MSR258

Comparing the Measurement Properties of EQ-5D-5L and QLU-C10D in Chinese Patients with Non-Small Cell Lung Cancer

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BACKGROUND

QLU-C10D, a disease-specific preference-based measure, may be more sensitive than EQ-5D-5L; however, evidence in Chinese patients with non-small cell lung cancer (NSCLC) remains limited.

OBJECTIVES

To compare the measurement properties of EQ-5D-5L and QLU-C10D in Chinese patients with NSCLC.

METHODS

Design
Multicenter cross-sectional study

Setting
20 hospitals across 18 provinces in China

Participants
Adults with NSCLC

Data collection
Patients completed paper-based questionnaires covering sociodemographic and clinical information, the EQ-5D-5L, and the EORTC QLQ-C30.

Utility estimation
- EQ-5D-5L:
  - Chinese value set
- QLU-C10D:
  - Chinese general public value set
  - Patient value set

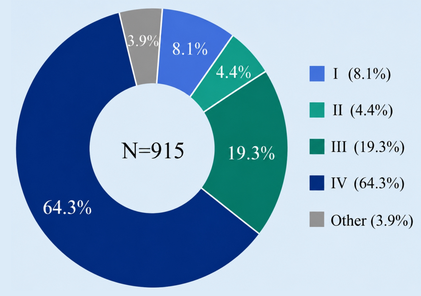
Analysis
Compared score distributions, proportions reporting full health, and agreement; assessed known-groups validity using effect sizes (ESs) and relative efficiency (RE).

RESULTS

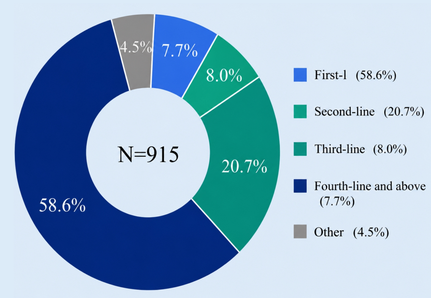
Key Characteristics of Patients (N=915)

Mean age (years)	61.5
Female (%)	36.4

Cancer stage



Treatment line



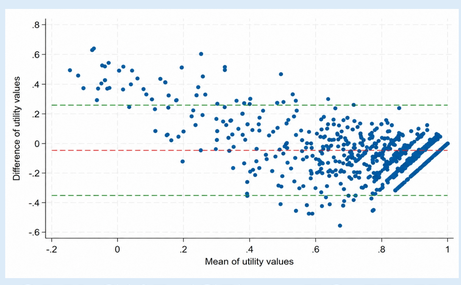
Utility Scores in Chinese Patients with NSCLC

Instrument (Value set)	Mean (SD)	Min	Max	Ceiling		Floor	
				N	%	N	%
EQ-5D-5L (China)	0.802(0.274)	-0.391	1	232	25.36	3	0.33
QLU-C10D (General Public)	0.755(0.205)	0.083	1	45	4.92	2	0.22
QLU-C10D (Patient)	0.634(0.248)	-0.092	1	45	4.92	2	0.22

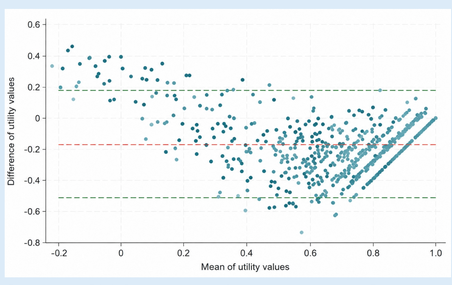
Agreement

Intraclass Correlation Coefficients (ICCs)
Agreement between EQ-5D-5L and QLU-C10D utilities was good when QLU-C10D utilities were based on the general public value set (ICC = 0.78), but moderate when they were based on the patient value set (ICC = 0.64).

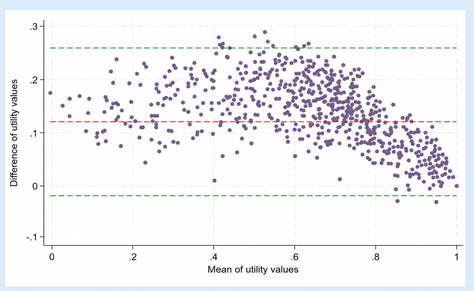
Bland - Altman Plots (Mean Difference ± 1.96SD)



QLU-C10D (GP) vs. EQ-5D-5L
Bias: -0.0472



QLU-C10D (Patient) vs. EQ-5D-5L
Bias: -0.1679



QLU-C10D (GP) vs. QLU-C10D (Patient) Bias: -0.1206

Known-groups Validity

Group	Effect Sizes (95% CIs)			Relative Efficiency (95% CIs)		
	EQ-5D-5L	QLU-C10D (General Public)	QLU-C10D (Patient)	QLU-C10D (GP) vs. EQ-5D-5L	QLU-C10D (Patient) vs. EQ-5D-5L	QLU-C10D (GP) vs. QLU-C10D (Patient)
Cancer stage (I-II vs. III–IV)	0.269 [0.072, 0.466]	0.280 [0.083, 0.477]	0.271 [0.073, 0.468]	**1.083 [0.634, 1.619]**	**1.011 [0.502, 1.634]**	**1.071 [0.875, 1.444]**
Adverse events (No vs. Yes)	0.312 [0.125, 0.499]	0.439 [0.252, 0.627]	0.455 [0.267, 0.642]	**1.982 [1.393, 2.822]**	**2.124 [1.432, 3.099]**	**0.933 [0.830, 1.067]**
Surgery (No vs. Yes)	-0.224 [-0.365, -0.082]	-0.195 [-0.336, -0.054]	-0.190 [-0.331, -0.048]	**0.761 [0.247, 1.526]**	**0.720 [0.162, 1.597]**	**1.058 [0.731, 1.696]**
Metastasis (No vs. Yes)	0.305 [0.154, 0.456]	0.282 [0.131, 0.433]	0.272 [0.121, 0.423]	**0.854 [0.446, 1.321]**	**0.793 [0.366, 1.351]**	**1.076 [0.840, 1.441]**
Treatment line (1 vs. ≥2)	0.224 [0.076, 0.372]	0.253 [0.105, 0.402]	0.252 [0.104, 0.400]	**1.279 [0.581, 3.356]**	**1.262 [0.546, 3.808]**	**1.011 [0.721, 1.436]**

QLU-C10D was more discriminative for cancer stage, adverse events, and treatment line, whereas EQ-5D-5L performed better for metastasis and surgery, only the difference for adverse-event status was significant based on the 95% CIs.

CONCLUSIONS

EQ-5D-5L and QLU-C10D generated different utility estimates and demonstrated complementary measurement properties in Chinese patients with NSCLC. These findings suggest that the choice of preference-based measure and value set may influence QALY estimates and cost-effectiveness results in NSCLC.



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3 Cao Y, Li H, Jin X, King MT, Norman R, Cheng LJ, Yu H, Huang W, Luo N. Quality of life utility-Core 10 dimensions (QLU-C10D) scores based on cancer patients' health preferences are more sensitive than those based on general public's health preferences. Eur J Health Econ. 2026 Jun;27(4):843-855.

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