Supplementary materials

Table S1. CHEERS 2022 Checklist

Topic	No.	Item	Reported
Title			
	1	Identify the study as an economic evaluation and specify the interventions being compared.	Yes
Abstract			
	2	Provide a structured summary that highlights context, key methods, results, and alternative analyses.	Yes
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.	Yes
Methods			
Health economic analysis plan	4	Indicate whether a health economic analysis plan was developed and where available.	Yes
Study population	5	Describe characteristics of the study population (such as age range, demographics, socioeconomic, or clinical characteristics).	Yes
Setting and location	6	Provide relevant contextual information that may influence findings.	Yes
Comparators	7	Describe the interventions or strategies being compared and why chosen.	Yes
Perspective	8	State the perspective(s) adopted by the study and why chosen.	Yes
Time horizon	9	State the time horizon for the study and why appropriate.	Yes
Discount rate	10	Report the discount rate(s) and reason chosen.	Yes
Selection of outcomes	11	Describe what outcomes were used as the measure(s) of benefit(s) and harm(s).	Yes
Measurement of outcomes	12	Describe how outcomes used to capture benefit(s) and harm(s) were measured.	Yes
Valuation of outcomes	13	Describe the population and methods used to measure and value outcomes.	Yes
Measurement and valuation of resources and costs	14	Describe how costs were valued.	Yes
Currency, price date, and conversion	15	Report the dates of the estimated resource quantities and unit costs, plus the currency and year of conversion.	Yes
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.	Yes
Analytics and assumptions	17	Describe any methods for analysing or statistically transforming data, any extrapolation methods, and approaches for validating any model used.	Yes
Characterising heterogeneity	18	Describe any methods used for estimating how the results of the study vary for subgroups.	NA

Topic	No.	Item	Reported
Characterising distributional effects	19	Describe how impacts are distributed across different individuals or adjustments made to reflect priority populations.	No
Characterising uncertainty	20	Describe methods to characterise any sources of uncertainty in the analysis.	Yes
Approach to engagement with patients and others affected by the study	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.	NA
Results			
Study parameters	22	Report all analytic inputs (such as values, ranges, references) including uncertainty or distributional assumptions.	Yes
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.	Yes
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.	Yes
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	NA
Discussion			
Study findings, limitations, generalisability, and current knowledge	26	Report key findings, limitations, ethical or equity considerations not captured, and how these could affect patients, policy, or practice.	Yes
Other relevant information			
Source of funding	27	Describe how the study was funded and any role of the funder in the identification, design, conduct, and reporting of the analysis	Yes
Conflicts of interest	28	Report authors conflicts of interest according to journal or International Committee of Medical Journal Editors requirements.	Yes

From: Husereau D, Drummond M, Augustovski F, et al. Consolidated Health Economic Evaluation Reporting Standards 2022 (CHEERS 2022) Explanation and Elaboration: A Report of the ISPOR CHEERS II Good Practices Task Force. Value Health 2022;25. doi:10.1016/j.jval.2021.10.008

Table S2. Parameters used to fit survival curves in the five parametric models

	Exponential	Weibull		Log-normal		Log-logistic		Gamma	
	λ	γ	λ	μ	σ	γ	λ	γ	λ
Disease-free survival									
Capecitabine	0.00315	0.701	646.964	6.400	0.908	0.750	472.924	0.689	0.00115
Observation	0.00505	0.790	274.565	5.437	0.753	0.868	194.567	0.778	0.00293
Overall survival									
Capecitabine	0.00254	0.983	405.775	6.074	0.627	1.037	335.195	1.008	0.00259
Observation	0.00342	1.086	258.655	5.555	0.505	1.165	210.047	1.133	0.00451

Table S3. The results of goodness-of-fit to the individual-level data from the SYSUCC-001 trial

	Exponential	Weibull	Log-normal	Log-logistic	Gamma
Disease-free survival					
Capecitabine					
AIC	515.714	511.689	**505.371**	510.195	512.509
BIC	519.113	518.486	**512.167**	516.992	519.306
SSE	0.122	0.057	**0.047**	0.049	0.063
–2 log-likelihood statistic	-256.857	-253.845	**-250.685**	-253.098	-254.255
Observation					
AIC	706.276	704.399	**698.656**	702.309	705.133
BIC	709.637	711.122	**705.379**	709.031	711.855
SSE	0.096	0.043	**0.025**	0.031	0.051
–2 log-likelihood statistic	-352.138	-350.200	**-347.328**	-349.154	-350.566
Overall survival					
Capecitabine					
AIC	448.359	450.349	**446.195**	449.53	450.358
BIC	**451.758**	457.146	452.991	456.326	457.154
SSE	0.021	0.019	**0.015**	0.017	0.021
–2 log-likelihood statistic	-223.180	-223.175	**-221.097**	-222.765	-223.179
Observation					
AIC	549.658	551.354	**547.725**	550.201	551.154
BIC	**553.019**	558.076	554.447	556.923	557.877
SSE	0.022	0.028	**0.018**	0.022	0.029
–2 log-likelihood statistic	-273.829	-273.677	**-271.862**	-273.100	-273.577

SYSUCC: Sun Yat-sen University Cancer Center; AIC: Akaike information criterion; BIC: Bayesian information criterion; SSE: Sum of the squared errors.

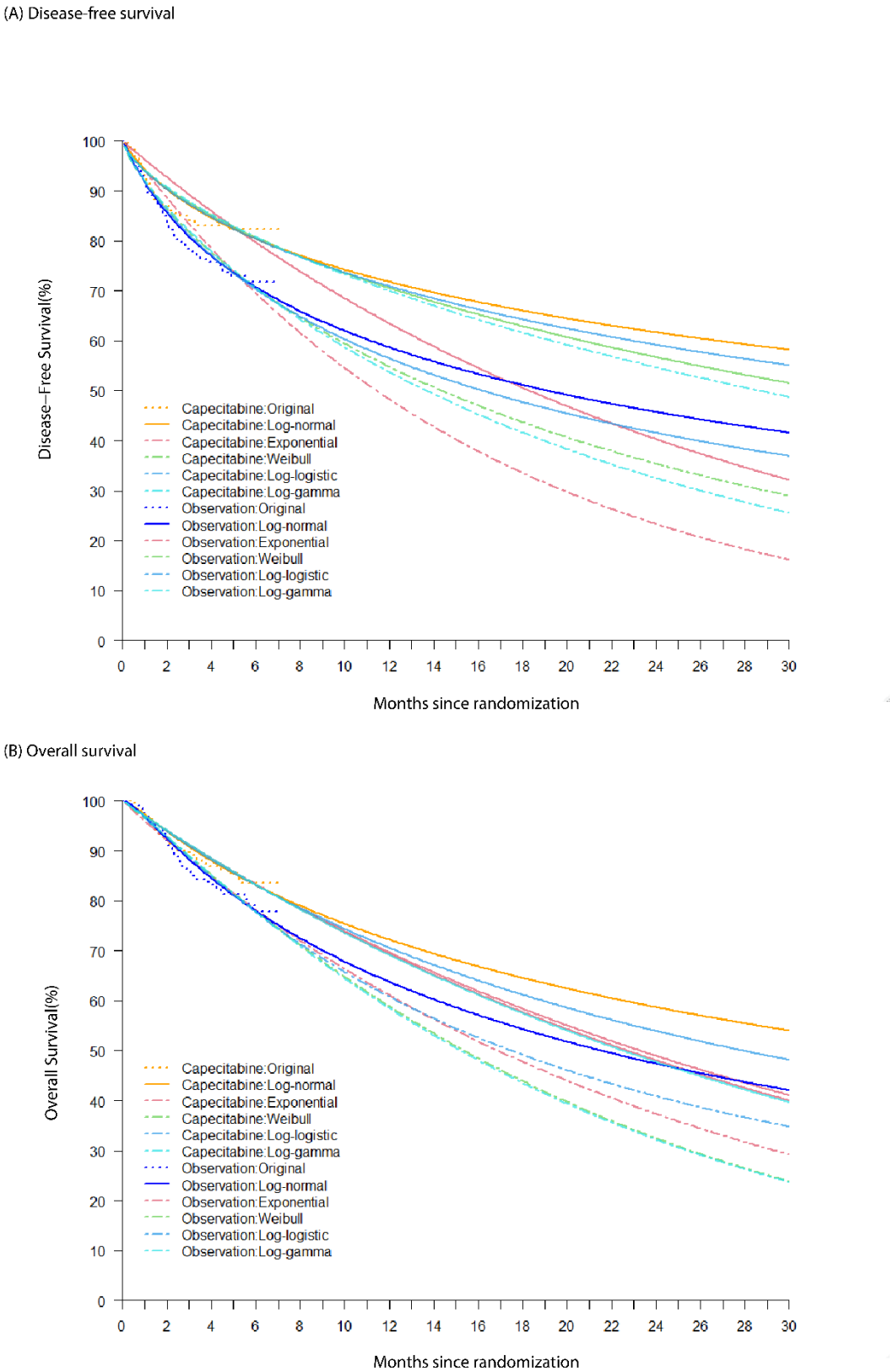

Figure S1. The fitted survival curves by five parametric distributions for the capecitabine maintenance and observational groups.

Table S4. Time-dependent transition probabilities matrix of two groups

	Cycle months	pFTF	pFTR	pFTD	pRTR	pRTD
Capecitabine maintenance group						
	1	0.995075	0.00483	9.50E-05	0.880343	0.119657
	2	0.994216	0.005689	9.50E-05	0.751205	0.248795
	3	0.994363	0.005542	9.50E-05	0.660326	0.339674
	4	0.994581	0.005324	9.50E-05	0.591029	0.408971
	5	0.994797	0.005108	9.50E-05	0.534812	0.465188
	6	0.994995	0.00491	9.50E-05	0.487484	0.512516
	7	0.995176	0.004729	9.50E-05	0.446635	0.553365
	8	0.99534	0.004565	9.50E-05	0.410735	0.589265
	9	0.995489	0.004416	9.50E-05	0.378745	0.621255
	10	0.995625	0.00428	9.50E-05	0.349927	0.650073
	11	0.99575	0.004155	9.50E-05	0.323736	0.676264
	12	0.995865	0.00404	9.50E-05	0.299756	0.700244
	……	……	……	……	……	……
	360	0.997784	0	0.00221598	0	1
Observational group						
	Cycle months	pFTF	pFTR	pFTD	pRTR	pRTD
	1	0.994786	0.005119	9.50E-05	0.923519	0.076481
	2	0.992458	0.007447	9.50E-05	0.831824	0.168176
	3	0.992126	0.007779	9.50E-05	0.758097	0.241903
	4	0.992146	0.007759	9.50E-05	0.699184	0.300816
	5	0.992276	0.007629	9.50E-05	0.650101	0.349899
	6	0.992445	0.00746	9.50E-05	0.608046	0.391954
	7	0.992625	0.00728	9.50E-05	0.571288	0.428712
	8	0.992805	0.0071	9.50E-05	0.538677	0.461323
	9	0.99298	0.006925	9.50E-05	0.509407	0.490593
	10	0.993148	0.006757	9.50E-05	0.482887	0.517113
	11	0.993307	0.006598	9.50E-05	0.458672	0.541328
	12	0.993459	0.006446	9.50E-05	0.436416	0.563584
	……	……	……	……	……	……
	360	0.997784	0	0.00221598	0	1

pFTF: Transition probability from disease-free state to disease-free state.

pFTR: Transition probability from disease-free state to relapse state.

pFTD: Transition probability from disease-free state to death state.

pRTR: Transition probability from relapse state to relapse state.

pRTD: Transition probability from relapse to death state.

Table S5. The cost-effectiveness of capecitabine maintenance therapy based on alternative survival functions

Survival functions	Effectiveness (QALYs)	Incremental Effectiveness	Cost ($)	Incremental Cost	ICER ($ per QALY)
Exponential					
Observation	6.92	—	4176.94	—	—
Capecitabine	8.36	1.44	8327.07	4150.13	2876.78
Weibull					
Observation	7.55	—	5238.13	—	—
Capecitabine	9.12	1.57	8819.09	3580.96	2284.43
Log-logistic					
Observation	7.78	—	5218.24	—	—
Capecitabine	9.19	1.41	8825.03	3606.79	2561.02
Gamma					
Observation	7.43	—	5375.73	—	—
Capecitabine	9.04	1.61	8879.83	3504.10	2176.91

—: Not applicable.
ICER: Incremental cost-effectiveness ratio; QALY: Quality-adjusted life year.