

Oncologists' and urologists' preferences for first-line treatment of locally advanced/unresectable metastatic urothelial carcinoma: a discrete choice experiment conducted in 5 European countries

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COI Disclosure Information

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Gaps in Knowledge of Preferences for Treatment Attributes and Profiles Among Physicians in Oncology

- A prior systematic literature review¹ of preference studies in oncology found that physicians routinely rank the survival attribute of treatment as most important
- However, little is known about heterogeneity in physician preferences
 - In different cancers and indications
 - Across countries
 - In trading off key attributes (eg, survival and adverse events)
 - And how this impacts preferred treatment profiles
- **Objective:** to use the example of aUC to help inform our understanding of differences in physician preferences in the broader oncology space

aUC, locally advanced or metastatic urothelial carcinoma.

1. Collacott H, et al. Patient. 2021;14(6):775-90.

Study Objectives

1

To quantify preferences for attributes of 1L aUC treatments among oncologists and urologists in 5 European countries (Eu5; France, Germany, Italy, Spain, and the UK)

2

To assess oncologists' and urologists' preferences for different 1L treatment profiles across the 5 countries

3

To assess latent heterogeneity in oncologists' and urologists' preferences for treatment attributes and profiles

Setting and Study Population



Survey instrument

- Web-based survey incorporating a DCE
- Administered August to September 2022 in Eu5 countries
- Adapted from a US study¹
- Asked about a typical 69-year-old male patient with aUC



Study population

- Oncologists and urologists who:
- ✓ Treat/manage ≥ 2 patients with aUC per month
 - ✓ Have been practicing for ≥ 3 years
 - ✓ Spend $\geq 50\%$ of their time providing direct patient care



Sample size

- 500 physicians (100 per country)
- Powered at 90% for full sample; 80% for country-level analysis²

aUC, locally advanced or metastatic urothelial carcinoma; DCE, discrete choice experiment.

1. Grivas P, et al. Future Oncol. Published online March 6, 2023. 2. Louviere JJ, Hensher DA, Swait JD. *Stated Choice Methods: Analysis and Applications*. Cambridge University Press; 2000.

DCE Question Example

5 treatment attributes

Attribute levels varied according to a fractional factorial design¹

1L, first line; DCE, discrete choice experiment; mo, month; TRAE, treatment-related adverse event; wk, week.
1. Jaynes J, et al. Stat Med. 2016;35(15):2543-60.

	Treatment plan 1	Treatment plan 2
Treatment course	75% grade 3/4 TRAEs 15% grade 3/4 TRAEs 1 mo 2 mo 3 mo 4 mo Until progression Treatment 1 given for 4 mo followed by treatment 2 given until disease progression or unacceptable toxicity	90% grade 3/4 TRAEs 15% grade 3/4 TRAEs 1 mo 2 mo 3 mo 4 mo Until progression Treatment 1 given for 4 mo followed by treatment 2 given until disease progression or unacceptable toxicity
Frequency of administration	2 wk 6 wk Once every 2 wk Once every 6 wk	2 wk 2 wk Once every 2 wk Once every 2 wk
Time to progression, median	5 mo	9 mo
Overall survival, median	12 mo	16 mo
Which treatment plan would you recommend?	☐	☐

2 hypothetical treatment options

No treatment was not an option

Each participant answered 12 questions

Hypothetical 1L Treatment Profiles and Attribute Levels

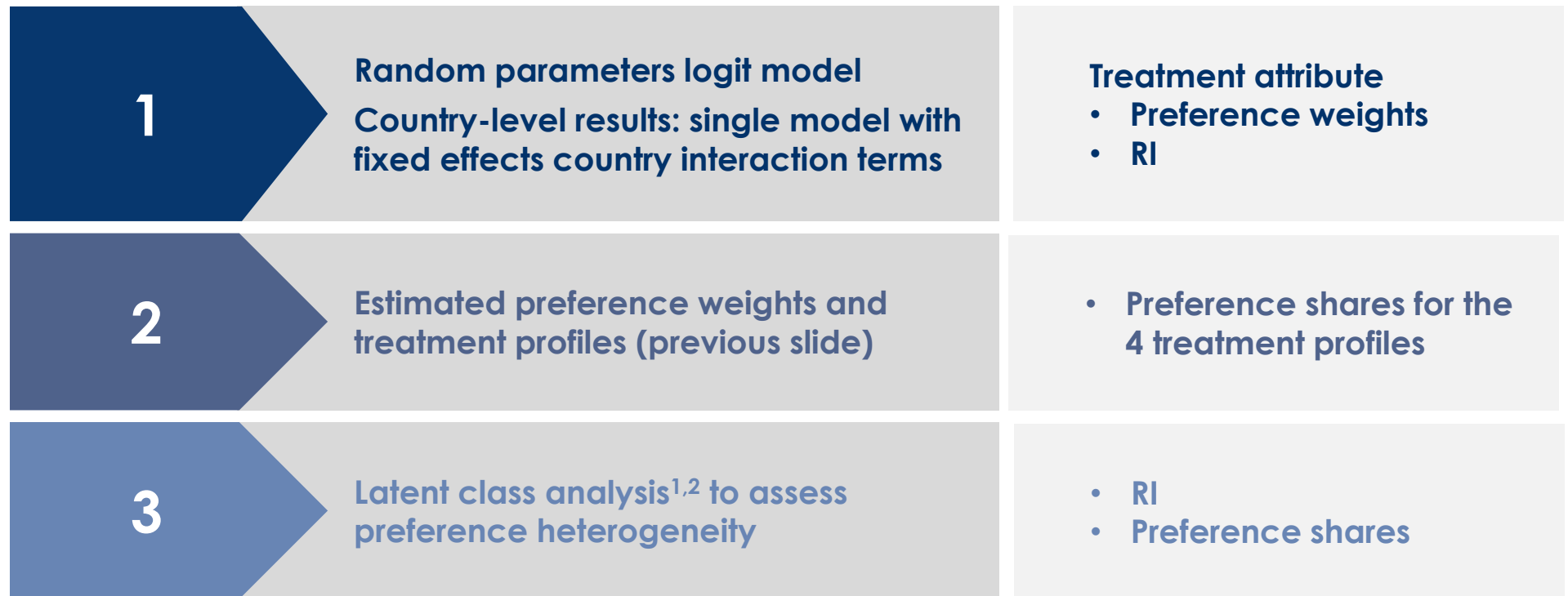
Treatment attributes calibrated from clinical trial data as of fall 2021

	5 treatment attributes				
4 hypothetical treatment profiles	Grade 3/4 TRAE	Induction frequency	Maintenance frequency	Progression-free survival	Overall survival
1L chemotherapy only	75% 4 months → no maintenance treatment	Q1W	None	5 months	12 months
1L ICI monotherapy	15% until progression or unacceptable toxicity	Q6W	Q6W	6 months	16 months
1L ICI combination therapy* (ICI + chemotherapy followed by ICI)	90% 4 months (ICI + chemotherapy) → 15% (ICI) until progression or unacceptable toxicity	Q1W	Q6W	9 months	16 months
1L ICI maintenance therapy (chemotherapy followed by ICI)	75% 4 months (chemotherapy) → 15% (ICI) until progression or unacceptable toxicity	Q1W	Q2W	9 months	24 months

1L, first line; ICI, immune checkpoint inhibitor; Q1W, once every week; Q2W, once every 2 weeks; Q6W, once every 6 weeks; TRAE, treatment-related adverse event.

*Not approved in Europe.

Statistical Analysis and Outcome Measures



RI, relative importance.

1. Boeri M, et al. Pharmacoeconomics. 2020;38(6):593-606. 2. Weller BE, et al. J Black Psychol. 2020;46(4):287-311.

Physician Demographics and Practice Characteristics

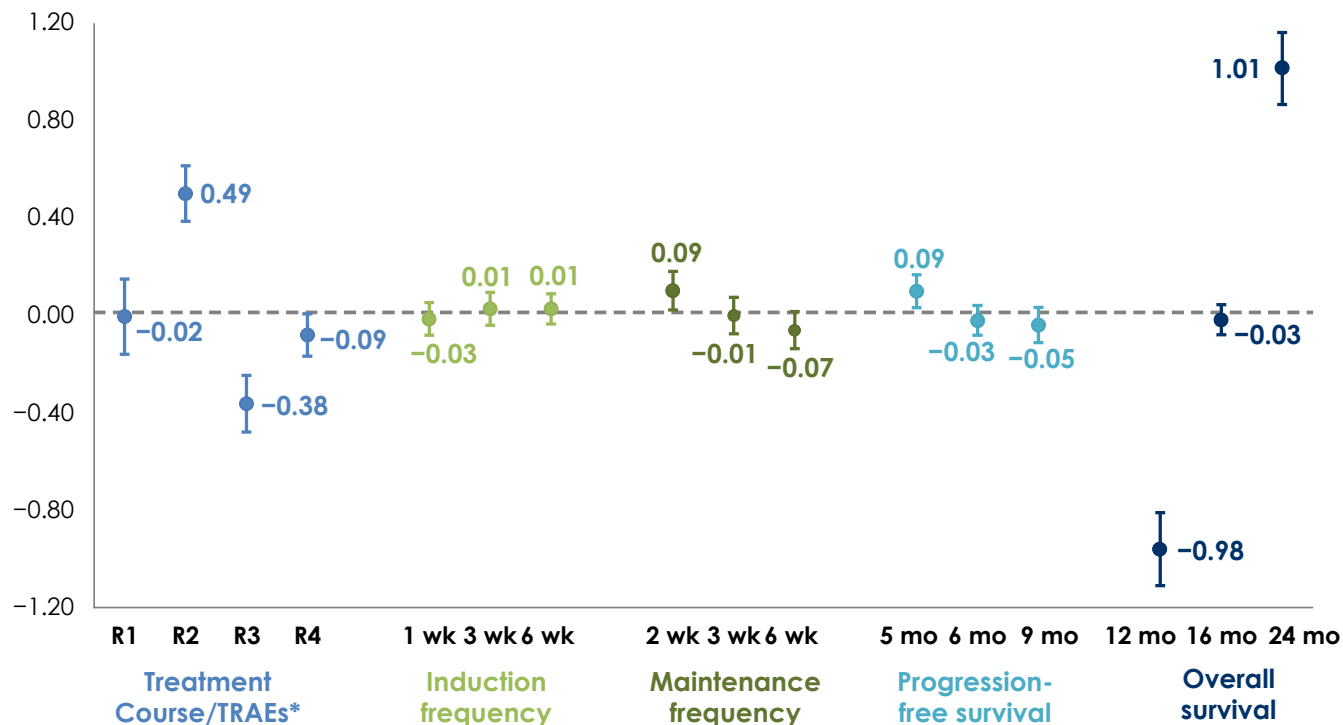
	Full sample (n=498)	Range across countries, % (country)	p value
Age, years			0.266
Mean (SD)	45 (8)	44 (ES)-46 (DE)	
Sex, n (%)			<0.001
Female	110 (22)	13 (FR)-47 (ES)	
Male	359 (72)	48 (ES)-83 (FR)	
Prefer not to answer	29 (6)	3 (DE)-10 (UK)	
Primary specialty, n (%)			<0.001
Oncology	343 (69)	54 (DE)-77 (IT)	
Urology	155 (31)	23 (IT)-46 (DE)	
Years in practice, n (%)			0.038
3-10	154 (31)	21 (UK)-42 (IT)	
11-18	259 (52)	42 (IT)-64 (UK)	
>18	85 (17)	14 (UK)-21 (DE)	
Practice setting, n (%)			<0.001
Public teaching hospital	200 (40)	24 (IT)-58 (ES)	
Public nonteaching hospital	121 (24)	19 (FR)-32 (IT)	
Private hospital	101 (20)	7 (DE)-36 (FR)	
Public or private office	53 (11)	0 (ES)-28 (DE)	
Specialist cancer center	23 (5)	2 (ES)-7 (DE)	
Average number of patients with aUC treated per month, n (%)			<0.001
2-10	226 (45)	31 (FR)-55 (DE)	
11-19	140 (28)	17 (ES)-49 (IT)	
>20	132 (27)	10 (IT)-39 (FR)	

Full sample

- **69%** were oncologists
- **69%** had ≥10 years in practice
- **40%** practiced in public teaching hospitals
- **45%** treated 2-10 patients with aUC per month
- There were **significant differences between countries** for all characteristics except age

Preference Weights Across Treatment Attributes

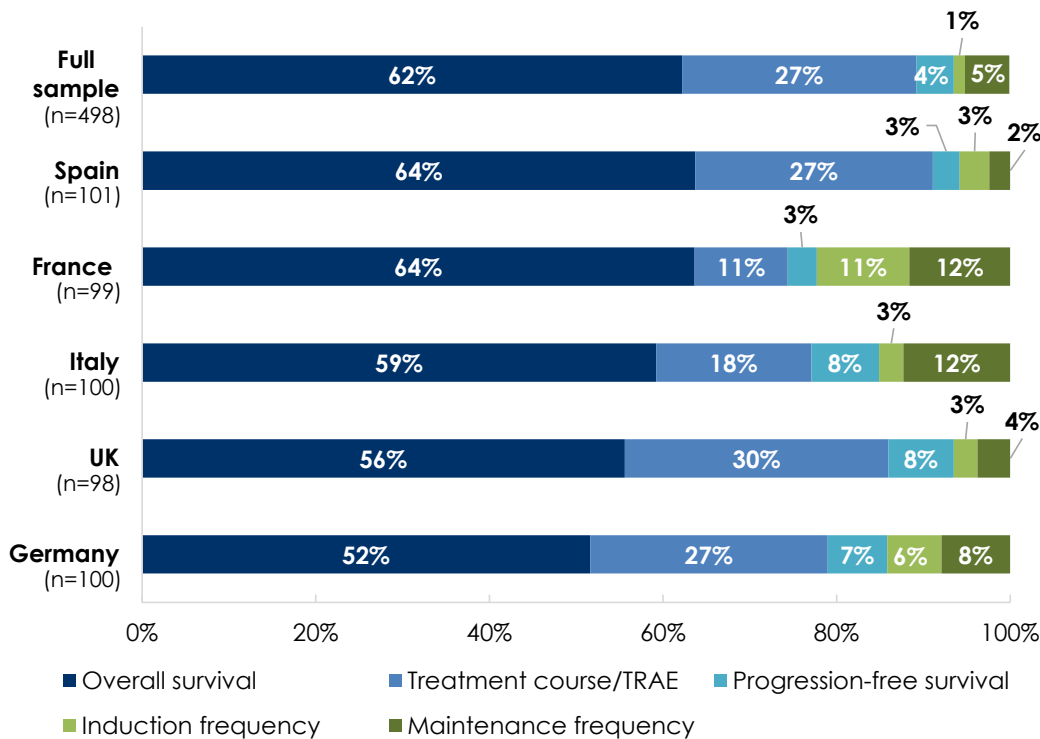
Full sample (n=498)



- Physicians were **more likely** to choose a treatment associated with greater increases in **overall survival** (24 months) and a **treatment course with greater reductions in TRAEs** (R2) compared with the other attribute levels
- Physicians placed relatively less importance on frequency of administration and changes in **progression-free survival**

*R1, 75% grade 3/4 TRAEs 4 months → no treatment until progression. R2, 15% grade 3/4 TRAEs until progression. R3, 90% grade 3/4 TRAEs 4 months → 15% grade 3/4 TRAEs until progression. R4, 75% grade 3/4 TRAEs 4 months → 15% grade 3/4 TRAEs until progression.
mo, month; TRAE, treatment-related adverse event; wk, week.

Relative Importance of Treatment Attributes*



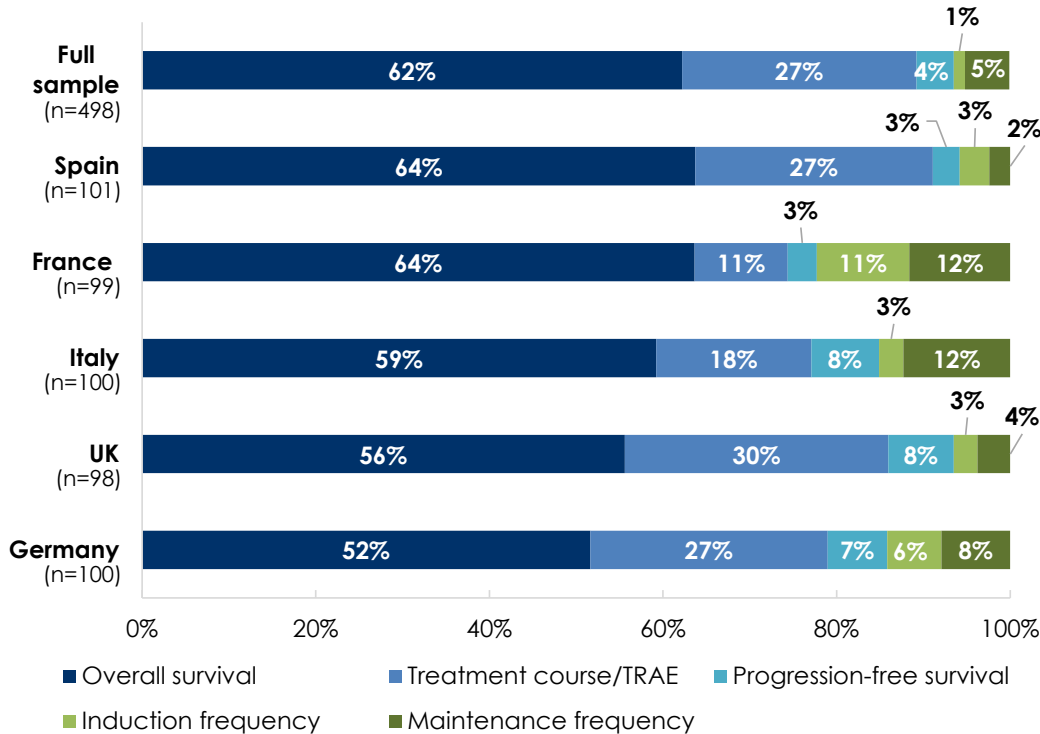
- **Overall survival** had the strongest influence on physicians' preferences (**RI=62%**)
 - Country range: **52%** (Germany)-**64%** (Spain, France)
- **Treatment course/TRAEs** was the second most influential attribute (**RI=27%**)
 - Country range: **11%** (France)-**30%** (UK)
- **Induction** and **maintenance** administration schedule and **progression-free survival** had less influence on preferences (**combined RI=11%**)

RI, relative importance; TRAE, treatment-related adverse event.

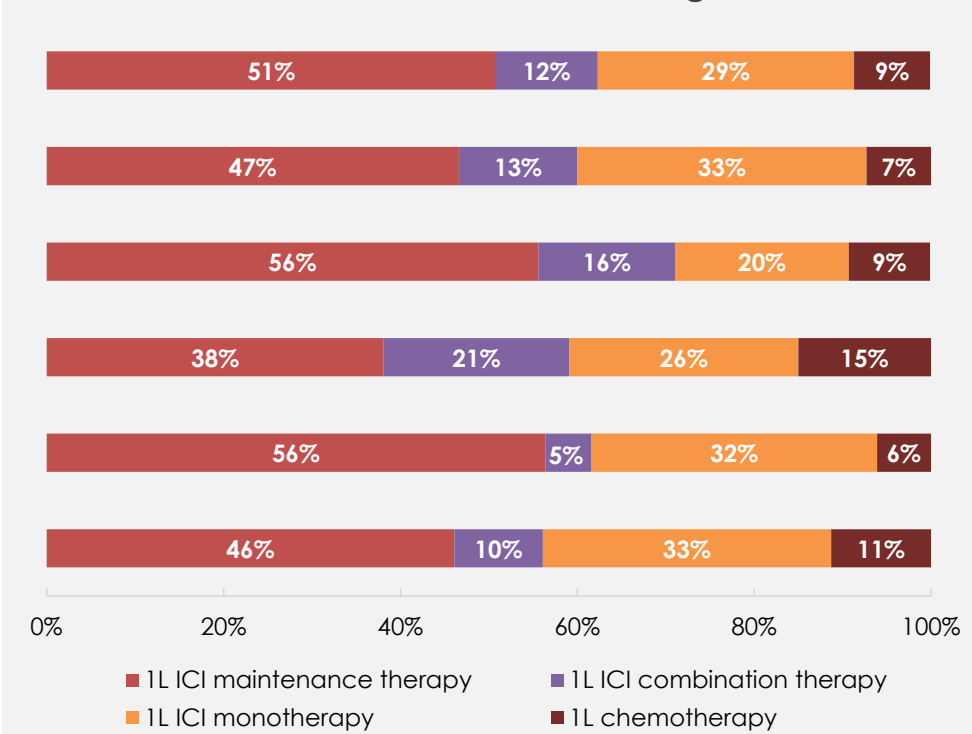
*Attribute RI (0-100%) is the difference in preference weights between the most preferred and least preferred level divided by the sum of the differences across all attributes.

Preference Shares for 1L Treatment Regimens

A. Relative importance of treatment attributes



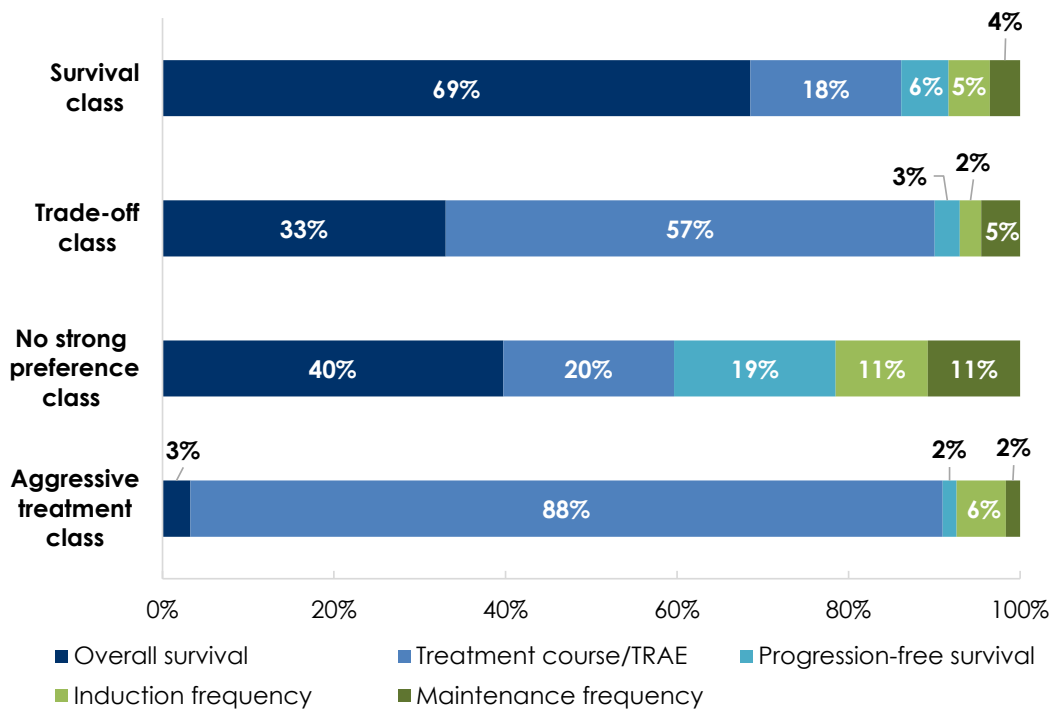
B. Preference shares for 1L treatment regimens



- In the full sample, preference shares were the largest for the **ICI maintenance therapy** profile (**51%**)
 - Country range: **38%** (Italy)-**56%** (France, UK)

Latent Class Results

A. Relative importance of treatment attributes

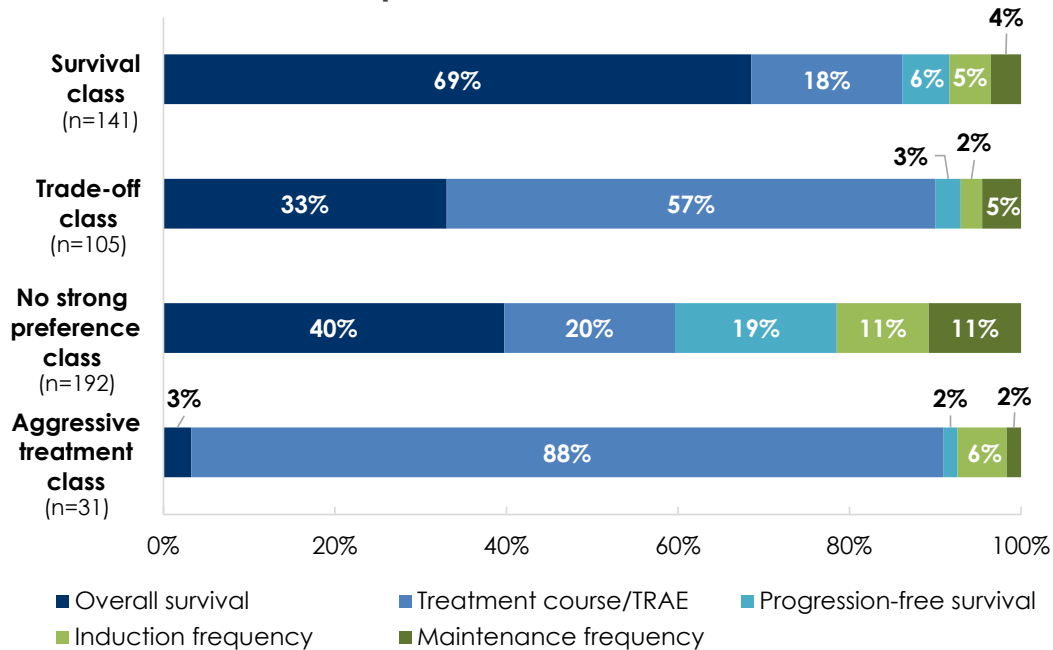


In a separate analysis (n=469), 4 latent classes were identified:

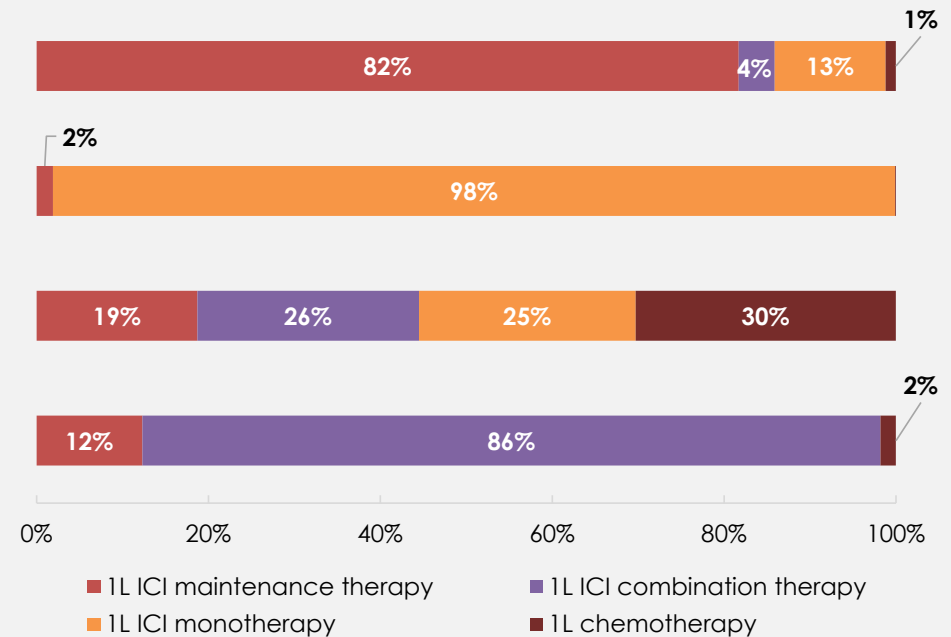
- **Survival class** (n=141; 30.1%)
 - **Overall survival** was the dominant treatment attribute (**RI=69%**)
- **Trade-off class** (n=105; 22.4%)
 - **Treatment course/TRAEs** (**RI=57%**) and **overall survival** (**RI=33%**) were both strongly important
- **No strong preference class** (n=192; 40.9%)
 - A relatively balanced preference structure across attributes
- **Aggressive treatment class** (n=31; 6.6%)
 - **Treatment course/TRAEs** was the dominant attribute (**RI=88%**), but there was a preference toward regimens with relatively higher TRAE attributes (R3, R4)

Latent Class Results

A. Relative importance of treatment attributes



B. Preference shares for 1L treatment regimens



- Preference shares varied significantly across latent classes, with the dominant treatment profile being **ICI maintenance therapy** in the survival class (**82%**), **ICI monotherapy** in the trade-off class (**98%**), and **ICI combination therapy** (**86%**) in the aggressive treatment class

Results Summary and Limitations

- **Overall survival** was the dominant attribute driving treatment choice among physicians in the European region (RI=62%), followed by **treatment course/TRAEs** (RI=27%)
 - **Induction** and **maintenance** frequency of administration and **progression-free survival** were less important treatment decision-making factors (combined RI=11%)
- Across countries, **overall survival** ranked as the most important attribute (RI range, 52% [Germany]-64% [Spain, France])
 - However, differences in the RI of attributes led to varying preference shares for the dominant therapy profile, **1L ICI maintenance therapy** (range, 38% [Italy]-56% [France, UK])
- Latent class analysis identified 4 different preference structures among physicians, each with a different dominant treatment profile
 - In 2 preference groups (nearly 30% of physicians), **overall survival** was not the dominant attribute
- **Limitation:** the DCE asked physicians to consider a typical 69-year-old male patient with aUC; therefore, results may not be **generalizable** to all patients with aUC

Conclusions

- Our results in aUC were largely consistent with prior results in oncology¹
 - **Overall survival** was the dominant attribute driving treatment choice, followed by **treatment course/TRAEs**; frequency of administration was least important
- While attribute rankings were similar across countries, differences in the RI of each attribute led to variations in the preference share for the dominant treatment profile
- Our results also show significant heterogeneity in preferences across 4 latent classes (which preferred different dominant treatment profiles) and that overall survival was not the dominant attribute for nearly 30% of physicians

aUC, locally advanced or metastatic urothelial carcinoma; RI, relative importance; TRAE, treatment-related adverse event.

1. Collacott H, et al. Patient. 2021;14(6):775-90.

Acknowledgments

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