

Supplement Tables and Figures

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Supplementary Table S1. The CHEERS 2022 checklist

Section/item	Item No	Recommendation	Reported in section
Title and abstract			
Title	1	Identify the study as an economic evaluation and specify the interventions being compared.	Page 1
Abstract	2	Provide a structured summary that highlights context, key methods, results, and alternative analyses.	Page 2
Introduction			
Background and objectives	3	Give the context for the study, the study question, and its practical relevance for decision making in policy or practice.	Page 3-4
Methods			
Health economic analysis plan	4	Indicate whether a health economic analysis plan was developed and where available.	Page 4-5
Study population	5	Describe characteristics of the study population (such as age range, demographics, socioeconomic, or clinical characteristics).	Page 5
Setting and location	6	Provide relevant contextual information that may influence	Page 5
Comparators	7	Describe the interventions or strategies being compared and why chosen.	Page 5
Perspective	8	State the perspective(s) adopted by the study and why chosen.	Page 5
Time horizon	9	State the time horizon for the study and why appropriate.	Page 5
Discount rate	10	Report the discount rate(s) and reason chosen.	Page 5
Selection of outcomes	11	Describe what outcomes were used as the measure(s) of benefit(s) and harm(s).	Page 6
Measurement of outcomes	12	Describe how outcomes used to capture benefit(s) and harm(s)	Page 6
Valuation of outcomes	13	Describe the population and methods used to measure and value outcomes.	Page 6
Measurement and valuation of	14	Describe how costs were valued.	Page 6

resources and costs			
Currency, price date, and conversion	15	Report the dates of the estimated resource quantities and unit costs, plus the currency and year of conversion.	Page 7
Rationale and description of model	16	If modelling is used, describe in detail and why used. Report if the model is publicly available and where it can be accessed.	Page 7
Analytics and assumptions	17	Describe any methods for analysing or statistically transforming data, any extrapolation methods, and approaches for validating any model used.	Page 7
Characterizing heterogeneity	18	Describe any methods used for estimating how the results of the study vary for subgroups.	Page 8
Characterizing distributional effects	19	Describe how impacts are distributed across different individuals or adjustments made to reflect priority populations.	Page 7
Characterizing uncertainty	20	Describe methods to characterise any sources of uncertainty in the analysis.	Page 7
Approach to engagement with patients and others affected by the	21	Describe any approaches to engage patients or service recipients, the general public, communities, or stakeholders (such as clinicians or payers) in the design of the study.	Page 7
Results			
Study parameters	22	Report all analytic inputs (such as values, ranges, references) including uncertainty or distributional assumptions.	Page 7
Summary of main results	23	Report the mean values for the main categories of costs and outcomes of interest and summarise them in the most appropriate overall measure.	Page 7
Effect of uncertainty	24	Describe how uncertainty about analytic judgments, inputs, or projections affect findings. Report the effect of choice of discount rate and time horizon, if applicable.	Page 8

Effect of engagement with patients and others affected by the study	25	Report on any difference patient/service recipient, general public, community, or stakeholder involvement made to the approach or findings of the study	Page 8
Discussion			
Study findings, limitations, generalizability, and current knowledge	26	Report key findings, limitations, ethical or equity considerations not captured, and how these could affect patients, policy, or practice.	Page 8-11
Other relevant information			
Source of funding	23	Describe how the study was funded and any role of the funder in the identification, design, conduct, and reporting of the analysis	Page 14
Conflicts of interest	28	Report authors conflicts of interest according to journal or International Committee of Medical Journal Editors requirements.	Page 14

Supplementary Table S2. Patient baseline demographic and clinical characteristics

Characteristics	dMMR Cohort		pMMR Cohort	
	PC group (N = 112)	Chemotherapy group (N = 113)	PC group (N = 293)	Chemotherapy group (N = 295)
Demographic				
Median age (range) — yr	67 (38-81)	66 (37-85)	66 (31-93)	65 (29-90)
Race — no. (%)				
White	92 (82.1)	86 (76.1)	212 (72.4)	212 (71.9)
Other	20 (17.9)	27 (23.9)	81 (27.6)	83 (28.1)
Medical history				
ECOG performance-status score — no. (%)				
0	72 (64.3)	73 (64.6)	196 (66.9)	198 (67.1)
1	39 (34.8)	35 (31.0)	88 (30.0)	88 (29.8)
2	1 (0.9)	5 (4.4)	9 (3.1)	9 (3.1)
Histologic analysis — no. (%)				
Adenocarcinoma, NOS	12 (10.7)	14 (12.4)	24 (8.2)	33 (11.2)
Clear cell	1 (0.9)	0	17 (5.8)	20 (6.8)
Dedifferentiated or undifferentiated	4 (3.6)	4 (3.5)	7 (2.4)	6 (2.0)
Endometrioid				
G1	21 (18.8)	35 (31.0)	54 (18.4)	46 (15.6)
G2	52 (46.4)	41 (36.3)	51 (17.4)	58 (19.7)
G3	15 (13.4)	16 (14.2)	53 (18.1)	42 (14.2)
Mixed epithelial	3 (2.7)	2 (64.6)	6 (2.0)	11 (3.7)
Serous	4 (3.6)	1 (31.0)	78 (26.6)	72 (24.4)

Pending	0	0	3 (1.0)	7 (2.4)
Previous therapy				
Chemotherapy — no. (%)				
Yes	5 (4.5)	8 (7.1)	72 (24.6)	77 (26.1)
No	107 (95.5)	105 (92.9)	221 (75.4)	218 (73.9)
Radiotherapy — no. (%)				
Yes	3 (2.7)	2 (64.6)	6 (2.0)	11 (3.7)
No	4 (3.6)	1 (31.0)	78 (26.6)	72 (24.4)
Surgery — no. (%)				
Yes	3 (2.7)	2 (64.6)	6 (2.0)	11 (3.7)
No	4 (3.6)	1 (31.0)	78 (26.6)	72 (24.4)
Missing data	0	0	3 (1.0)	4 (1.4)

Supplementary Table S3: Summary of Statistical Goodness-of-fit of K-M Curves in pMMR and dMMR populations in NRG-GY018 trial

	Exponential	Weibull	Log-logistic	Lognormal	Gompertz
pMMR cohort - Pembrolizumab plus chemotherapy PFS curve					
AIC	-137.6515	-136.1411	-164.1126	-159.0904	-142.5016
BIC	-134.0831	-130.7885	-158.7601	-153.7378	-137.149
pMMR cohort - Chemotherapy PFS curve					
AIC	-102.6662	-139.1756	-190.6125	-176.7948	-126.1081
BIC	-99.09778	-133.8231	-185.2599	-171.4422	-120.7555
pMMR cohort - Pembrolizumab plus chemotherapy OS curve					
AIC	-176.0048	-238.7859	-255.2169	-254.3173	-207.4866
BIC	-172.0643	-232.875	-249.306	-248.4064	-201.5757
pMMR cohort - Chemotherapy OS curve					
AIC	-99.63034	-164.3716	-157.8558	-155.3342	-117.861
BIC	-95.76668	-158.5761	-152.0603	-149.5388	-112.0655
dMMR cohort - Pembrolizumab plus chemotherapy PFS curve					
AIC	-170.8733	-197.7685	-205.4842	-201.4436	-156.5511
BIC	-166.8953	-191.8015	-199.5172	-195.4767	-150.5841
dMMR cohort - Chemotherapy PFS curve					
AIC	-104.5451	-110.3213	-132.3652	-132.2035	-96.12522
BIC	-100.721	-104.5852	-126.6291	-126.4674	-90.38915
dMMR cohort - Pembrolizumab plus chemotherapy OS curve					
AIC	-269.8262	-303.4233	-304.6008	-309.2445	-140.4744
BIC	-265.8116	-297.4013	-303.2225	-298.5788	-134.4524
dMMR cohort - Chemotherapy OS curve					

AIC	-181.5293	-216.2673	-226.5605	-220.0046	-23.70808
BIC	-177.6657	-210.4718	-220.765	-214.2091	-17.9126

Abbreviation: AIC, Akaike's information criterion; BIC, Bayesian information criterion; PFS, progression-free survival; OS, overall survival; dMMR, mismatch repair-deficient; pMMR, mismatch repair-proficient.

Supplementary Table S4: Background mortality rate in China

Age	Background mortality rate	Age	Background mortality rate	Age	Background mortality rate
23	0.00054	50	0.00363	77	0.04970
24	0.00056	51	0.00374	78	0.05466
25	0.00058	52	0.00397	79	0.06025
26	0.00057	53	0.00440	80	0.07162
27	0.00059	54	0.00497	81	0.07499
28	0.00061	55	0.00517	82	0.08228
29	0.00068	56	0.00562	83	0.08934
30	0.00070	57	0.00607	84	0.09852
31	0.00077	58	0.00679	85	0.10516
32	0.00081	59	0.00764	86	0.11221
33	0.00083	60	0.00850	87	0.12213
34	0.00094	61	0.00934	88	0.13448
35	0.00103	62	0.01033	89	0.14546
36	0.00106	63	0.01106	90	0.16220
37	0.00114	64	0.01293	91	0.16954
38	0.00121	65	0.01411	92	0.18356
39	0.00134	66	0.01463	93	0.18787
40	0.00151	67	0.01708	94	0.18915
41	0.00155	68	0.01847	95	0.19821
42	0.00182	69	0.02167	96	0.19900
43	0.00189	70	0.02525	97	0.18581
44	0.00207	71	0.02638	98	0.18027
45	0.00231	72	0.03047	99	0.22825
46	0.00236	73	0.03304	100	0.66667
47	0.00254	74	0.03675		
48	0.00311	75	0.04067		
49	0.00327	76	0.04132		

The background mortality rate in the model was estimated based on the China life table. The start age was assumed as 67 years old in the PC group and 66 years old in the chemotherapy group in the dMMR cohort, which was based on the median age in the baseline characteristic. In the pMMR cohort, the start age was 66 years old in the PC group and 65 years old in the chemotherapy group, respectively.

PC, pembrolizumab plus chemotherapy

Supplementary Table S5: Background mortality rate in the US

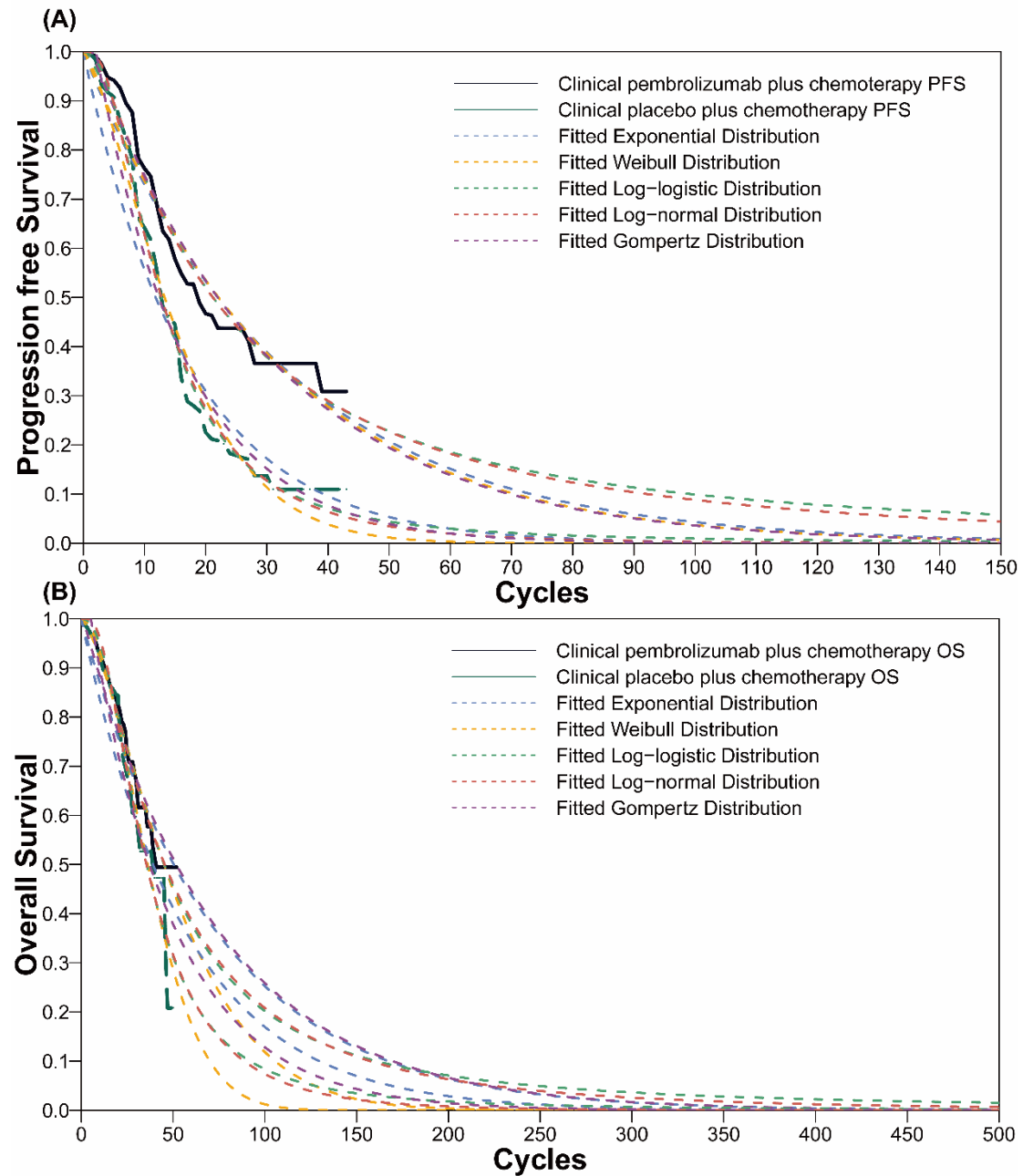
Age	Background mortality rate	Age	Background mortality rate	Age	Background mortality rate
23	0.001048	50	0.004090	77	0.035365
24	0.001083	51	0.004474	78	0.038878
25	0.001112	52	0.004891	79	0.043164
26	0.001143	53	0.005344	80	0.047923
27	0.001177	54	0.005822	81	0.052977
28	0.001216	55	0.006319	82	0.058839
29	0.001260	56	0.006825	83	0.065561
30	0.001306	57	0.007341	84	0.072949
31	0.001353	58	0.007877	85	0.081194
32	0.001401	59	0.008447	86	0.090814
33	0.001451	60	0.009065	87	0.101377
34	0.001504	61	0.009734	88	0.112927
35	0.001566	62	0.010444	89	0.125502
36	0.001635	63	0.011177	90	0.139125
37	0.001701	64	0.011928	91	0.153806
38	0.001763	65	0.012707	92	0.169539
39	0.001827	66	0.013557	93	0.186296
40	0.001907	67	0.014515	94	0.204030
41	0.002011	68	0.015634	95	0.222669
42	0.002136	69	0.016961	96	0.242121
43	0.002280	70	0.018596	97	0.262267
44	0.002445	71	0.020506	98	0.282973
45	0.002621	72	0.022564	99	0.304084
46	0.002821	73	0.024655	100	1.000000
47	0.003066	74	0.026878		
48	0.003369	75	0.029366		
49	0.003720	76	0.032205		

Background mortality rate in the model was estimated based on the US life table. The start age was assumed as 67 years old in the PC group and 66 years old in the chemotherapy group in the dMMR cohort, which was based on the median age in the baseline characteristic. In the pMMR cohort, the start age was 66 years old in the PC group and 65 years old in the chemotherapy group, respectively.

PC, pembrolizumab plus chemotherapy

Supplementary Figure S1: Kaplan-Meier Curve Fitting and Extrapolation in pMMR

population

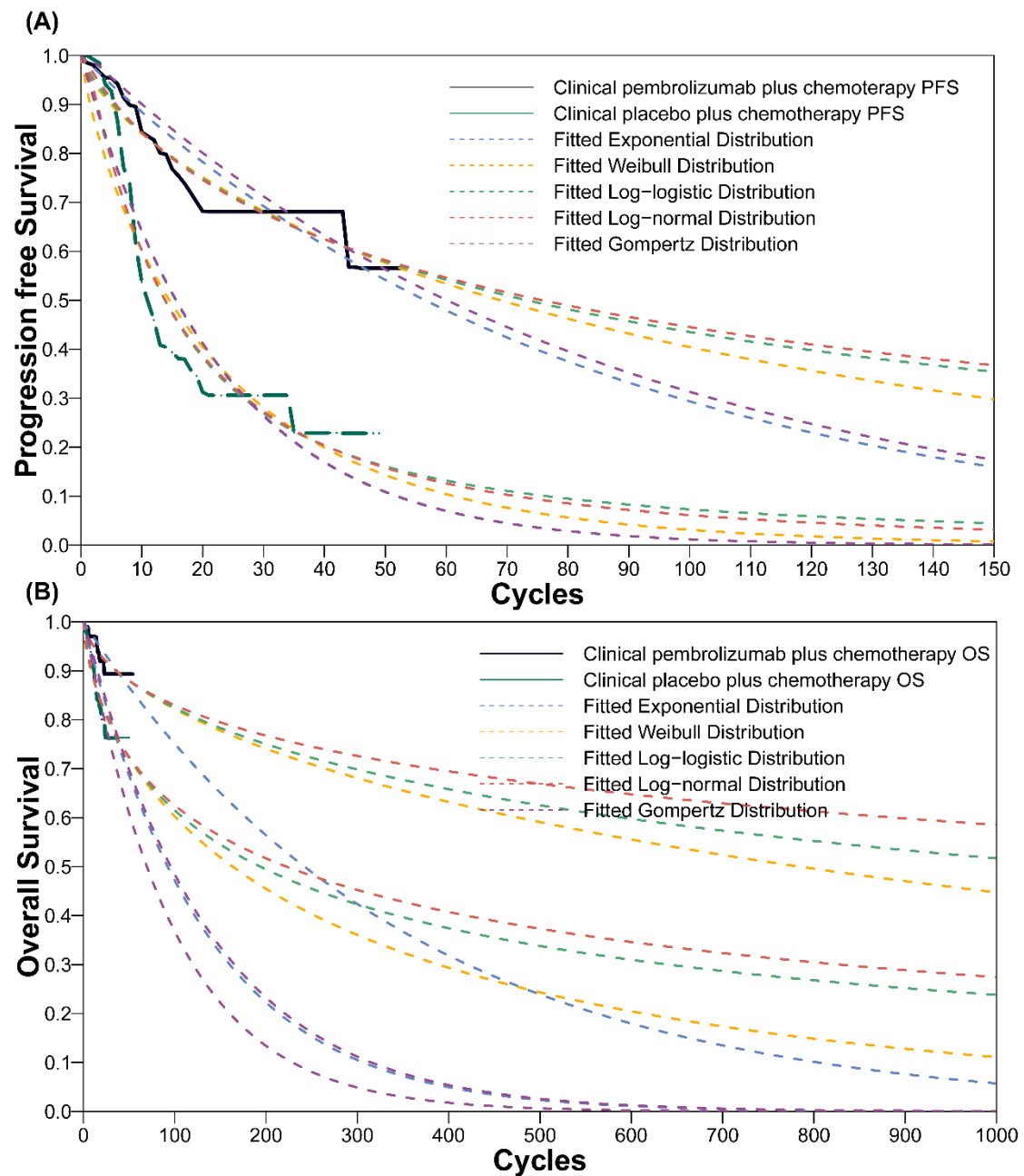


A, PFS Kaplan-Meier curve fitting and extrapolation for the pembrolizumab plus chemotherapy group and chemotherapy group in pMMR population; B, OS Kaplan-Meier curve fitting and extrapolation for pembrolizumab plus chemotherapy group and chemotherapy group in pMMR population.

Abbreviation: PFS, progression-free survival; OS, overall survival.

Supplementary Figure 2: Kaplan-Meier Curve Fitting and Extrapolation in dMMR

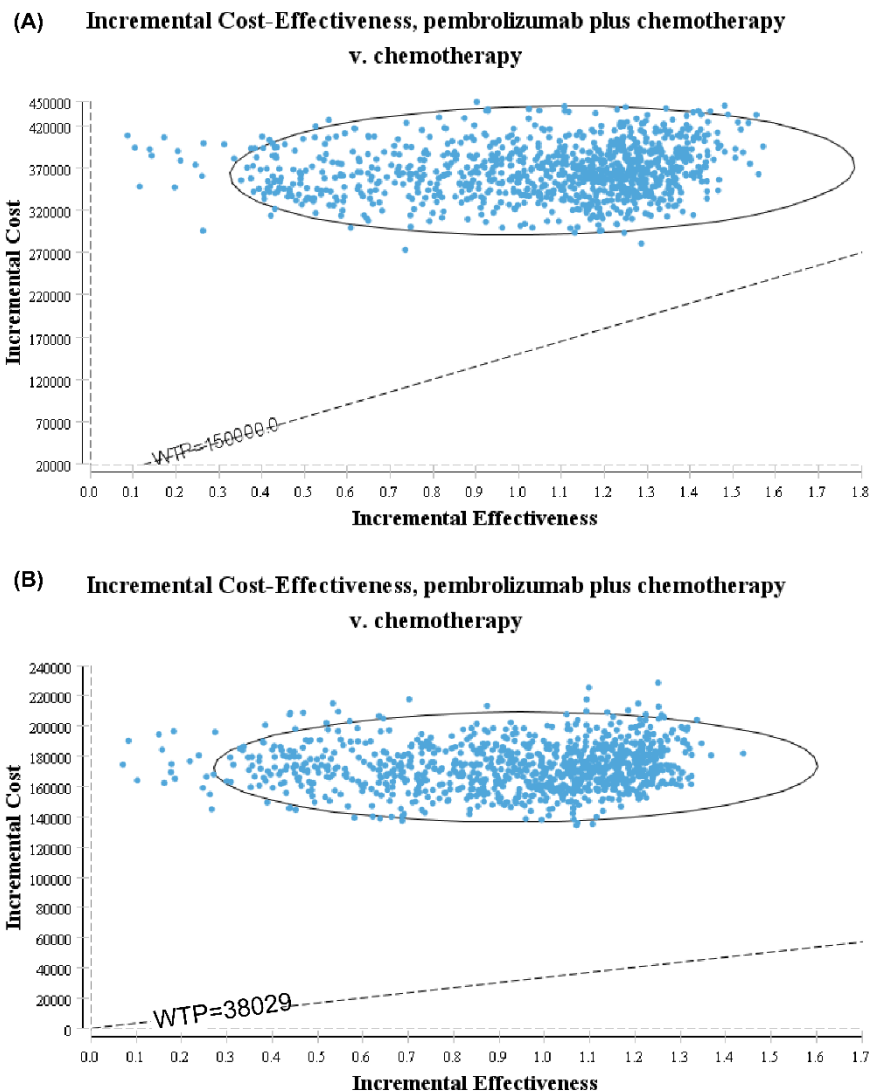
population



A, PFS Kaplan-Meier curve fitting and extrapolation for the pembrolizumab plus chemotherapy group and chemotherapy group in dMMR population; B, OS Kaplan-Meier curve fitting and extrapolation for pembrolizumab plus chemotherapy group and chemotherapy group in dMMR population.

Abbreviation: PFS, progression-free survival; OS, overall survival.

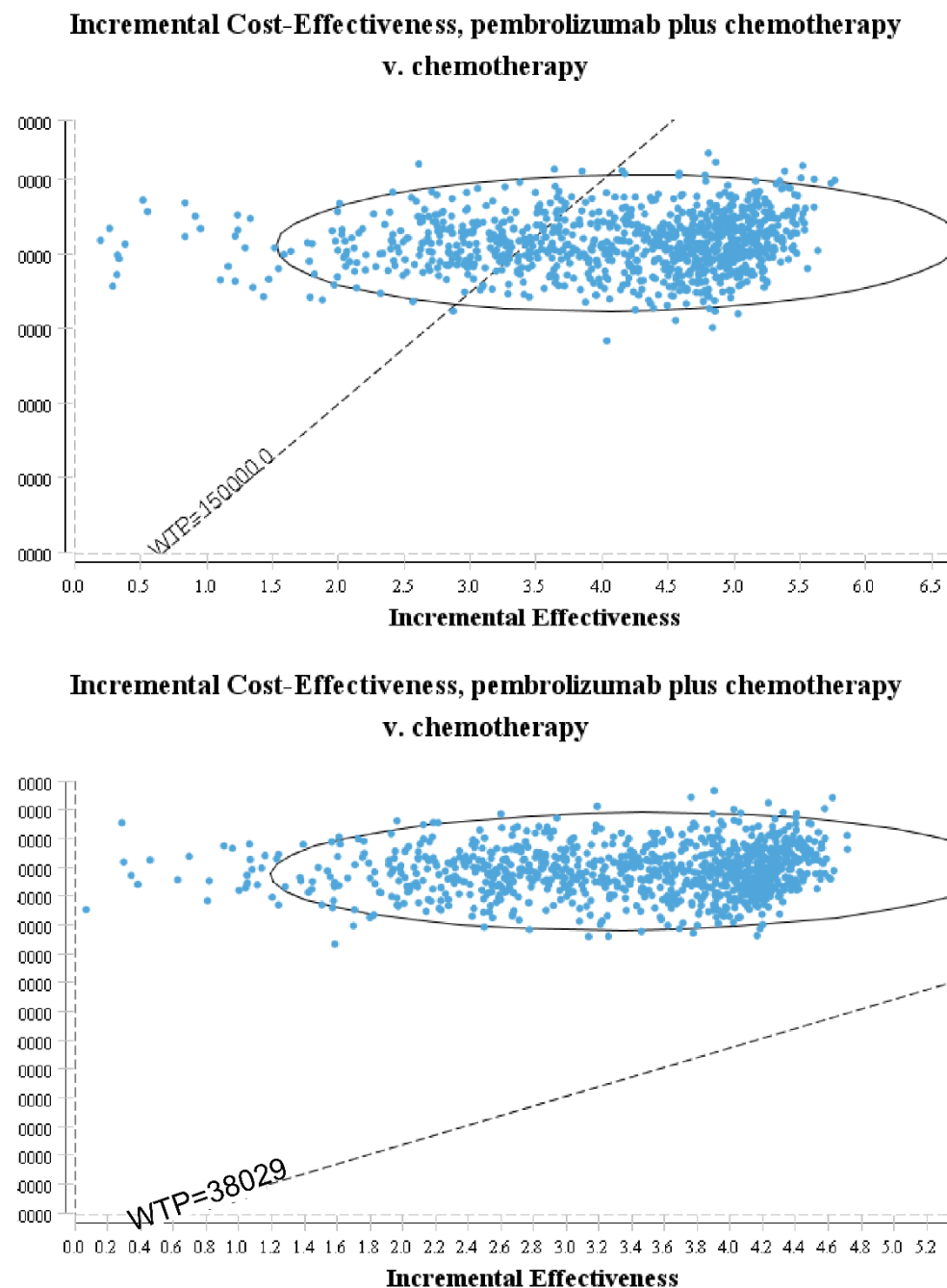
Supplementary Figure 3: Scatter Plot of Probability Sensitivity Analysis in pMMR population



A, Scatter plot of probability sensitivity analysis in the United States; B, Scatter plot of probability sensitivity analysis in China. Each point in the diagram represents a simulation result of 10,000 Monte Carlo simulations. Ellipse represents the 95% CI and the dotted line represents WTP in the US and China. Points to the right of the dotted line are considered cost-effective.

Abbreviations: WTP, willingness-to-pay

Supplementary Figure 4: Scatter Plot of Probability Sensitivity Analysis in dMMR population



A, Scatter plot of probability sensitivity analysis in the United States; B, Scatter plot of probability sensitivity analysis in China. Each point in the diagram represents a simulation result of 10,000 Monte Carlo simulations. Ellipse represents the 95% CI and the dotted line represents WTP in the US and China. Points to the right of the dotted line are considered cost-effective.

Abbreviations: WTP, willingness-to-pay