICER remained at "\$52,765.69" per QALY”</p>
Y	In-Context
	Article Quote
174	“As of 2022, China’s GDP per capita was US\$ 11,756.31, which translated to a WTP threshold of US\$ 35,268.94/QALY”
	LLM Quote
	“- Both ICERs exceeded China's willingness-to-pay threshold of "\$35,268.94" per QALY”
Y	In-Context
	Article Quote
175	“with pembrolizumab priced at US\$ 2,458/100 mg, paclitaxel at US\$ 22/30 mg, cisplatin at US\$ 3/30 mg, and bevacizumab at US\$ 159/100 mg.”
	LLM Quote
	<p>“- Pembrolizumab: "\$2,458" per 100mg</p> <p>- Paclitaxel: "\$22" per 30mg</p> <p>- Cisplatin: "\$3" per 30mg</p> <p>- Bevacizumab: "\$159" per 100mg”</p>
	In-Context
	Article Quote
176	“This regimen increased the costs by US\$ 134,502.57, resulting in an ICER of US\$ 114,275.67 per QALY”
	LLM Quote
	“- Base case analysis showed pembrolizumab combination therapy increased costs by "\$134,502.57" with 1.18 additional QALYs”
Y	In-Context, Repetitive
	Article Quote
177	“This adjustment led to a revised incremental cost of US\$ 62,105.26, representing a decrease from the initial incremental cost.”
	LLM Quote
	“- Even with 41.4% charitable pricing discount, incremental cost remained "\$62,105.26”
Y	In-Context
	Article Quote
178	“In both the outlined scenarios, the ICER substantially surpassed China’s prevailing WTP threshold, which was set at three times the nation’s GDP per capita or US\$ 35,268.94/QALY.”
	LLM Quote
	“- Both scenarios exceeded China's WTP threshold of "\$35,268.94" per QALY”
Y	In-Context
	Article Quote

179	“with pembrolizumab priced at US\$ 2,458/100 mg”
	LLM Quote
	“- Pembrolizumab pricing in mainland China (" \$2,458" per 100mg) is lower than:”
Y	In-Context, Repetitive
	Article Quote
180	“Notably, while the retail price for pembrolizumab in mainland China is US\$ 2,458/100 mg, it is US\$ 4,800/100 mg in the U.S. and US\$ 3,594/100 mg in Hong Kong”
	LLM Quote
	“- Pembrolizumab pricing in mainland China (" \$2,458" per 100mg) is lower than: * US pricing (" \$4,800" per 100mg) * Hong Kong pricing (" \$3,594" per 100mg)”
Y	In-Context
	Article Quote
181	“Notably, the domestic PD-1 immune checkpoint inhibitors camrelizumab, toripalimab, and sintilimab have undergone significant price reductions through these insurance negotiations, with prices set at US\$ 353/200 mg, US\$ 147/100 mg, and US\$ 148/ 100 mg, respectively”
	LLM Quote
	“* Camrelizumab: " \$353" per 200mg * Toripalimab: " \$147" per 100mg * Sintilimab: " \$148" per 100mg”
Y	In-Context
	<u>Article 31: Cost-effectiveness Analysis in the New Era of Treatment Strategies in Metastatic Urothelial Carcinoma Based on Checkmate-901 and EV302/Keynote A39, Rieger C. et al. 2024</u>
	Article Quote
182	“At a lifetime horizon, SoC, gemcitabine/cisplatin + nivolumab, and EV + P were associated with average costs of €163 424 (USA: \$458 006), €206 853 (USA: \$597 802), and €401 170 (USA: \$1 228 455),”
	LLM Quote
	“The analysis found that while EV+P demonstrated superior clinical outcomes with nearly doubled quality-adjusted life years (QALYs), its high cost of " \$1,228,455" per patient makes it cost ineffective under current pricing. Gemcitabine/cisplatin + nivolumab showed moderate clinical benefit at " \$597,802" per patient, emerging as potentially cost-effective in Germany but not the US. The standard of care remained the least expensive at " \$458,006" per patient.”
Y	In-Context
	Article Quote
183	“We measured WTP at €/\$50 000/QALY, €/\$100 000/QALY, and €/\$150 000/QALY”
	LLM Quote
	“- Willingness-to-pay (WTP) thresholds analyzed at " \$50,000", " \$100,000", and " \$150,000””
Y	In-Context
	Article Quote
184	“Gemcitabine (1000 mg/m2)/cisplatin (70 mg/m2) 2500 1250–3750 140”, “Avelumab (800 mg) 3100 1550–4650 7518”, “Enfortumab (100 mg) 3060 1530–4590 14 045”, “Nivolumab (360 mg) 4400 2200–6600 11 226”, “Pembrolizumab (200 mg) 5700 2850–8550 11 337”
	LLM Quote
	“Drug costs per treatment cycle (US pricing): - Gemcitabine/cisplatin: " \$140" - Avelumab (800mg): " \$7,518" - Enfortumab (100mg): " \$14,045" - Nivolumab (360mg): " \$11,226" - Pembrolizumab (200mg): " \$11,337””
Y	In-Context
	Article Quote
185	“SoC, gemcitabine/cisplatin + nivolumab, and EV + P were associated with average costs of €163 424 (USA: \$458 006)”
	LLM Quote
	“1. Standard of Care: - Cost: " \$458,006””
Y	In-Context
	Article Quote
186	“SoC, gemcitabine/cisplatin + nivolumab, and EV + P were associated with average costs of €163 424 (USA: \$458 006), €206 853 (USA: \$597 802)”
	LLM Quote
	“2. Gemcitabine/cisplatin + nivolumab: - Cost: " \$597,802””
Y	In-Context
	Article Quote
187	“The ICERs of the newer strategies were €87 340 (USA: \$281 142; gemcitabine/cisplatin + nivolumab)”

		LLM Quote
		“- Incremental cost-effectiveness ratio (ICER): "\$281,142""
Y	In-Context	
		Article Quote
188		“€401 170 (USA: \$1 228 455)”
		LLM Quote
		“3. EV+P: - Cost: "\$1,228,455""
Y	In-Context	
		Article Quote
189		“EV + P 401 170 1 228 455 237 755 770 449 2.31/3.17 1.1/1.44 216 140 700 408”
		LLM Quote
		“- ICER: "\$700,408""
Y	In-Context	
		Article Quote
190		“At a commonly used WTP threshold of €/ \$100 000"
		LLM Quote
		“- At standard WTP threshold of "\$100,000":”
Y	In-Context	
		Article Quote
		<u>Article 32: Cost-effectiveness analysis of pembrolizumab plus chemotherapy versus chemotherapy in untreated advanced pleural mesothelioma in the Chinese healthcare system, Lang W. et al. 2025</u>
		Article Quote
191		“This was not favorable compared to China’s willingness-to-pay (WTP) threshold of \$38,042.49/QALY”
		LLM Quote
		with ICERs exceeding China's willingness-to-pay threshold of "\$38,042.49" per QALY
Y	In-Context	
		Article Quote
192		“Cost of pembrolizumab 4654.66”, “Cost of pemetrexed 143.53”, “Cost of cisplatin 35.03”, “Cost of nivolumab 3279.69”, “Cost of bevacizumab 496.69”, “Cost of the laboratory test 120.96”, “Chest and abdominal enhanced CT 268.88” "Cost of end-of-life 1,460.30"
		LLM Quote
		“Cost Inputs: - Pembrolizumab cost per cycle: "\$4,654.66" - Pemetrexed cost per cycle: "\$143.53" - Cisplatin cost per cycle: "\$35.03" - Nivolumab cost per cycle: "\$3,279.69" - Bevacizumab cost per cycle: "\$496.69" - Laboratory tests: "\$120.96" - CT scans: "\$268.88" - End-of-life care: "\$1,460.30""
Y	In-Context	
		Article Quote
193		“pembrolizumab plus chemotherapy group achieved an additional 0.99 QALYs at an incremental cost of \$35,560.57. In contrast, the chemotherapy-only group gained 0.77 QALYs, with associated costs totaling \$17,360.94. Comparative analysis between pembrolizumab plus chemotherapy and chemotherapy alone indicated a mean incremental effect of 0.23 QALYs and an additional cost of \$18,199.63.”
		LLM Quote
		“- Pembrolizumab + chemotherapy total cost: "\$35,560.57" - Chemotherapy alone total cost: "\$17,360.94" - Incremental cost: "\$18,199.63""
Y	In-Context	
		Article Quote
194		“ ICER of \$80,557.23/QALY. This was not favorable compared to China’s willingness-to-pay (WTP) threshold of \$38,042.49/QALY, with an INHB of –0.25 QALYs and an INMB of \$-9,605.00.”
		LLM Quote
		“- ICER: "\$80,557.23" per QALY - INHB: -0.25 QALYs - INMB: "-\$9,605.00""
Y	In-Context	
		Article Quote

195	“In the subgroup analyses, the ICER for pembrolizumab plus chemotherapy versus chemotherapy alone was \$33,917.61 per QALY gained for patients with non-epithelioid histology”, “Regarding INMB, the values were \$2,085.28”
	LLM Quote
	“Non-epithelioid Subgroup: - ICER: "\$33,917.61" per QALY - INHB: 0.05 QALYs - INMB: "\$2,085.28"
Y	In-Context
	Article Quote
196	“\$99,536.73 per QALY for those with epithelioid histology”, “Regarding INMB, the values were \$2,085.28 and \$-11,127.42, respectively”
	LLM Quote
	“Epithelioid Subgroup: - ICER: "\$99,536.73" per QALY - INHB: -0.29 QALYs - INMB: "\$-11,127.42"
Y	In-Context
	<u>Article 33: Cost-effectiveness of first-line enfortumab vedotin in addition to pembrolizumab for metastatic urothelial carcinoma in the United States, Li A. et al. 2024</u>
	Article Quote
197	“incremental cost of \$962,240.8 per patient. The incremental cost-effectiveness ratio (ICER) is \$558,973 per QALY”
	LLM Quote
	“- The incremental cost was "\$962,240.8" per patient - The incremental cost-effectiveness ratio (ICER) was "\$558,973" per QALY”
Y	In-Context
	Article Quote
198	“From the perspective of US payers, at a willingness-to-pay threshold of \$150,000 per QALY”
	LLM Quote
	“At a willingness-to-pay threshold of "\$150,000" per QALY”
Y	In-Context
	Article Quote
199	“Enfortumab Vedotin 131.520”, “Pembrolizumab 55.730”, “Carboplatin 0.072”, “Gemcitabine 0.044”, “Avelumab 9.236”
	LLM Quote
	“- EV: "\$131.52" per mg - Pembrolizumab: "\$55.73" per mg - Carboplatin: "\$0.072" per mg - Cisplatin: "\$0.404" per mg - Gemcitabine: "\$0.044" per mg - Avelumab: "\$9.236" per mg”
Y	In-Context
	Article Quote
200	“First hour 144.390”, “Additional hour 31.100”
	LLM Quote
	“Administration costs: - First hour: "\$144.39" - Additional hours: "\$31.10”
Y	In-Context
	Article Quote
201	“Hyperglycemia 255.506”, “Thrombocytopenia 45,332.000”
	LLM Quote
	“Adverse event management costs ranged from "\$255.51" to "\$45,332" depending on the condition.”
Y	In-Context
	Article Quote
202	“Cost, US \$ 1,493,868 531,627.2 962,240.8”
	LLM Quote
	“- EV + pembrolizumab: "\$1,493,868" - Chemotherapy: "\$531,627.2" - Incremental cost: "\$962,240.8”
Y	In-Context
	Article Quote

203	“Per LY 458,390.1”, “Per QALY 558,973”
	LLM Quote
	“- ICER per life year: "\$458,390.1" - ICER per QALY: "\$558,973”"
Y	In-Context
	Article Quote
204	“However, if the WTP threshold were increased to approximately \$820,000 per QALY, there would be an 80% chance of being cost-effective for this combination therapy”
	LLM Quote
	"- Would require approximately "\$820,000"/QALY threshold for 80% probability of cost-effectiveness"
Y	In-Context
	Article Quote
205	“Reducing the unit price of EV to \$20 per milligram would result in a 50% probability of cost-effectiveness compared to chemotherapy at a WTP threshold of \$150,000. Furthermore, reducing the unit price of EV to \$15 per milligram would increase the probability of cost-effectiveness to 75% at the same WTP threshold (Supplementary Table 2).”
	LLM Quote
	“2. Price Sensitivity - Reducing EV price to "\$20" per mg would achieve 50% probability of cost-effectiveness - Reducing EV price to "\$15" per mg would achieve 75% probability of cost-effectiveness”
Y	In-Context
	Article Quote
206	“Subgroup analyses showed that the ICER for EV in combination with pembrolizumab ranged from \$563,128.5 per QALY in platinum-eligible patients to \$536135.5 per QALY in platinum-ineligible patients.”
	LLM Quote
	“- Cisplatin-ineligible patients showed better cost-effectiveness (ICER: "\$536,135.5"/QALY) - Cisplatin-eligible patients had higher ICER ("563,128.5"/QALY)”
Y	In-Context
	Article 34: Cost-effectiveness of immunotherapies for advanced squamous non-small cell lung cancer: a systematic review, Cheng M. et al. 2024
	Article Quote
207	“The average threshold selected for the Chinese studies was \$39,275.25 /QALY and the average threshold for the non-Chinese studies was \$102,000 /QALY”
	LLM Quote
	“- Cost-effectiveness varied significantly by region, with an average willingness-to-pay threshold of "\$39,275.25/QALY" for Chinese studies versus "\$102,000/QALY" for non-Chinese studies”
Y	In-Context
	Article Quote
208	“The Hu 2023 [49] study results showed an increase of RMB ¥207,388 (US \$31,537) per QALY for nivolumab versus docetaxel ICER in squamous aNSCLC. Rothwell 2021 showed ICERs of £33,134 for nivolumab in patients with LSCC compared to docetaxel. The other two studies chose incremental cost per QALY as a measure of cost-effectiveness. Chaudhary 2021 [43] includes two cost-benefit analyses based on 5-year data from Canada or Sweden, with ICERs of \$140,753 per QALY for the Canadian LSCC patients and SEK 568,895 per QALY for Sweden.”
	LLM Quote
	“Nivolumab Monotherapy vs. Chemotherapy: - Hu et al. showed ICER of "\$31,537/QALY" - Rothwell et al. demonstrated ICER of "\$33,134/QALY" - Chaudhary et al. found ICERs of "\$140,753/QALY" for Canadian patients and "\$568,895/QALY" for Swedish patients
P	Partial-Context, 1 Swedish Krona (SEK) = 0.1166 USD, SEK 568,895 = \$66,300 USD
	Article Quote
209	“The PS model showed an increase in the cost of treatment with nivolumab of \$198,862 /QALY and \$181,623 /LY.”
	LLM Quote
	“- Gao et al. reported increased costs of "\$198,862/QALY" and "\$181,623/LY”"
Y	In-Context
	Article Quote
210	“In the study by Chouaid et al. [46], ICER for patients with LSCC was €66,825 /LY for pembrolizumab and €84,097 /QALY for platinum-based dual agents.”, “with a corresponding marginal incremental cost of \$3,449”, “resulting in an ICER of \$86,293/QALY.”
	LLM Quote
	“Pembrolizumab Studies: - Chouaid et al. showed ICER of "\$84,097/QALY" vs platinum agents - Liu et al. found incremental cost of "\$3,449" with added 0.22 QALYs vs monotherapy - Insinga et al. demonstrated ICER of "\$86,293/QALY" for combination therapy”
Y	In-Context
	Article Quote

211	<p>“Zhou 2023 [56] showed an ICER of \$18,369/QALY (threshold US \$37,653/QALY), a higher ICER was obtained by Zhang 2023 [54] \$32,237/QALY (threshold value (\$37,654/QALY).”</p> <p style="text-align: center;">LLM Quote</p> <p>“Chinese Market Analysis: - Zhou et al. showed ICER of "\$18,369/QALY" for toripalimab combination - Zhang et al. found ICER of "\$32,237/QALY" for toripalimab”</p> <p>Y In-Context</p>
212	<p style="text-align: center;">Article Quote</p> <p>“as an optimal choice for LSCC first-line treatment. In contrast, the Li 2022 [52] analysis showed that with \$37,663/QALYs as the threshold, the ICER of sugemalimab-Chemo therapy compared with placebo-Chemo combination therapy was \$96,230.83/QALYs. Shao 2022 [53] found that camrelizumab combined with chemotherapy increased by 0.47 QALYs and 0.91 LYs compared to chemotherapy, with a corresponding incremental cost of \$6,347.81”</p> <p style="text-align: center;">LLM Quote</p> <p>“- Li et al. reported ICER of "\$96,230.83/QALY" for sugemalimab - Shao et al. showed incremental cost of "\$6,347.81" with 0.47 QALYs gained for camrelizumab”</p> <p>Y In-Context</p>
213	<p style="text-align: center;">Article Quote</p> <p>“Cost \$2734.55 \$39710.96”, “ICER(USD per additional QALY gained) \$422535.53” “Incr Cost \$36976.41”</p> <p style="text-align: center;">LLM Quote</p> <p>“- Pembrolizumab treatment cost "\$39,710.96" per patient compared to "\$2,734.55" for chemotherapy - Pembrolizumab provided an additional 0.09 QALYs at an incremental cost of "\$36,976.41" - The ICER was "\$422,535.53" per QALY gained, significantly exceeding China's willingness-to-pay threshold”</p> <p>Y In-Context</p>
214	<p style="text-align: center;">Article Quote</p> <p>“The 21-day therapy costs were as follows: pembrolizumab (\$5327.90), capecitabine (\$36.39), gemcitabine (\$44.16), and docetaxel (\$31.22) ”</p> <p style="text-align: center;">LLM Quote</p> <p>“Pembrolizumab: "\$5,327.90" per cycle Chemotherapy options: - Capecitabine: "\$36.39" per cycle - Gemcitabine: "\$44.16" per cycle - Docetaxel: "\$31.22" per cycle”</p> <p>Y In-Context</p>
215	<p style="text-align: center;">Article Quote</p> <p>“Anemia 6562.68”, “Neutrocytopenia 475.32”, “Imaging/Surveillance 207.25”, “Laboratory test 11.89”, “Terminal care cost 1460.30”</p> <p style="text-align: center;">LLM Quote</p> <p>“- Anemia management: "\$6,562.68" - Neutrocytopenia treatment: "\$475.32" - Imaging/surveillance: "\$207.25" - Laboratory tests: "\$11.89" - Terminal care: "\$1,460.30”</p> <p>Y In-Context</p>
216	<p style="text-align: center;">Article Quote</p> <p>“Cost \$2734.55 \$39710.96”</p> <p style="text-align: center;">LLM Quote</p> <p>“- Total cost pembrolizumab: "\$39,710.96" - Total cost chemotherapy: "\$2,734.55”</p> <p>Y In-Context, Repetitive</p>
217	<p style="text-align: center;">Article Quote</p> <p>“Incr Cost \$36976.41”, “ICER(USD per additional LY gained) \$1232547.00”</p> <p style="text-align: center;">LLM Quote</p> <p>“- Incremental cost: "\$36,976.41" - ICER per life year: "\$1,232,547.00”</p> <p>Y In-Context</p>
218	<p style="text-align: center;">Article Quote</p> <p>“ICER(USD per additional QALY gained) \$422535.53”</p> <p style="text-align: center;">LLM Quote</p> <p>“- ICER per QALY: "\$422,535.53”</p> <p>Y In-Context</p>

	<u>Article 36: Enfortumab vedotin plus pembrolizumab as a first-line treatment for advanced urothelial carcinoma: a cost-effectiveness analysis from China based on the EV-302 trial, You M. et al. 2024</u>	
	Article Quote	
219	“The EV-PEMB regimen demonstrated a gain of 3.22 QALYs at \$375,420.24, compared to the chemotherapy regimen with 1.70 QALYs at \$23,369.67. ICER for EV-PEMB compared to chemotherapy was at \$232,256.16 per QALY gained. In China, at a willingness-to-pay threshold of \$38,133 per QALY, EV-PEMB has a 0% probability of being cost-effective as a firstline treatment for advanced UC compared to chemotherapy.”	
	LLM Quote	
	“- EV-PEMB achieved 3.22 quality-adjusted life years (QALYs) at a total cost of "\$375,420.24" per patient - Standard chemotherapy achieved 1.70 QALYs at "\$23,369.67" per patient - The incremental cost-effectiveness ratio (ICER) was "\$232,256.16" per QALY gained - At China's willingness-to-pay threshold of "\$38,133" per QALY, EV-PEMB had 0% probability of being cost-effective”	
Y	In-Context	
	Article Quote	
220	“Enfortumab vedotin (30 mg) 1,593.2”, “Pembrolizumab (100 mg) 2,548.8”, “Gemcitabine (1000 mg) 48.1”, “Carboplatin (100 mg) 9.2”, “Cisplatin (10 mg) 7.1”	
	LLM Quote	
	“- Enfortumab vedotin: "\$1,593.2" per 30mg - Pembrolizumab: "\$2,548.8" per 100mg - Gemcitabine: "\$48.1" per 1000mg - Carboplatin: "\$9.2" per 100mg - Cisplatin: "\$7.1" per 10mg”	
Y	In-Context	
	Article Quote	
221	“cost in the EV-PEMB group were 1.52 QALYs and \$352,050.58”	
	LLM Quote	
	“1. The high cost differential between EV-PEMB and chemotherapy (" \$352,050.58") is driven by”	
Y	In-Context	
	Article Quote	
222	“the prices of EV and pembrolizumab simultaneously decreased to 13.1% of the original, i.e., \$208.7 and \$333.9 for EV and pembrolizumab, respectively.”	
	LLM Quote	
	“- "\$208.7" for enfortumab vedotin (13.1% of current price) - "\$333.9" for pembrolizumab (13.1% of current price)”	
Y	In-Context	
	Article Quote	
223	“177,113.39”, “196,413.28”, “195,743.27”, “198,087.78”	
	LLM Quote	
	“- ECOG performance status = 0: ICER "\$177,113.39" - Low PD-L1 expression: ICER "\$196,413.28" - Cisplatin-ineligible patients: ICER "\$195,743.27" - Mild renal impairment: ICER "\$198,087.78””	
Y	In-Context	
	Article 37: Immune checkpoint inhibitors as the secondline treatment for advanced esophageal squamous cell carcinoma: a cost-effectiveness analysis based on network meta-analysis, Yang X. et al. 2024	
	Article Quote	
224	“WTP threshold of \$38,223.34/QALY”	
	LLM Quote	
	“willingness-to-pay threshold of "\$38,223.34" per quality-adjusted life year (QALY)”	
Y	In-Context	
	Article Quote	
225	“Camrelizumab 200 mg 383.08”, “Sintilimab 100 mg 160.57”, “Nivolumab 240 mg 3,436.02”, “Tislelizumab 100 mg 204.80”, “Pembrolizumab 100 mg 2,663.95”	
	LLM Quote	
	“- Camrelizumab 200mg: "\$383.08" - Sintilimab 100mg: "\$160.57" - Nivolumab 240mg: "\$3,436.02" - Tislelizumab 100mg: "\$204.80" - Pembrolizumab 100mg: "\$2,663.95””	
Y	In-Context	
	Article Quote	
226	“Sintilimab 9,662.47 0.953”, “Tislelizumab 11,054.76 0.971 75,472.65”, “Camrelizumab 15,696.50 0.987 175,681.92”, “Nivolumab 44,120.77 0.861”, “Pembrolizumab 52,885.34 0.867”	
	LLM Quote	

	“- Sintilimab: "\$9,662.47" total cost, 0.953 QALYs - Tislelizumab: "\$11,054.76" total cost, 0.971 QALYs, ICER "\$75,472.65/QALY" vs sintilimab - Camrelizumab: "\$15,696.50" total cost, 0.987 QALYs, ICER "\$175,681.92/QALY" vs sintilimab - Nivolumab: "\$44,120.77" total cost, 0.861 QALYs (dominated) - Pembrolizumab: "\$52,885.34" total cost, 0.867 QALYs (dominated)”
Y	In-Context
	<u>Article 38: Cost-effectiveness of immune checkpoint inhibitors in treating metastatic urothelial cancer, Yang L. et al. 2024</u>
	Article Quote
227	“The median lifetime cost after metastatic UC diagnosis was USD 31,221.”
	LLM Quote
	“The median lifetime cost after metastatic UC diagnosis was "\$31,221".”
Y	In-Context
	Article Quote
228	“The subsequent ICI therapy group had significantly higher costs when compared with the ICI combination therapy group (155.8 USD per day, [IQR 99.0 to 220.5] v 97.8 USD per day, [IQR 60.8 to 159.19], p = 0.026).”
	LLM Quote
	“- Cost per life day for subsequent ICI therapy: "\$155.8" [IQR 99.0 to 220.5] - Cost per life day for ICI combination therapy: "\$97.8" [IQR 60.8 to 159.19]”
Y	In-Context
	Article Quote
229	“There were more insurance reimbursement expenses in the subsequent ICI therapy group in this study. (95.2 vs. 32.5 USD per life day, p = 0.003)”
	LLM Quote
	“- Subsequent ICI: "\$95.2" per day [IQR 8.7-223.3] - ICI combination: "\$32.5" per day [IQR 10.6-165.3]”
Y	In-Context
	Article Quote
230	“The median lifetime cost after metastatic UC diagnosis was USD 31,221.”
	LLM Quote
	“- Total median lifetime cost: "\$31,221””
Y	In-Context, Repetitive
	Article Quote
231	“but the subsequent ICI group had the higher outpatient fee than the combination group. (6784.9 vs. 2080.0 USD per patient, p = 0.003)”
	LLM Quote
	“- Higher outpatient costs were observed in the subsequent ICI group (" \$6,784.9" vs "\$2,080.0" per patient)”
Y	In-Context
	<u>Article 39: Cost-effectiveness of nivolumab plus gemcitabine-cisplatin as first-line treatment for advanced urothelial carcinoma in China and the United States, Xiang G. et al. 2024</u>
	Article Quote
232	“This resulted in ICERs for nivolumab plus gemcitabine-cisplatin compared to gemcitabine-cisplatin alone of \$116,856/QALY in the US and \$51,997/QALY in China”
	LLM Quote
	“- US incremental cost-effectiveness ratio (ICER): "\$116,856/QALY" - China ICER: "\$51,997/QALY””
Y	In-Context
	Article Quote
233	“the willingness-to-pay threshold of \$38,043/QALY in China, but below was lower than the costeffectiveness threshold of \$150,000/QALY in the US”
	LLM Quote
	“- Willingness-to-pay thresholds: - US: "\$150,000/QALY" - China: "\$38,043/QALY””
Y	In-Context
	Article Quote
234	“Nivolumab (100mg) 3042.60”, “Gemcitabine (1000mg) 31.07”, “Cisplatin (10mg) 2.19”
	LLM Quote
	“US Setting: - Nivolumab (100mg): "\$3042.60" - Gemcitabine (1000mg): "\$31.07" - Cisplatin (10mg): "\$2.19””
Y	In-Context

		Article Quote
235	“respectively, while also increasing the total cost by \$108,838”	
		LLM Quote
	“- Total incremental cost: "\$108,838"”	
Y	In-Context	
		Article Quote
236	“1312.06”, “71.33”, “1.98”, “while also increasing the total cost by \$108,838 and \$48,001, respectively.”	
		LLM Quote
	“China Setting: - Nivolumab (100mg): "\$1312.06" - Gemcitabine (1000mg): "\$71.33" - Cisplatin (10mg): "\$1.98" - Total incremental cost: "\$48,001"”	
Y	In-Context	
		Article Quote
237	“Cost-effectiveness could be reached if the price of nivolumab were reduced to \$920.87/100mg in China.”	
		LLM Quote
	“- China requires 29.81% nivolumab price reduction (to "\$920.87/100mg") for cost-effectiveness”	
Y	In-Context	
		Article Quote
238	“86,413”, “ 83,217”, “109,818”	
		LLM Quote
	“- Age <65: ICER "\$86,413/QALY", 96.1% probability - ECOG 0: ICER "\$83,217/QALY", 95.3% probability - Treatment-naïve: ICER "\$109,818/QALY", 81.1% probability”	
Y	In-Context	
		Article Quote
239	“ 35,848”, “ 35,605”	
		LLM Quote
	“China Setting: - Age <65: ICER "\$35,848/QALY", 59.1% probability - ECOG 0: ICER "\$35,605/QALY", 60.8% probability”	
Y	In-Context	
		Article 40: Evaluating nivolumab plus gemcitabine–cisplatin’s cost-effectiveness for aUC in China, Meng K. et al. 2024
		Article Quote
240	“The base-case analysis showed Nivolumab plus Gemcitabine–Cisplatin yielded 0.59 QALYs at an extra cost of \$78,780.61, leading to an incremental costeffectiveness ratios (ICER) of \$133,526.46/QALY.”	
		LLM Quote
	“- Base case analysis showed an incremental cost-effectiveness ratio (ICER) of "\$133,526.46" per quality-adjusted life year (QALY) gained - Additional cost of "\$78,780.61" for 0.59 QALYs gained compared to gemcitabine-cisplatin alone”	
Y	In-Context	
		Article Quote
241	“for aUC patients with the WTP threshold of \$38,223 per QALY, thereby rendering it cost-effective.”	
		LLM Quote
	“- Zero probability of being cost-effective at China’s willingness-to-pay threshold of "\$38,223" per QALY”	
Y	In-Context	
		Article Quote
242	“Nivolumab cost 1249.072/100 mg”, “Gemcitabine cost 5.596/0.2 g”, “Cisplatin cost 1.059/10 mg”, “Administration per unit 41”, “Terminal care in end-of-life 278.21”	
		LLM Quote
	“- Nivolumab: "\$1,249.072" per 100mg - Gemcitabine: "\$5.596" per 0.2g - Cisplatin: "\$1.059" per 10mg - Administration cost per unit: "\$41" - Terminal care: "\$278.21"”	
Y	In-Context	
		Article Quote
243	“Anemia 500.78”, “Neutropenia 434.57”, “Decrease Neutrophil count 534.4”, “Decreased white-cell count 622.5231”	
		LLM Quote

	<p>“Adverse Event Costs: - Anemia: "\$500.78" - Neutropenia: "\$434.57" - Decreased neutrophil count: "\$534.40" - Decreased white cell count: "\$622.52”</p>
Y	In-Context
	Article Quote
244	“Total cost, US\$ 84,617.97 5837.36”
	LLM Quote
	<p>“- Total cost for combination therapy: "\$84,617.97" - Total cost for standard therapy: "\$5,837.36”</p>
Y	In-Context
	Article Quote
245	“leading to a ICER of \$133,526.46 per QALY (\$103,658.70 per LY)”
	LLM Quote
	<p>“- ICER per life year: "\$103,658.70" - ICER per QALY: "\$133,526.46”</p>
	In-Context
	Article Quote
246	<p>“Tislelizumab was included in the insurance plan on 1 March 2021, with a preinsurance price of \$1,495.45 for 100 mg, now reduced to just \$175.39, representing an 88% price drop (Kangzhou Big Data, 2023). The price for 240 mg of Toripalimab before entering the insurance was \$1,007.42, and the current insurance price is only \$263.73 marking a 73% reduction”</p>
	LLM Quote
	<p>“* Tislelizumab: 88% reduction to "\$175.39" per 100mg * Toripalimab: 73% reduction to "\$263.73" per 240mg”</p>
Y	In-Context
	Article Quote
	Article 41: Nivolumab plus ipilimumab versus the EXTREME regimen in recurrent/metastatic squamous cell carcinoma of the head and neck: a cost-effectiveness analysis, Ye D. et al. 2024
	Article Quote
247	“at a willingness to pay (WTP) threshold of \$150,000/QALY.”
	LLM Quote
	“at a willingness-to-pay threshold of "\$150,000" per quality-adjusted life year (QALY)”
Y	In-Context
	Article Quote
248	“EXTREME was related to ICER of \$7545/QALY compared with nivolumab plus ipilimumab.”
	LLM Quote
	“- EXTREME showed an incremental cost-effectiveness ratio (ICER) of "\$7,545" per QALY compared to nivolumab plus ipilimumab”
Y	In-Context
	Article Quote
249	: “Nivolumab 30”, “Ipilimumab 166”, “Cetuximab 7.04”, “Cisplatin 0.17 ”, “Carboplatin 0.05”, “5-Fluorouracil 0.005”
	LLM Quote
	<p>“- Nivolumab: "\$30" - Ipilimumab: "\$166" - Cetuximab: "\$7.04" - Cisplatin: "\$0.17" - Carboplatin: "\$0.05" - Fluorouracil: "\$0.005”</p>
Y	In-Context
	Article Quote
250	“Drug 290,970 322,595”
	LLM Quote
	<p>“1. Drug acquisition costs: - EXTREME total: "\$290,970" - Nivolumab plus ipilimumab total: "\$322,595”</p>
Y	In-Context
	Article Quote
251	“Nondrugb 565,153 532,956”
	LLM Quote

	<p>“2. Non-drug costs: - EXTREME: "\$565,153" - Nivolumab plus ipilimumab: "\$532,956”</p>
Y	In-Context
	Article Quote
252	“Overall 856,123 855,551”
	LLM Quote
	<p>“3. Overall costs: - EXTREME: "\$856,123" - Nivolumab plus ipilimumab: "\$855,551”</p>
Y	In-Context
	Article Quote
253	“0.076 QALYs, as well as a cost increase of \$572 per patient. The corresponding ICERs were \$7545/QALY along with the values of INMB and INHB were \$113,267 and 0.076 QALYs, respectively, at a willingness to pay (WTP) threshold of \$150,000/QALY.”
	LLM Quote
	<p>“- Incremental cost: "\$572" favoring EXTREME - Incremental QALYs: 0.076 favoring EXTREME - ICER: "\$7,545" per QALY - Incremental net monetary benefit: "\$113,267" at WTP of "\$150,000"/QALY”</p>
Y	In-Context
	Article Quote
254	“INHB of 0.076 QALYs at a WTP of \$150,000/QALY versus nivolumab plus ipilimumab”
	LLM Quote
	“- Incremental net health benefit: 0.076 QALYs at WTP of "\$150,000"/QALY”
Y	In-Context
	Article Quote
255	“Using the WTP threshold of \$150,000/QALY to determine cost-effectiveness, EXTREME had a probability of 63.86%.”
	LLM Quote
	“- At a WTP threshold of "\$150,000" per QALY, EXTREME had a 64% probability of being cost-effective compared to nivolumab plus ipilimumab for the overall population”
Y	In-Context, Abbreviation
	Article Quote
256	“The corresponding ICERs were \$7545/QALY along with the values of INMB and INHB were \$113,267 and 0.076 QALYs, respectively, at a willingness to pay (WTP) threshold of \$150,000/QALY”
	LLM Quote
	“- The relatively low ICER of "\$7,545" per QALY suggests EXTREME provides good value for money”
Y	In-Context
	Article 42: A cost-effectiveness analysis of the combination of serplulimab with chemotherapy for advanced esophageal squamous cell carcinoma: insights from the ASTRUM-007 trial, Li J. et al. 2024
	Article Quote
257	“This corresponds to ICER values per QALY of \$23,657, \$23,982, and \$25,134”
	LLM Quote
	“- Incremental cost-effectiveness ratios (ICERs) ranged from "\$23,657" to "\$25,134" per quality-adjusted life year (QALY)”
Y	In-Context
	Article Quote
258	“The ICER was significantly reduced in patients with an ECOG performance of 0, resulting in an ICER of \$19,706 per QALY”
	LLM Quote
	“- Treatment was most cost-effective in patients with ECOG performance status of 0, with ICER of "\$19,706" per QALY”
Y	In-Context
	Article Quote
259	“ICER values were computed by dividing incremental costs by incremental increases in QALYs and then compared to a WTP cutoff of \$36,438/QALY, representing three times China’s gross domestic product [26].”
	LLM Quote
	“- Willingness-to-pay threshold of "\$36,438" per QALY (3x China's GDP)”
Y	In-Context
	Article Quote
260	“Serplulimab 198”, “Cisplatin 12”, “5-fluorouracil 127”, “Paclitaxel 180”, “Laboratory per cycle 53”, “Tumor imaging per cycle 162”, “Administration per cycle 12”, “PD-L1 test per patient 86”, “Best supportive care per cycle 70”, “Terminal care per patient 1,402”

	LLM Quote
	“Direct medical costs incorporated: - Serplulimab: "\$198" per cycle - Cisplatin: "\$12" per cycle - 5-fluorouracil: "\$127" per cycle - Paclitaxel: "\$180" per cycle - Laboratory testing: "\$53" per cycle - Imaging: "\$162" per cycle - Administration: "\$12" per cycle - PD-L1 testing: "\$86" per patient - Best supportive care: "\$70" per cycle - Terminal care: "\$1,402" per patient”
Y	In-Context
	Article Quote
261	“QALYs of \$3,163 and 0.14, \$2,418 and 0.10, and \$3,849 and 0.15, respectively”
	LLM Quote
	“- Overall population: 0.14 QALYs gained at incremental cost of "\$3,163" - PD-L1 CPS 1-10: 0.10 QALYs gained at "\$2,418" - PD-L1 CPS \geq 10: 0.15 QALYs gained at "\$3,849”
Y	In-Context
	Article Quote
262	“This corresponds to ICER values per QALY of \$23,657, \$23,982, and \$25,134.”
	LLM Quote
	“- Overall: "\$23,657" per QALY - PD-L1 CPS 1-10: "\$23,982" per QALY - PD-L1 CPS \geq 10: "\$25,134" per QALY”
Y	In-Context
	Article Quote
263	“Beijing, Shanghai, Guangdong, Hubei, Hunan, Guangxi, and Gansu are \$80,822, \$76,277, \$43,281, \$39,188, \$36,650, \$22,200, and \$19,127”
	LLM Quote
	“- WTP thresholds vary significantly: "\$80,822" (Beijing) vs "\$19,127" (Gansu)”
Y	In-Context
	Article Quote
264	“from 2013 to 2030, escalating from \$33.4 billion to \$76.4 billion”
	LLM Quote
	“- "\$33.4" billion (2013) to "\$76.4" billion (2030)”
Y	In-Context
	Article 43: Cost-effectiveness analysis of first-line sintilimab plus chemotherapy vs. chemotherapy alone for unresectable advanced or metastatic gastric or gastroesophageal junction cancer in China, Xiang Z. et al. 2024
	Article Quote
265	"In the base-case analysis, group SINT + Chemo showed an increase in utility value by 0.32 quality-adjusted life-years (QALYs) at an extra cost of \$7988.43, resulting in an ICER of \$25239.29/QALY, below the Chinese cost-effective willingness-to-pay (WTP) threshold of \$38223.34.”
	LLM Quote
	“- Sintilimab plus chemotherapy showed an incremental cost-effectiveness ratio (ICER) of "\$25,239.29" per quality-adjusted life year (QALY) - This ICER falls below China's willingness-to-pay threshold of "\$38,223.34”
Y	In-Context
	Article Quote
266	“Sintilimab/100 mg 160.57”, “Capecitabine/1000 mg 0.9”, “Oxaliplatin/100 mg 50.55”
	LLM Quote
	“Drug costs: - Sintilimab: "\$160.57" per 100mg - Capecitabine: "\$0.90" per 1000mg - Oxaliplatin: "\$50.55" per 100mg”
Y	In-Context
	Article Quote
267	“Patients who were treated with SINT + Chemo achieved 1.12 QALYs at a cost of \$27503.91, while those who received chemotherapy alone achieved 0.8 QALYs at a cost of \$19515.48 (Table 3).”
	LLM Quote
	“- Total cost: "\$27,503.91" - QALYs gained: 1.12 - Chemotherapy alone: - Total cost: "\$19,515.48" - QALYs gained: 0.80”

Y	In-Context	
		Article Quote
268	"In the base-case analysis, group SINT + Chemo showed an increase in utility value by 0.32 quality-adjusted life-years (QALYs) at an extra cost of \$7988.43"	
		LLM Quote
	"- Incremental cost: "\$7,988.43" - Incremental QALYs: 0.32"	
	In-Context	
		Article Quote
269	"Subgroup analysis results are also shown in Table 3. The incremental costs for SINT + Chemo group with PD-L1 CPS ≥ 5 and CPS < 5 were \$12980.27 and \$3391, respectively. The incremental effects were 0.49 QALYs and 0.19 QALYs" "the ICERs were \$26341.01/QALY for patients highly expressing PD-L1 (CPS ≥ 5)"	
		LLM Quote
	"Subgroup analyses by PD-L1 expression: - CPS ≥ 5 : - ICER: "\$26,341.01" per QALY - Incremental cost: "\$12,980.27" - Incremental QALYs: 0.49 - CPS < 5 : - ICER: "\$17,658.26" per QALY - Incremental cost: "\$3,391.00" - Incremental QALYs: 0.19"	
Y	In-Context	
		Article Quote
270	"Pembrolizumab/100 mg 2663.95", "Nivolumab/100 mg 1540.08", "Sintilimab/100 mg 160.57 "	
		LLM Quote
	"- Pembrolizumab: "\$2,663.95" per 100mg - Nivolumab: "\$1,540.08" per 100mg - Sintilimab: "\$160.57" per 100mg"	
Y	In-Context, Repetitive	
		Article 44: Drug Cost Avoidance Resulting from Participation in Clinical Trials: A 10-Year Retrospective Analysis of Cancer Patients with Solid Tumors, Carreras M. et al. 2024
		Article Quote
271	"for the same study period 2010–2019 [20]. The total cost of antineoplastic drugs supplied by sponsors in the clinical trials setting was EUR 107,306,084, with a potential DCA of EUR 92,662,609"	
		LLM Quote
	"- Total pharmaceutical cost avoidance of "\$92,662,609" over the 10-year period"	
Y	In-Context	
		Article Quote
272	"Pembrolizumab EUR 3,590,128.10", "Nivolumab EUR 2,489,205.42", "Atezolizumab EUR 1,983,242.04"	
		LLM Quote
	"- Leading mAb expenditures in 2019 were pembrolizumab ("\$3,590,128"), nivolumab ("\$2,489,205"), and atezolizumab ("\$1,983,242")"	
Y	In-Context	
		Article Quote
273	"2019 EUR 1,310,587 EUR 11,687,195"	
		LLM Quote
Y	"- 2019 immunotherapy spending: "\$11,687,195""	
	In-Context	
		Article Quote
274	"Pembrolizumab EUR 3,590,128.10", "Nivolumab EUR 2,489,205.42", "Atezolizumab EUR 1,983,242.04", "Bevacizumab EUR 1,696,849.55", "Ipilimumab EUR 786,563.46", "Avelumab EUR 568,416.00"	
		LLM Quote
	"Top mAb Expenditures 2019: 1. Pembrolizumab: "\$3,590,128" (13.0%) 2. Nivolumab: "\$2,489,205" (9.0%) 3. Atezolizumab: "\$1,983,242" (7.2%) 4. Bevacizumab: "\$1,696,850" (6.1%) 5. Ipilimumab: "\$786,563" (2.8%) 6. Avelumab: "\$568,416" (2.1%)"	
Y	In-Context	
		Article 45: Cost-effectiveness of durvalumab plus tremelimumab in combination with chemotherapy for the treatment of metastatic non-small-cell lung cancer from the US healthcare sector's and societal perspectives, Gan Y. et al. 2024

	Article Quote
275	“which resulted in an ICER of \$82,501/QALY. The T+D+CT strategy yielded an additional 0.02 QALYs at an increased cost of \$27,779 compared with the D+CT, which resulted in an ICER of \$1,243,868/QALY.”
	LLM Quote
	“(ICER) of "\$82,501/QALY" compared to chemotherapy alone and "\$1,243,868/QALY" versus durvalumab plus chemotherapy (D+CT).”
Y	In-Context
	Article Quote
276	“against willingness-to-pay. thresholds of \$100,000/QALY ”
	LLM Quote
	“The analysis suggests T+D+CT is cost-effective compared to chemotherapy alone but not versus D+CT when using a \$100,000/QALY willingness-to-pay threshold”
Y	In-Context
	Article Quote
277	“Durvalumab 1,380”, “Tremelimumab 9,360”, “Abraxane 6,395”, “Pemetrexed 2,117”, “Drug administration per hour 143”, “Follow-up and monitoring 433”, “Palliative care and death 15,957”
	LLM Quote
	“- Durvalumab: "\$1,380" per cycle - Tremelimumab: "\$9,360" per cycle - Abraxane: "\$6,395" per cycle - Pemetrexed: "\$2,117" per cycle - Drug administration: "\$143" per hour - Follow-up/monitoring: "\$433" per cycle - Palliative care/death: "\$15,957"”
Y	In-Context
	Article Quote
278	“T+D+CT was associated with an increased cost of \$7,108 from \$360,968 for CT and an increased cost of \$27,779” and an increased cost of \$27,779 from \$340,297 for D+CT”
	LLM Quote
	“- Total healthcare costs: "\$368,076" - Incremental cost vs CT: "\$7,108" - Incremental cost vs D+CT: "\$27,779"”, “D+CT arm: - Total healthcare costs: "\$340,297" CT arm: - Total healthcare costs: "\$360,968"”
Y	In-Context, LLM calculated \$368,076 (360,968+7,108)
	Article Quote
279	“C in the US were projected to save a total of \$601 million when eligible patients received T+D+CT”
	LLM Quote
	“- Potential cost savings of "\$601 million" projected when eligible patients receive T+D+CT”
Y	In-Context