Insights on Early Prostate Cancer (PCa) Epidemiology and Treatment Pathways from an Online Modified Delphi Panel

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Key takeaway

This online modified Delphi panel reached consensus on several aspects of PCa classification and treatment decision-making. However, significant variability in responses regarding other features of early PCa epidemiology and treatment pathways may reflect heterogeneity in clinical settings, practices, and experiences, suggesting that seeking consensus may be inappropriate for some aspects of early PCa. Whilst question or concept misinterpretation may have contributed, the diversity of perspectives is a valuable finding, offering insights into the complexity and variability of the LPC/LAPC treatment pathway.

Conclusions

This online modified Delphi panel reached consensus on some aspects of early PCa classification and treatment decision-making, notably on areas related to risk stratification and diagnostic assessments used for high-risk LPC and LAPC.

A high degree of variation in responses regarding other features of early PCa epidemiology and treatment pathways was observed, limiting the ability to reach consensus on these topics. Some of this variation may have been driven by question or concept misinterpretation, but it may also reflect true differences, driven by local practices and specificities.[3]

ABBREVIATIONS

EAU: European Association of Urology; **EU:** European Union; **HCP:** healthcare professional; **LAPC:** locally advanced prostate cancer; **LPC:** localised prostate cancer; **MRI:** magnetic resonance imaging; **PCa:** prostate cancer; **PSA:** prostate-specific antigen; **SD:** standard deviation.

ACKNOWLEDGEMENTS

he authors acknowledge Johnson & Johnson Innovative Medicine employees (Evgeniya Ragulina, Hind Stitou El Amine Demnati, Irene Luccarini, and Sarah Fletcher) for their contribution to the study and publication. The authors acknowledge Adelphi Group for their role in running the Delphi Panel fieldwork, Costello Medical, Cambridge, UK, for medical writing and editorial assistance, and the Creative team at Costello Medical for graphic design assistance. This study was funded by Johnson & Johnson Innovative Medicine.

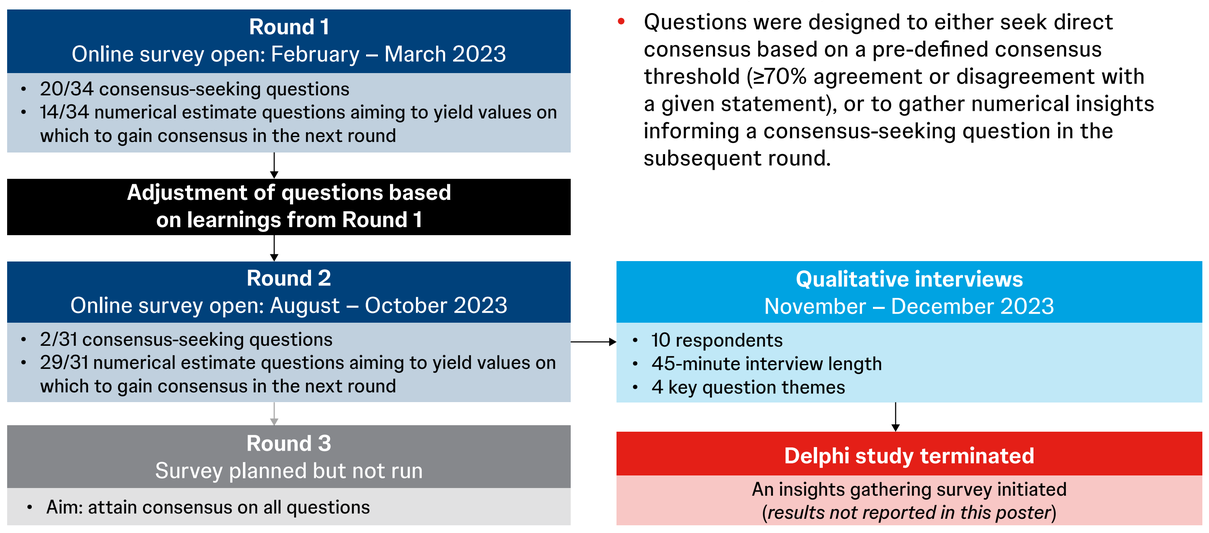
DISCLOSURES

EL: Acted as an expert consultant and/or received travel fees from Johnson & Johnson, Astellas, Bayer, IPSEN, Recordati, AstraZeneca and MSD; **SC:** Acted as an expert consultant and/or received travel fees from Roche Pharmaceuticals, AstraZeneca, Medac, Dr. Sennewald Medizintechnik, Elekta, Accuray, Bristol Myers Squibb, Brainlab, Daiichi Sankyo, Icotec, Carl Zeiss Meditec, HMG Systems Engineering, Johnson & Johnson Innovative Medicine and CureVac; **PR**, **VF**, **AG:** Johnson & Johnson Innovative Medicine employee and shareholder; **CB:** Employee of Costello Medical, which received payment from Johnson & Johnson Innovative Medicine for analytical services for this study; **PS:** Acted as an expert consultant and/or received travel fees from Astellas, Bayer, Johnson & Johnson Innovative Medicine, Sanofi, Novartis, Ferring, Ipsen, Recordati, Accord-Healthcare, Takeda.

Introduction

- Despite PCa being the second most common cancer in men and the fourth most common malignancy worldwide, there is limited literature on European epidemiology and treatment pathways for high-risk localised PCa (LPC) and locally advanced PCa (LAPC) specifically.[1]
- To address this, we conducted an online modified Delphi panel with the aim of gaining insights on key areas of early PCa epidemiology and treatment pathways in Europe, with a particular focus on high-risk LPC and LAPC.

Figure 1. Modified online Delphi panel methodology



Methods

- A streamlined, modified version of the classical Delphi method was employed online, featuring a maximum of three rounds (Figure 1). An additional qualitative interview step with a selection of panellists was used to investigate the Round 2 results in detail.
- A steering committee of three expert clinicians, specialising in urology and radiation oncology, reviewed the study protocol and questionnaires, and supported the clinical interpretation of the results.
- An anonymous online market research panel participated in the study. Panellists included urologists and radio-oncologists from five European countries (Table 1).
- Questions were designed to either seek direct consensus based on a pre-defined consensus threshold (≥70% agreement or disagreement with a given statement), or to gather numerical insights informing a consensus-seeking question in the subsequent round.

Table 1. Panellist summary

	Round 1 (n=113)	Round 2 (n=72)
Countries		
Belgium	17	11
France	24	16
Germany	24	13
Italy	24	16
Spain	24	16
Specialty		
Urologist	67	45
Radio-oncologist	46	27
Hospital type[a]		
Primary-level hospital	13	8
Secondary-level hospital	15	8
Tertiary-level hospital	52	32

[a]These data excludes France and Germany as hospitals in these countries are not stratified into these categories.

Results and discussion

Round 1

- In Round 1, 14/34 questions were designed to gather numerical insights and 20/34 questions aimed to seek consensus. Consensus was reached in 5/20 questions, including:
  - EAU guidelines are used to assess LPC patient risk level.
  - PSA-level, Gleason score and prostate- or pelvic-specific MRI are used to diagnose and stage patients with high-risk LPC or LAPC.
  - 'Life expectancy' is the main reason why newly-diagnosed patients with high-risk LPC or LAPC do not receive treatment with curative intent.
- Consensus was not achieved in the remaining consensus-seeking questions.
- Heterogeneity was observed across questions that obtained numerical insights:
  - For example, the proportion of high-risk LPC or LAPC patients not receiving treatment with curative intent; mean ± standard deviation (SD): 22%±18; this also varied by country (12–31%) and hospital-setting (14–29%).
  - Other topics where variation was observed included the proportion of patients receiving salvage therapy with curative intent, the proportions of patients with metastatic PCa, LPC and LAPC, and the proportions of patients with low, intermediate or very high-risk LPC.

Round 2

- Round 2 was adjusted towards obtaining numerical estimates (Figure 1) with the aim of improving the likelihood of achieving consensus in the planned Round 3.
- Upon reviewing the Round 1 results with the steering committee, it was hypothesised that some question concepts or definitions had not been interpreted as intended, therefore some questions were also modified for Round 2 to improve clarity.
- In Round 2, notable variation by country, speciality and/or hospital setting was still observed across the two-remaining consensus-seeking questions and those geared to gain numerical insights. Examples included:
  - Epidemiology, such as the proportion of patients with metastatic PCa at diagnosis (mean±SD: 37%±17; range: 0–75%; Figure 2). This value differed from published estimates (5%).[1]
  - Treatment patterns, such as the proportion of patients receiving salvage therapy following local/regional recurrence after primary radiotherapy (mean±SD: 52%±27; range: 0–100%; Figure 3). This result was higher than published estimates (4%).[2]
  - Other topics where substantial variation was observed included incidence of locoregional recurrence following primary radiotherapy, choice of curative treatment options, use of advanced imaging techniques, and factors affecting treatment decision-making.
- The discrepancy between these results and published values may support our hypothesis that question concepts were not interpreted as intended, despite efforts to improve clarity after Round 1. However, it may also reflect genuine heterogeneity in clinical settings, highlighting the complexity of the LPC/LAPC treatment pathway and suggesting that seeking consensus on all aspects of early PCa may not be feasible.
- Whilst some drop-off is expected between Delphi rounds, a 36% decrease in panellists from Round 1 to Round 2 was observed. This reduction should be considered when interpreting the Round 2 results.
- Overall, the high degree of variation observed across the Round 1 and Round 2 results led us to conclude that achieving consensus in a third round would have been unlikely, therefore a third round was not initiated.

Qualitative interviews

- Follow-up qualitative interviews with 10 panellists indicated that factors such as HCP caseload, hospital setting, national screening programmes and evolving clinical practice may have contributed to response variation. Additionally, residual question and concept misinterpretation resulting from the online methodology appeared to have contributed to response variation (**see ISPOR EU 2024 Poster #SA55**).[3]

Figure 2. Round 2: Thinking about all newly diagnosed patients with PCa (i.e. including non-metastatic patients designated as watchful waiting) you have seen in the past 3–6 months, and remembering to base your answer on conventional imaging only, please indicate what percentage of these patients had metastatic disease

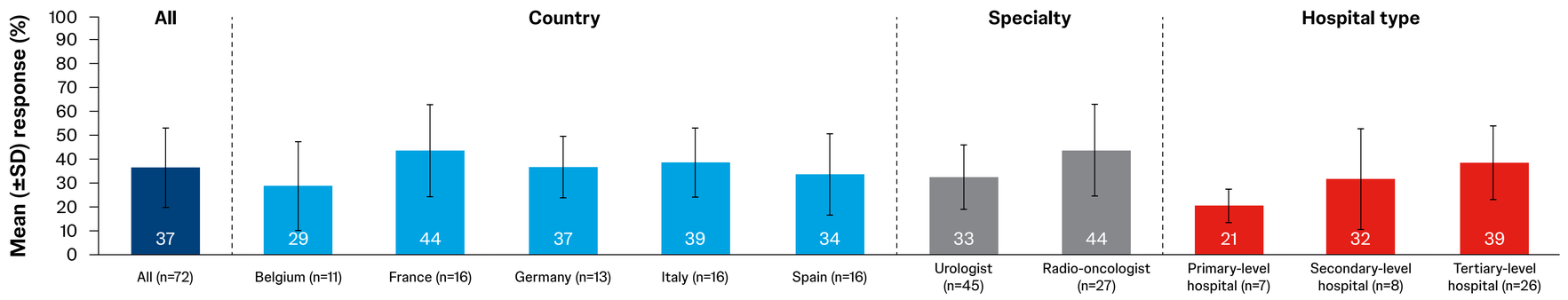
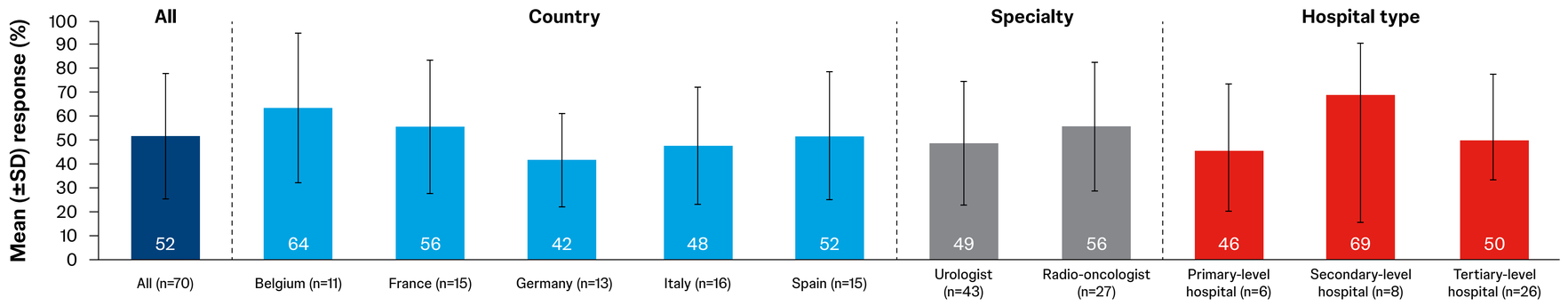


Figure 3. Round 2: In your current clinical practice, among patients with high-risk LPC or LAPC who were treated with primary radical radiotherapy with or without (neo-)adjuvant hormone therapy (do not include patients who received adjuvant or salvage radiotherapy), and experienced local and/or regional recurrence, what percentage proceed to receive salvage therapy?



Footnote: The question included a note not to include patients who receive palliative/non-curative treatment, and to use the percentage of patients who experienced recurrence in the prior question as the denominator.

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