

Delivering Accurate Real-time Biomarker Testing – DART Research

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Introduction

Precision medicine is revolutionising cancer treatment, and targeted therapies have been shown to increase overall response rate, overall survival, and progression free survival (Morash et al, 2018, Kästner et al, 2024). Fully realising the benefits of precision medicine requires the seamless integration of treatment-guiding biomarker testing into clinical pathways, however, research has shown that there are many barriers to delivering this within the UK.

This collaborative research project between Macmillan Cancer Support and AstraZeneca, aims to use both qualitative and quantitative data, to look specifically at the barriers which may exist in biomarker testing, from both the patient and the health care professional (HCP) perspectives. Once these barriers have been identified, the objective of the project is to co-create solutions, improve the clinical pathway and patient experience.

This poster highlights the early insights from the data that has been collected from the patient survey which was disseminated across the UK. Full results from both our patient and HCP research are expected to be published early next year.

Methods

Six cancer types were chosen for this research, to reflect rare and common cancers, those with mature and less mature precision medicine biomarkers, and encompassing a broad range of demographic characteristics such as sex, age and socio-economic status. These cancers were: lung, melanoma, breast, colorectal, sarcoma and glioblastoma.

This research took a three-stage approach for the patient and HCP insight and experience. A comprehensive literature review was performed, which then informed the questions posed for a focus group of 24 cancer patients. 20 HCPs were interviewed, across nations and expertise areas. Together, the literature review, interviews and focus group informed the content of the online surveys of patients and HCPs.

The patient survey was active for 3 months and advertised through hospitals, social media, newsletters, patient specific support groups, professional networks and word of mouth.

Survey content included questions on access, understanding and experience of biomarker testing. All results were anonymous.

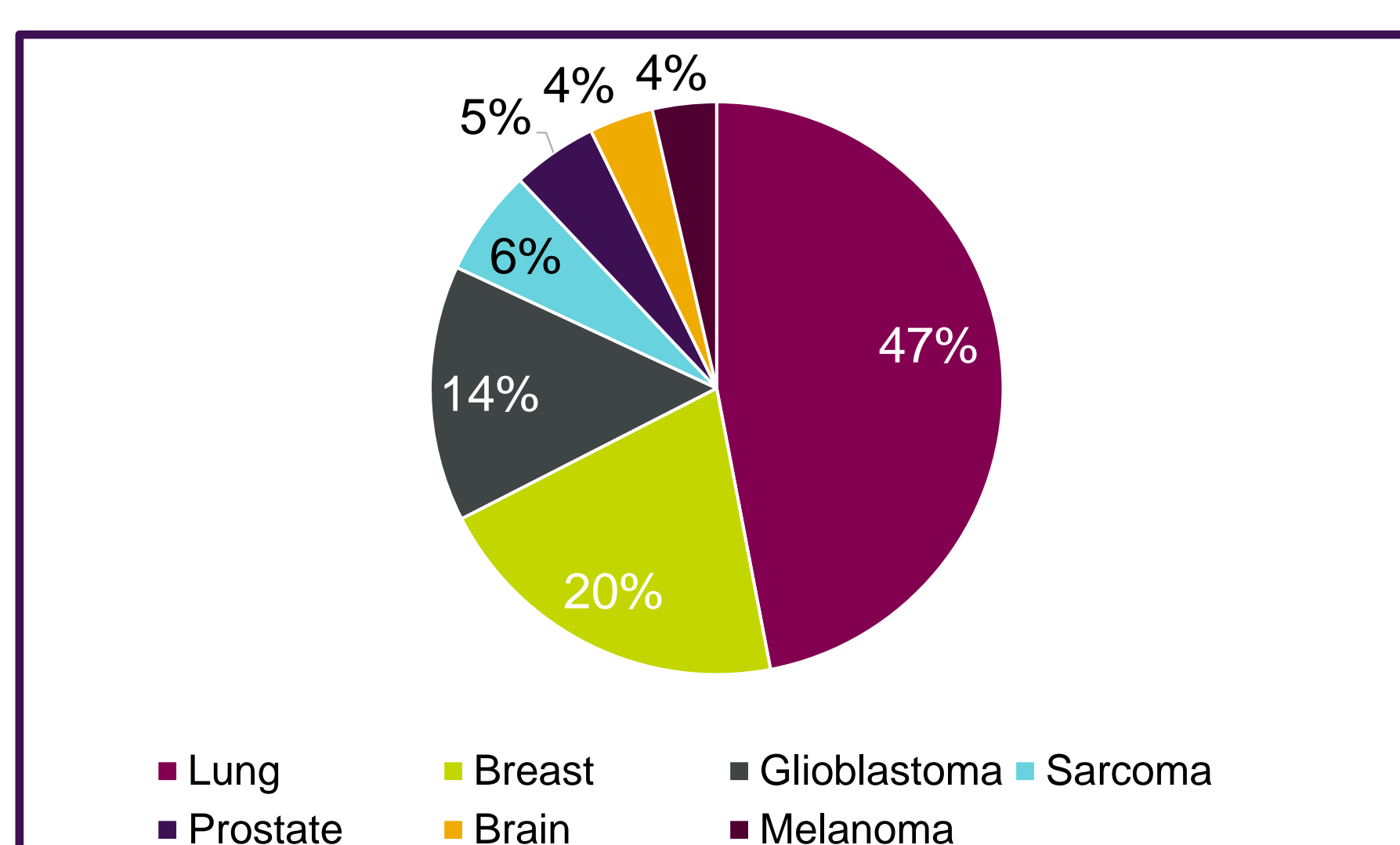


Figure 1 Tumour type distribution for patient survey of which 47% were lung cancer patients.

Results

Patient focus group of 24 patients, mix of sexes tumour types and some diversity:

- 11 male and 13 female
- 19 from England, 3 Scotland, 2 Wales, 0 Northern Ireland
- 1 Asian, Asian British (Indian, Pakistani, Bangladeshi, Chinese or other Asian background)
- 7 Black, Black British, Caribbean or African
- 1 Mixed or multiple ethnic group
- 15 White (English, Welsh, Scottish, Northern Irish or British, Gypsy other white background)

Patient Survey of 96 patients

Demographics

94% White, >50% higher education, 88% patients in England
59% Stage 4 cancer
60% patients currently having treatment

Key barriers

- All patients felt turnaround times were too long
- Lack of support and insufficient time with HCP to discuss biomarker testing
- Lack of plain language education materials discussing biomarker testing

Other Key findings

- 47% patients would like more information about their treatment, although 100% of patients knew what treatment they were on.
- 56% patients said they were aware they had treatment guiding biomarker testing, 29% were unsure, 15% had not had biomarker testing.
- 48% patients had biomarker testing discussed fully or partially with them, and of these 98% understood what was said
- 66% of patients had received no educational materials or resources relating to biomarker testing
- Of the 25% of patients who had information, all found it useful.
- 78% of patients felt they were fully or partially involved in their treatment decisions
- Both the focus group and survey highlighted the lack of information available for patients to explain biomarker testing
- The focus group highlighted patients felt they had a lack of time in oncology appointment to discuss biomarker test results
- The survey highlighted approximately half of patients wanted more information about their treatment, and stated they had not discussed biomarker testing with a HCP.
- HCP data collection is ongoing.

Conclusions

- Majority of patients would like more written information on treatment guiding biomarkers given to them at their appointments
- Majority of patients would like the opportunity for further discussions about biomarker testing in their clinic appointments
- All patients who received information found it useful and understood its content, highlighting the importance of ensuring patients have the information they would like.
- A significant proportion of patients were unaware of what biomarker testing is.

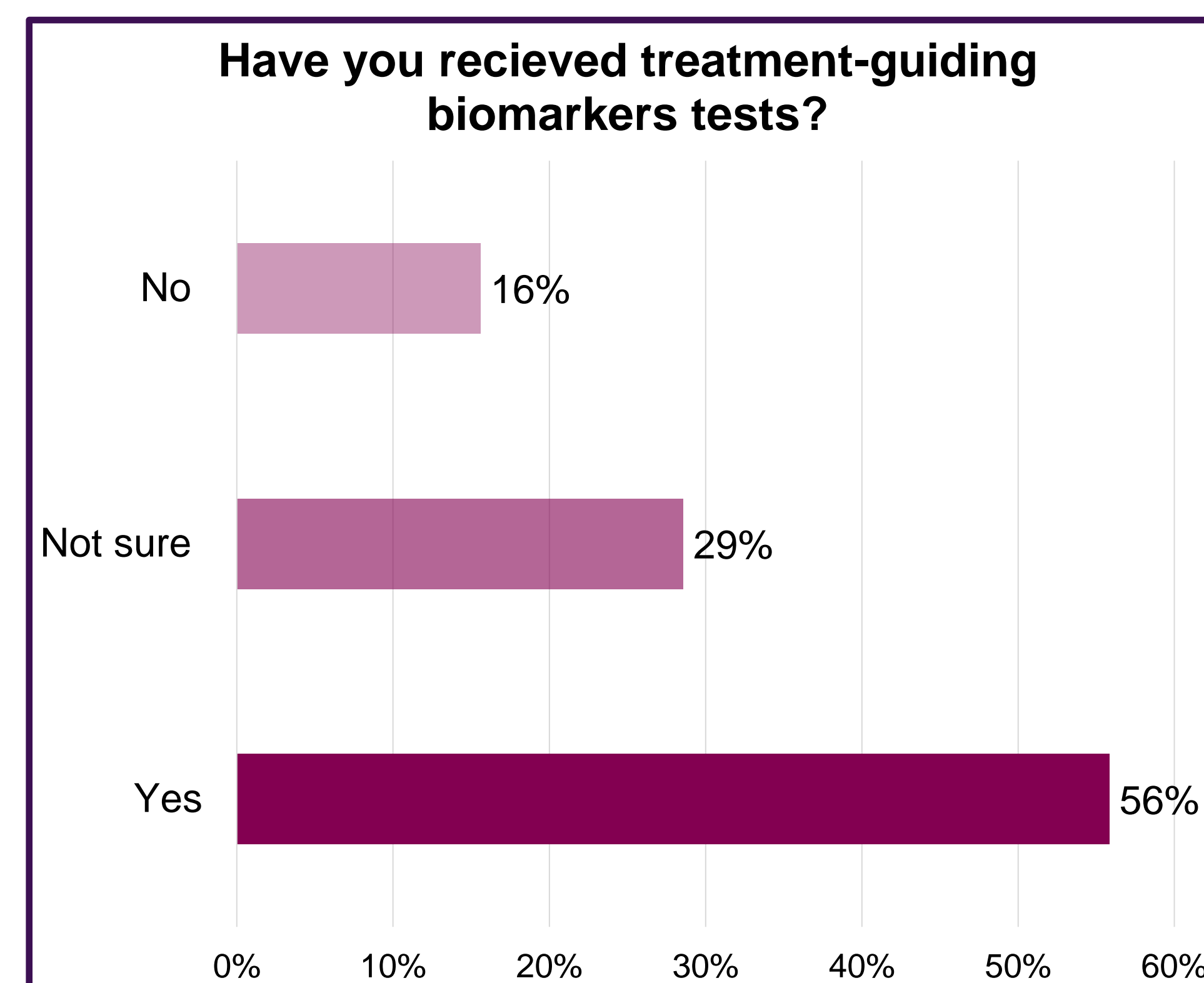


Figure 2 Percentage of n = 97 patients who received biomarker testing

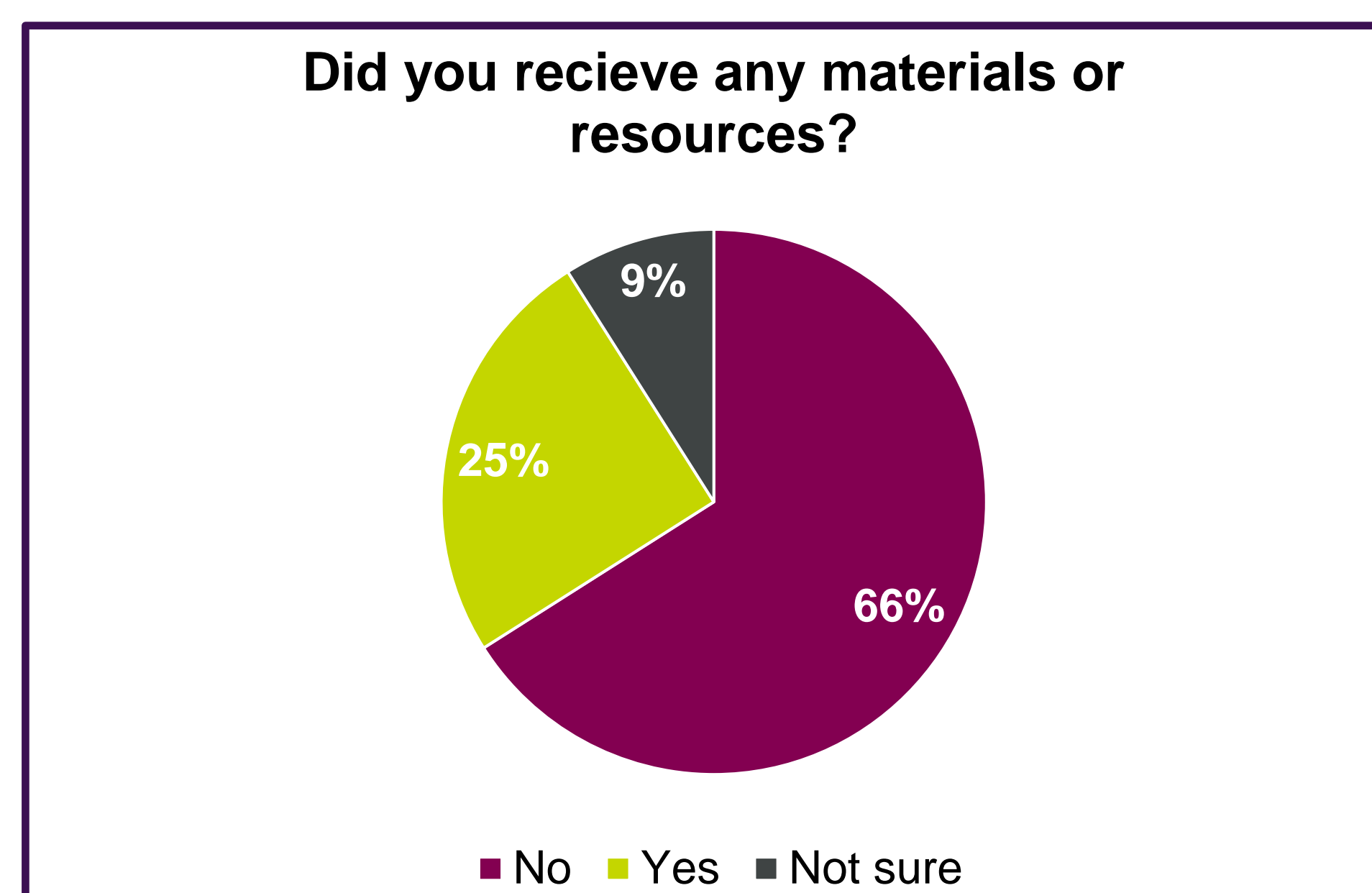


Figure 3 Percentage of n = 97 patients who received information

66% did not receive information but **100%** of those who did receive materials found them helpful

Recommendations

- Once research is complete, to explore fully the variation, barriers and implications of biomarker testing for both HCP and patients.
- To co-create solutions with patients and HCP which should, as a minimum, include a creation of understandable and accessible information on biomarker testing available to all.
- More research is needed, in what specifically patients need to support them, in relation to biomarker testing, and to understand the variation of care which exists across the UK.

References

1. Morash, M., Mitchel, H., Beltran, H. et al, (2018) The role of Next-Generation Sequencing in Precision Medicine: A review of outcomes in oncology. Journal of Personalised Medicine. Sep 17;8(3):30. doi: 10.3390/jpm8030030. PMID: 30227640; PMCID: PMC6164147.
 2. Kästner, A., Kron, A., Van Den Berg, N., et al. (2024). Evaluation of the effectiveness of a nationwide precision medicine programme for patients with advanced non-small cell lung cancer in Germany: a historical cohort analysis. The Lancet Regional Health – Europe, Volume 36, 100788
- * Numbers may not add up to 100% due to rounding

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