

Co-designing patient-reported outcome (PRO) data visualization: consider the context

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What did we learn?

- Patients find PRO data relevant and informative, so **patient-centric data visualization is essential**
- PRO data visualization **preference and interpretability are context dependent**
- Information processing and decision-making are mediated by emotional response**
- Consulting patients and responding to their feedback in an iterative, flexible process helps to meet their informational and emotional needs**

Scan to view the co-designed plain-language summary, a video summary of this poster, and a poster focused on stage 1



Background

STAGE 1

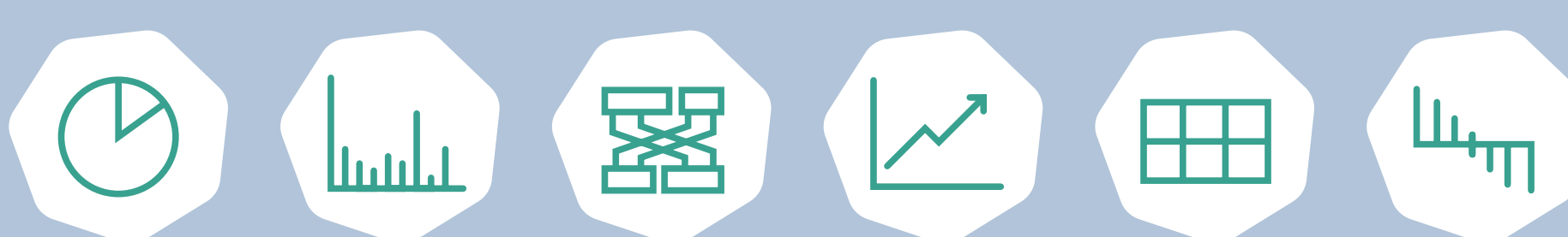
Communicating clear, understandable PRO data may help people make more informed healthcare decisions.

To co-design a plain-language summary (PLS), we explored preferences and interpretation of clinical trial PRO data among people with advanced prostate cancer.

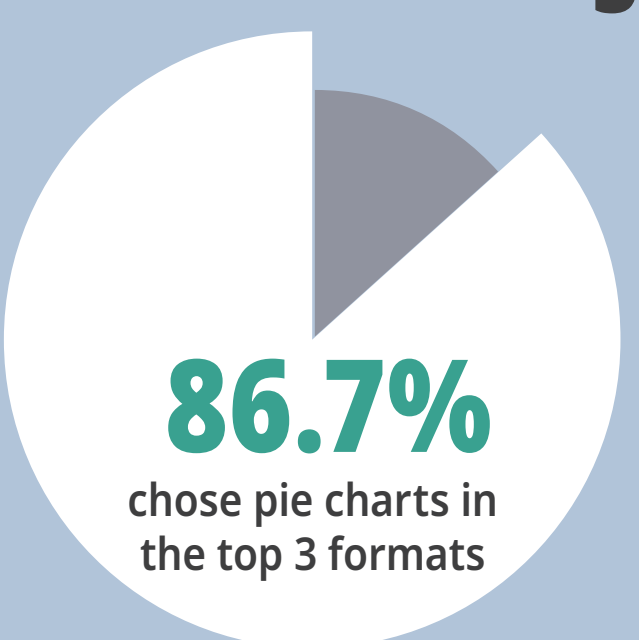
In stage 1, a 7-day online survey explored preferences for and understanding of 6 graphical formats.¹

- Graphical displays were designed based on the simulation of PRO data from a clinical trial investigating a new treatment option; the data covered 6 PRO concepts (quality of life; symptom impact; and emotional, social, physical, and functional well-being).

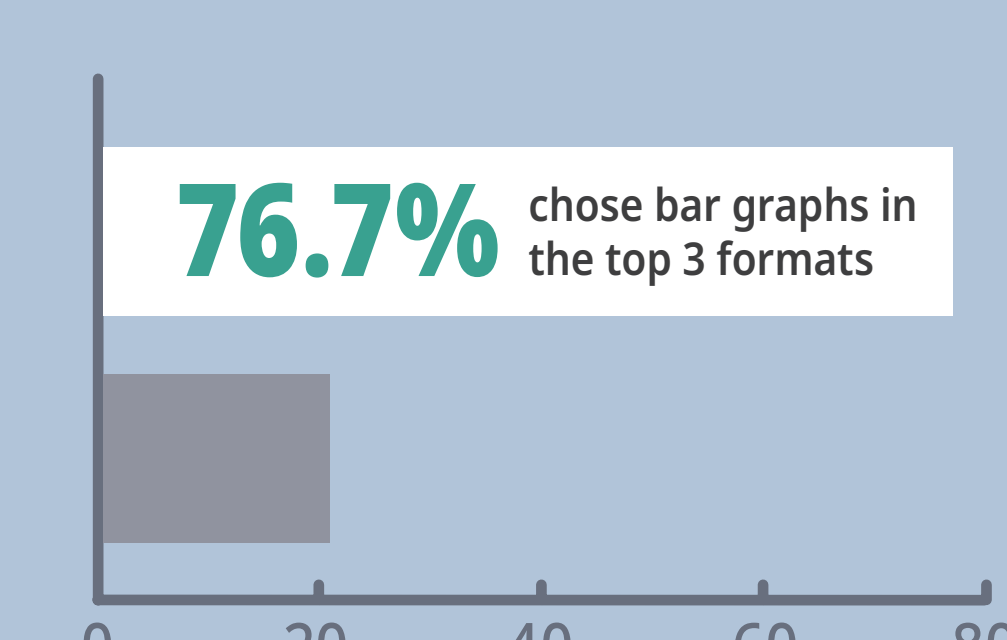
“Rank the images in terms of how you like to see the information.”



Pie and bar charts were most preferred for categorical PRO data*



86.7% chose pie charts in the top 3 formats



76.7% chose bar graphs in the top 3 formats

*Line graphs were preferred to display continuous PRO data showing change over multiple time points

¹Birkett H, et al. Evaluation of patient-reported outcomes (PRO) data to assess understanding and interpretability. Presented at the International Society for Medical Publication Professionals (ISMPP) 2023 European Meeting, London, 24–25, January 2023.



People with advanced prostate cancer reviewed text and the identified display preferences in the context of a PLS

STAGE 2

A draft PLS including study information and graphical displays was created based on stage 1 insights. Eighteen **patient interviews** focused on clarity, interpretation, and relevance. Iterations were made between 3 interview waves.



“Pie charts are a business thing. It’s very factual. I think it could be delivered a bit softer...You’re talking about people’s journey with cancer.”



“Looking at those [bar charts], I think they are better than the pie chart... you’ve got a clearer picture there.”

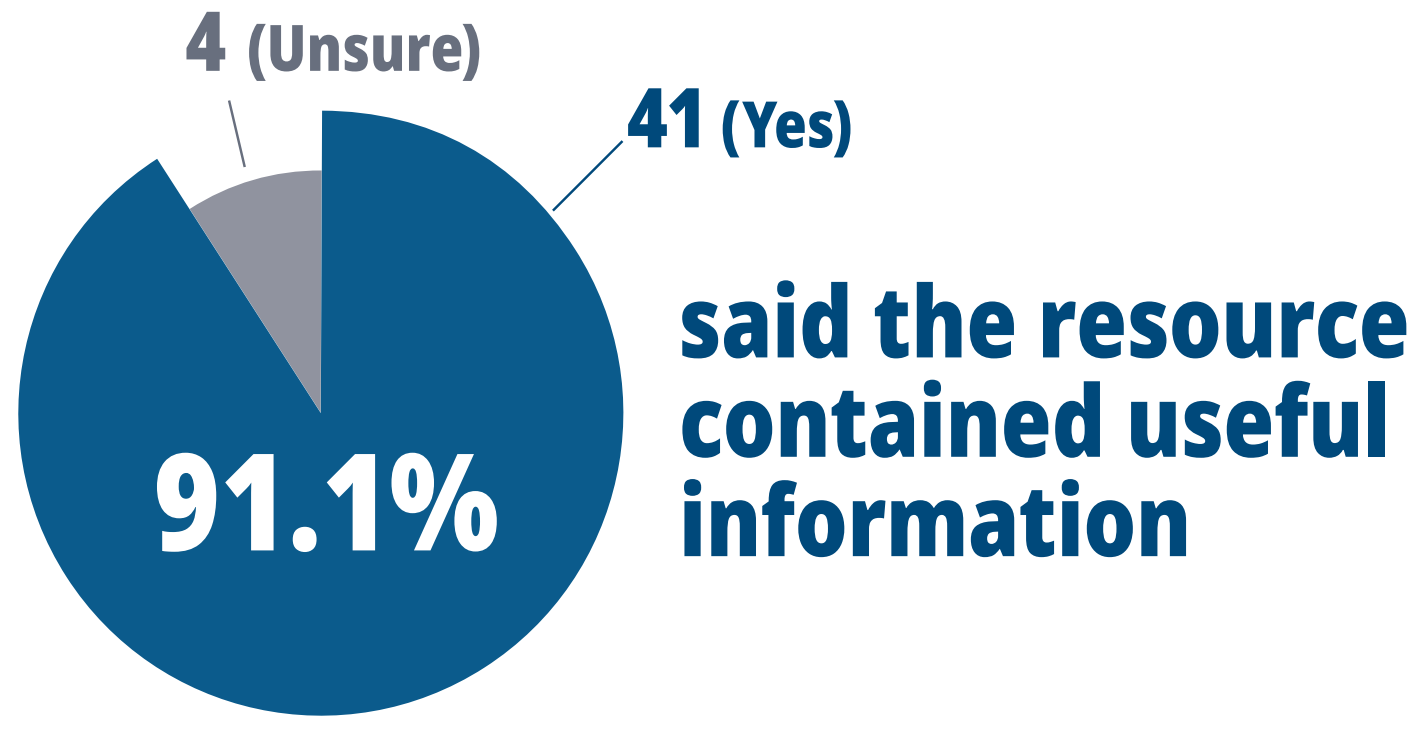
Wave 1	Wave 2	Wave 3
(n=5)	(n=5)	(n=8)
- Pie charts were seen as “overwhelming,” and bar charts were preferred. - All participants found the resource useful and relevant. - It had potential for “information overload.”	- Bar charts were favoured, alongside longer, more descriptive figure titles. - PRO messages were well understood. - More information on treatment side effects was requested.	- Content was confirmed as clear, relevant, and understandable. - Demographic information was requested to contextualize data.

Revisions were made after each wave to create the final co-designed plain-language summary.



An online survey of 45 people with prostate cancer assessed the final PLS for its usefulness and interest

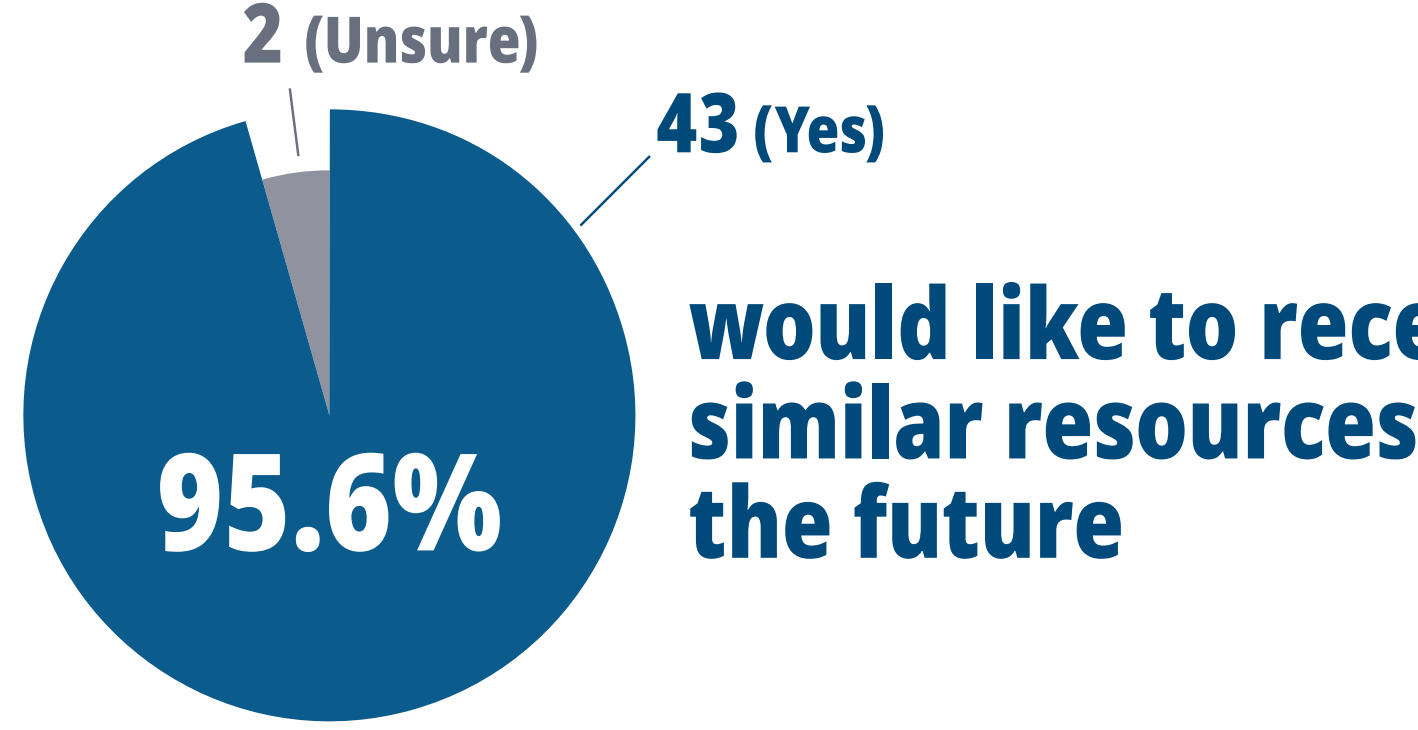
STAGE 3



91.1% said the resource contained useful information

4 (Unsure)

No respondents chose “no.”



95.6% would like to receive similar resources in the future

2 (Unsure)

No respondents chose “no.”

Of those who responded “yes,” 40 (93%) were interested in similar resources even when they had not participated in the trial.



“The more I know, the more easily I can get on with my daily life and prepare for the future.”



“The more information I have, the better I am able to take decisions about my treatment.”

Acknowledgement: The authors thank the study participants and the IQVIA Patient Centered Solutions team for conducting the interviews, and Angela Lorio and John Fallaha, IQVIA Medical and Patient Communications, who provided editorial support and designed the plain-language summary sheet. Thanks to Sharon Suntag and Rucha Kurtkoti, IQVIA Medical and Patient Communications, for reviewing this poster and providing editorial support.

Presented at the International Society for Medical Publication Professionals (ISMPP) 2023 Annual Meeting, Washington DC, April 24–26, 2023