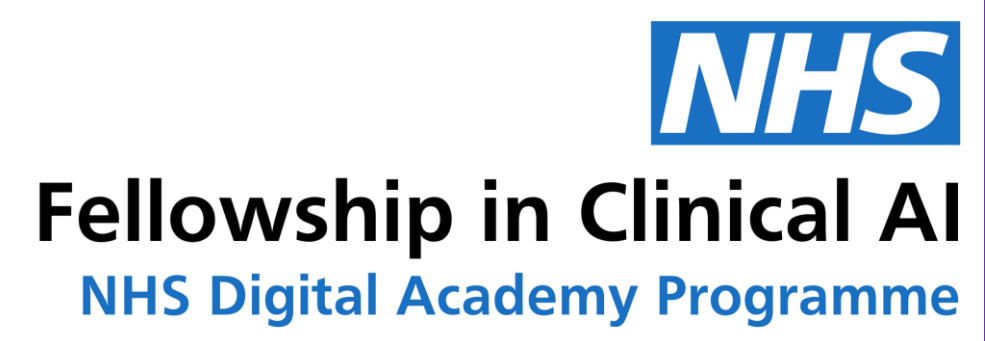


Assessing Staff Perspectives on Governance, Trust, and Bias in AI for Radiotherapy: A Departmental Service Evaluation



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n = 97
completed responses

22.7%
formal AI / data science
training

62.9%
have used AI at work

86.6%
support independent
verification

88.7%
trust AI if clinically
validated

96.9%
say accountability must
be defined

99.0%
say clear AI guidelines are
needed

“Changing workflows and job roles due to AI. Currently, even if AI contouring/planning makes the individual task quicker, plans can still end up sitting to the last minute”

Purpose

Artificial intelligence (AI) tools are emerging in radiotherapy to automate contouring and treatment planning, offering efficiency gains but introducing new governance and safety considerations. Understanding staff perceptions of risk, trust, and accountability is essential for compliant and responsible deployment. This project aimed to evaluate staff views on the benefits, risks, and governance requirements of AI-assisted planning within a tertiary cancer centre.

Methods

This was an anonymous, cross-sectional online staff questionnaire, developed using the Aletheia Framework for trustworthy AI in healthcare and BMJ supplementary guidance on AI attitude surveys. The survey explored five domains: social impact, trust and bias awareness, governance and accountability, role-specific experience, and overall enthusiasm for AI. Responses were analysed descriptively to identify trends in confidence, perceived benefit, and governance readiness.

Target population: all staff involved in the lung cancer radiotherapy workflow.

Response format: 5-point Likert scale, multiple-choice questions, and free-text comments.

Results - Respondents

Respondents included 32 clinical oncologists, 29 physicists, 26 radiographers, and 10 staff from other roles. Experience was high: 58.8% had worked in radiotherapy for more than 10 years. AI knowledge was mixed—most staff reported basic awareness (46%) or working knowledge (37%), while 14% reported advanced knowledge or the ability to deploy AI.

“strict governance, reducing over use and stressing how it is to be used sparingly and specifically. things that do not need to be rushed do not need AI use. not everything has to be done ASAP at the cost of the environment”

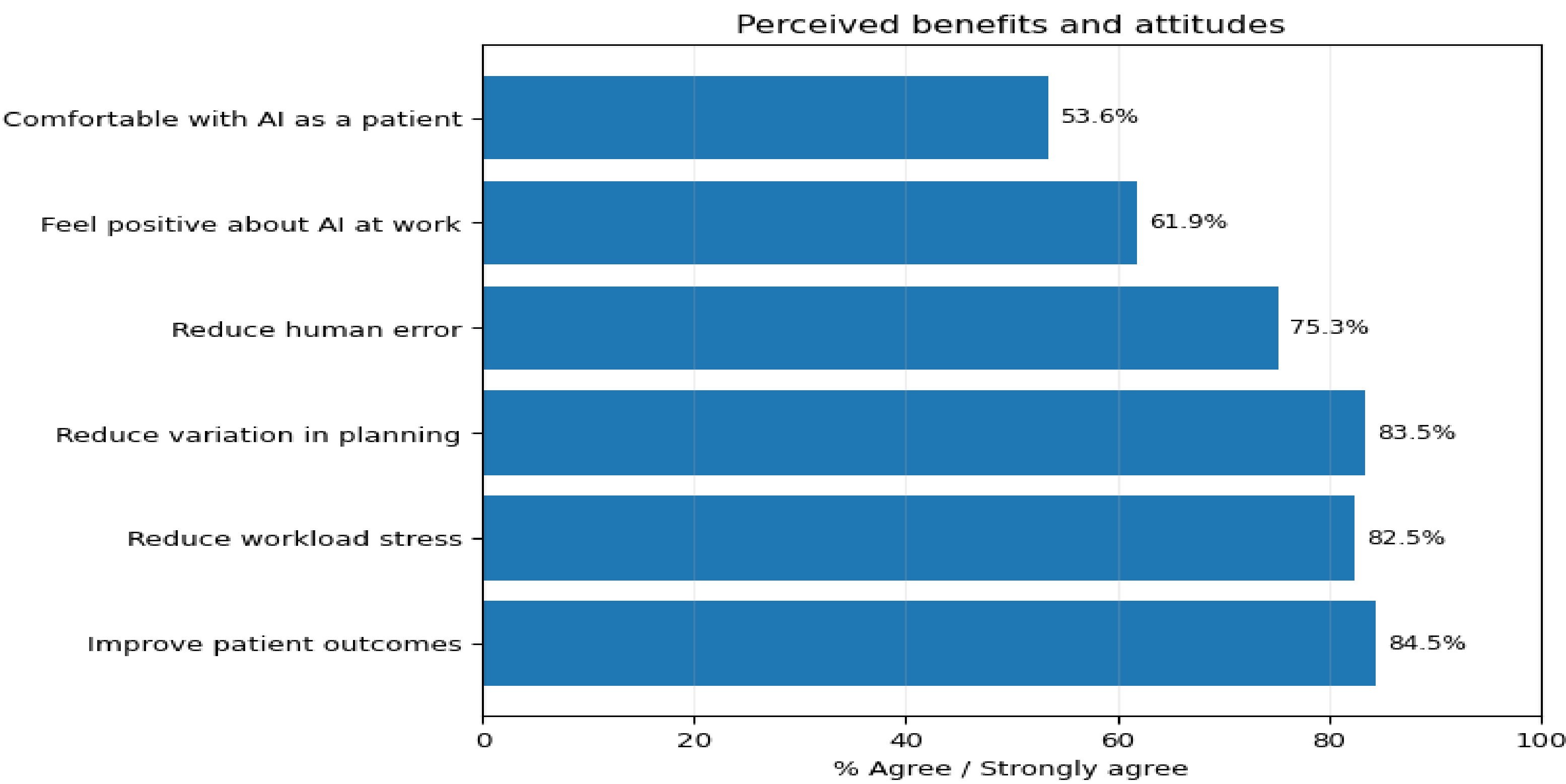


Figure 1

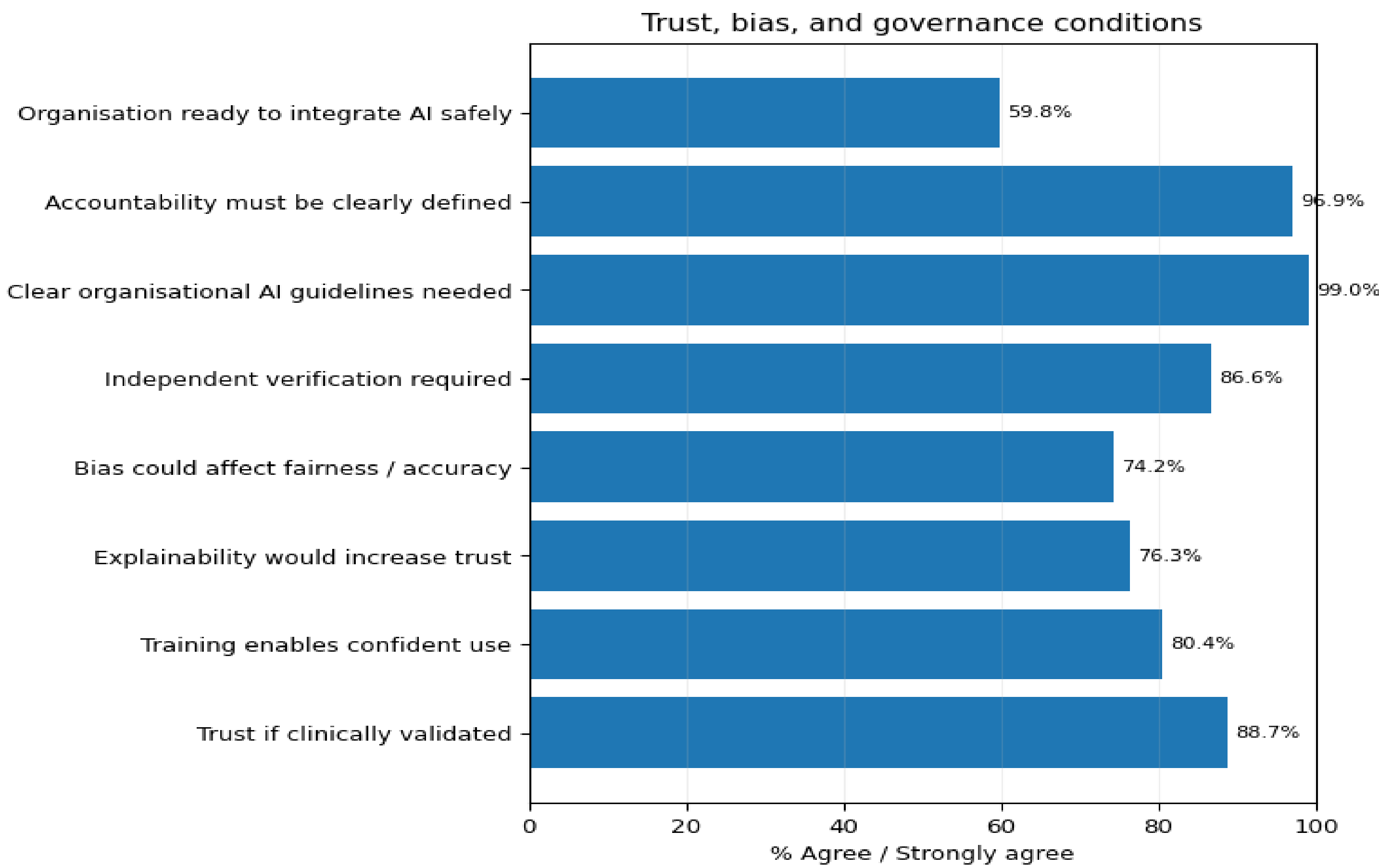


Figure 2

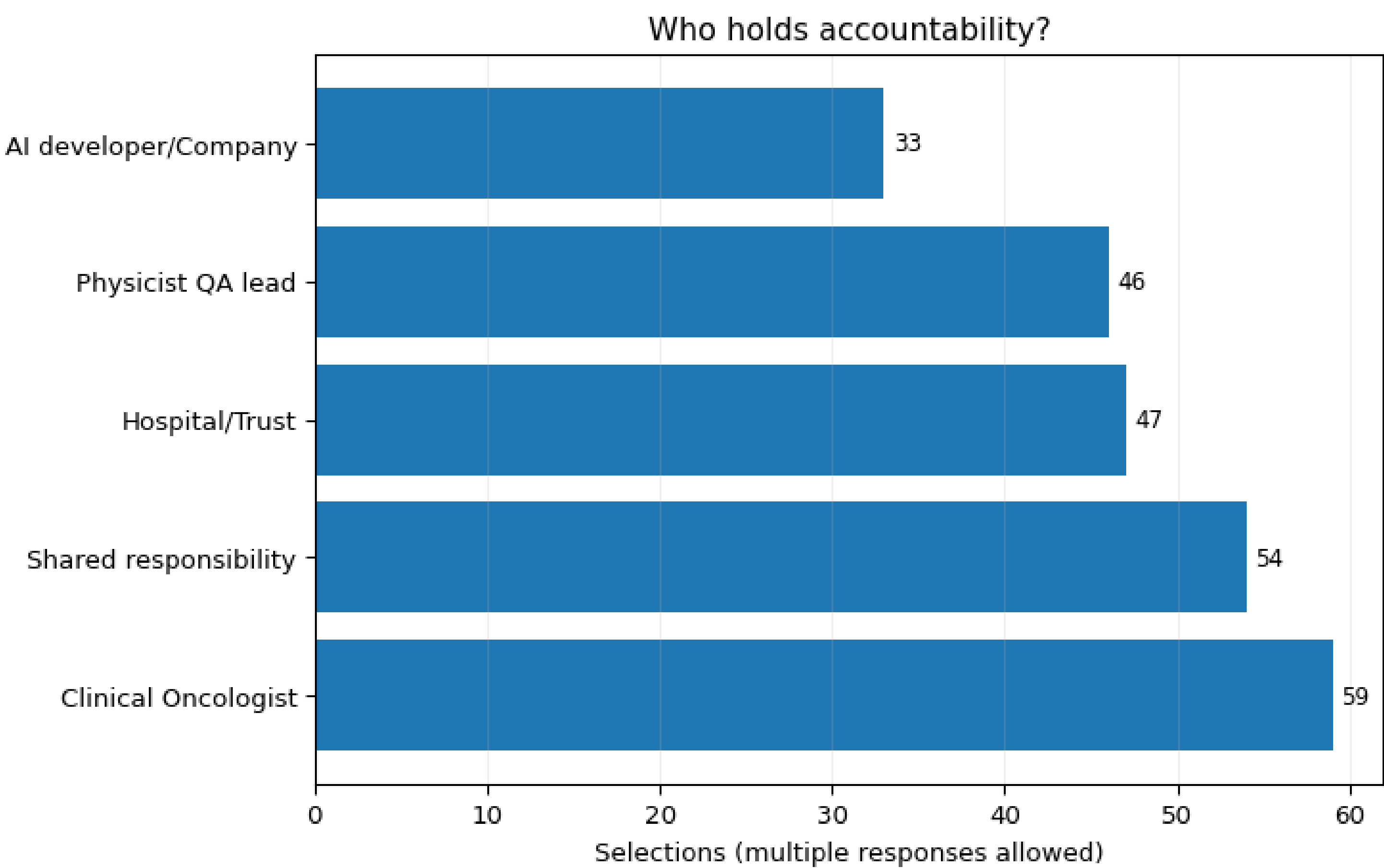


Figure 3

Results – Perceptive on AI

Overall sentiment was positive (figure 1): most respondents saw AI as a tool to improve efficiency, consistency, and workload.

At the same time, staff expressed strong expectations around validation, explainability, governance, and quality assurance (figure 2).

Personal positivity about AI (61.9%) was higher than perceived departmental enthusiasm (44.3%).

Staff were most positive about AI supporting planning and QA activities (70.1%) and enabling more time for direct patient care (69.6%). Comfort with auto-contours without substantial manual adjustment was lower (43.2%), reflecting caution where direct clinical review remains essential.

Accountability was viewed as distributed rather than belonging to one profession (figure 3). Consent responses were mixed, especially for direct care use, indicating uncertainty about how AI should be explained to patients and where consent thresholds should sit in routine practice.

Conclusion and practical implications

Staff were broadly positive about AI in radiotherapy and recognised its potential to improve efficiency, consistency, and patient-centred work. Confidence was conditional on explainability, human oversight, robust QA / audit, and clearly defined—often shared—accountability.

Current readiness appears mixed: enthusiasm and existing use are high, but formal training and confidence in organisational readiness are lower

We will continue gathering data on staff perceptions and will be distributing this questionnaire nationally. Please scan the QR code to fill out the survey

