

INCORPORATING PATIENT PREFERENCES INTO THE VALUE ASSESSMENT OF NOVEL LUNG CANCER DRUGS: EVIDENCE FROM A DISCRETE CHOICE EXPERIMENT

ACCEPTANCE CODE

HTA 18

Quantifying trade-offs among survival, health-related quality of life and out-of-pocket costs

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Research question

- Medical insurance decisions for novel lung cancer drugs must balance survival benefit, quality of life and financial burden.
- Patient preferences are often missing from price-value discussions, even though affordability can determine whether a treatment is acceptable.
- Objective: quantify how patients trade off incremental overall survival (OS), HRQoL utility and additional monthly out-of-pocket cost.

DCE focus

This poster presents only the discrete choice experiment component of the supplied thesis.

Study design

Setting and fieldwork

- Hospital-based survey in six cities across Jiangsu and Shandong, China.
- Data collection: 10 September to 30 November 2025; participants provided informed consent.

Choice experiment

OS2

Incremental overall survival

HRQoL2

Incremental HRQoL utility

Cost

Additional monthly out-of-pocket cost

- Each patient completed 8 choice tasks comparing hypothetical treatment options.
- A mixed logit model estimated preference parameters and captured individual-level heterogeneity.

Analysis

Relative importance and willingness to pay (WTP) were derived from the estimated coefficients. WTP is an expression of preference in the study scenarios, not a reimbursement threshold.

Sample profile

460 questionnaires distributed; 424 valid patients included

424

valid patients

3,392

valid choice sets

8

tasks / patient

Key sample characteristics

Male		65.09%
>65 years		62.97%
Resident insurance		62.50%

Analytic sample

The final sample covered different disease stages and insurance types. Stage IV and urban-rural resident insurance were the largest groups reported in the thesis.

Mixed logit main effects

All three attributes significantly influenced treatment choice

Incremental OS

+0.1116

p < 0.001

Longer survival increased choice probability.

Incremental HRQoL

+1.5553

p < 0.001

Quality-of-life improvement increased choice probability.

Additional cost

-0.2587

p < 0.001

Higher monthly cost reduced choice probability.

Direction of preferences

Patients preferred more survival and better quality of life, but preferred lower additional cost. The statistically significant random-parameter variation indicates meaningful differences between individuals.

Relative importance

Cost and survival contributed almost equally

Additional cost		44.00%
Survival benefit		43.79%
HRQoL improvement		12.21%

Core trade-off

In the choice scenarios, patients weighed financial burden and additional survival as the dominant drivers of treatment acceptance; HRQoL remained a stable positive attribute.

Willingness to pay

Preference coefficients converted into interpretable monetary values

CNY 431.25

per additional month of OS

CNY 601.08

per 0.1 increase in HRQoL utility

CNY 78,869.84

marginal WTP per QALY

Interpretation

WTP provides a patient-side reference for price-value dialogue. It should not be used directly as a national payment standard, reimbursement threshold or drug price recommendation.

Preference heterogeneity

Patients did not value every attribute in the same way

- Income groups: all groups preferred longer survival; higher-income groups showed stronger sensitivity to survival and HRQoL gains, while lower-income patients were more cost-sensitive.
- Clinical stage: survival benefit was positively valued across all stages, but the magnitude and significance of HRQoL and cost preferences varied.
- These differences suggest that the same reimbursement policy can affect access and acceptability differently across patient groups.

Equity signal

Patient preference evidence can make distributional concerns visible: affordability is not only an average effect, and disease stage can shape the value patients place on quality of life.

What the DCE adds

A patient-side complement to clinical and economic evidence

1 Quantifies trade-offs

A single model places survival, HRQoL and cost in the same preference structure.

2 Makes burden visible

The near-equal importance of cost and survival shows why affordability can be central to acceptance.

3 Supports dialogue

WTP and heterogeneity results can inform patient-centred discussion without replacing HTA or budget analysis.

Implications & limitations

Implications

- Include patient preferences when discussing reimbursement, access and value-based care for novel lung cancer drugs.
- Use survival, HRQoL and cost together when explaining the patient-perceived value of treatment options.

Limitations

- Participants were recruited from selected hospitals in Jiangsu and Shandong; broader external validation is needed.
- DCE estimates depend on the attributes and levels used in the hypothetical choice scenarios.
- WTP is preference-based and does not establish a policy threshold or actual ability to pay.

Conclusion

Patients preferred additional survival and HRQoL improvement, while additional cost reduced acceptance. Cost and survival were the dominant, nearly equal drivers of choice.