Society of Medical Education & Research

2025, Volume 5, Page No: 13-24
ISSN: 3108-5059

Asian Journal of Ethics in Health and Medicine

Integrating Artificial Intelligence in Oncology: Turkish Medical Oncologists' Knowledge, Attitudes, and Ethical Perspectives

Orhan Ersin Silik[1*]

[1] Faculty of Medicine, Department of Medical Oncology, Ankara University, Balkiraz Mh. Tip Fakultesi Cad. No 1 Mamak, Ankara, Türkiye.

***E-mail** ✉ Orhansilikersin@gmail.com

Abstract

Artificial intelligence (AI), including large language models (LLMs), holds significant promise for oncology, yet the extent of medical oncologists' knowledge, attitudes, and ethical concerns regarding AI is not well understood. This issue is especially pertinent in Türkiye, home to roughly 1,340 practicing oncologists. We conducted an online, cross-sectional survey through the Turkish Society of Medical Oncology from October 16 to November 27, 2024. The questionnaire collected information on demographics, AI experience, self-rated knowledge, attitudes, ethical and regulatory perceptions, and training needs. Quantitative data were analyzed descriptively, with visualizations created in R v.4.3.1, and qualitative responses were examined manually. A total of 147 oncologists participated (≈11% of the national workforce). While 77.5% reported using AI, mainly LLMs, only 9.5% had formal AI education. Respondents generally supported AI use in prognosis, research, and clinical decision support but raised concerns about its impact on patient interactions and public perception. Ethical considerations focused on patient care, research integrity, and academic writing. More than 79% felt current regulations were inadequate and recommended ethical audits, legal guidelines, and patient consent. Almost all participants expressed interest in AI training, highlighting a clear educational gap. Turkish medical oncologists approach AI with cautious optimism but point to major gaps in education, regulation, and ethical oversight. Addressing these issues is essential for responsible AI implementation. Findings are limited by the single-country focus; additional studies are needed to generalize results and track evolving perceptions as AI develops.

Keywords: Medical oncology, Artificial intelligence, Ethics, Survey

Background

Artificial intelligence (AI) is rapidly changing the landscape of medicine, and oncology is emerging as a field with significant opportunities for AI-driven innovations. Technologies such as machine learning, deep learning, and large language models (LLMs) have the potential to enhance diagnostic precision, personalize treatment strategies, forecast patient outcomes, and accelerate research productivity [1, 2]. Despite these promises, integrating AI into routine oncology care is not solely a technological challenge—it also depends on whether clinicians have the necessary knowledge, confidence, and ethical understanding to use AI responsibly [3].

Adoption of AI by medical oncologists is influenced by several factors, including prior education on AI, trust in algorithmic outputs, awareness of limitations, data privacy protections, and clearly defined roles and accountability. Although interest in AI is growing globally, there is limited information on oncologists' current understanding, attitudes, and ethical concerns, particularly in countries with healthcare systems undergoing rapid development. Türkiye, home to

Access this article online https://smerpub.com/

Received: 19 November 2024; **Accepted:** 05 February 2025

How to cite this article: Silik OE. Integrating Artificial Intelligence in Oncology: Turkish Medical Oncologists' Knowledge, Attitudes, and Ethical Perspectives. Asian J Ethics Health Med. 2025;5:13-24. https://doi.org/10.51847/ObxojlDDEH

approximately 1,340 practicing medical oncologists, offers a relevant setting to investigate these issues. Insights into their experiences can inform the design of targeted training programs, ethical guidance, and policies that support safe and effective AI use in patient care.

This study aimed to explore Turkish oncologists' experiences with AI, focusing on four objectives: (1) to measure their exposure to and familiarity with AI tools, especially LLMs; (2) to assess their attitudes toward AI in clinical and research contexts; (3) to identify ethical and legal concerns; and (4) to evaluate educational and regulatory needs. The goal was to generate insights that could guide the responsible adoption of AI in oncology and ultimately improve patient care.

Materials and Methods

Study population and design

We conducted an online, cross-sectional survey targeting members of the Turkish Society of Medical Oncology. Eligible participants included medical oncology specialists, as well as residents and fellows who had completed internal medicine training. Out of an estimated 1,340 oncologists in Türkiye, 147 completed the survey, representing roughly 11% of the national workforce [4].

Survey development

The survey was developed after an initial qualitative exploration and consultation with experts in AI and medical ethics. A focused literature review using the terms ("artificial intelligence" OR "AI") AND ("ethics" OR "concerns") helped inform question selection. The final questionnaire addressed: demographic and professional background, AI usage patterns, formal AI training, self-assessed knowledge in machine learning, deep learning, and natural language processing, attitudes toward AI in diagnosis, treatment planning, prognosis, research, patient monitoring, and decision support, as well as perceived impacts on physician-patient relationships, healthcare delivery, policy, workload, and job satisfaction. Ethical and regulatory topics included current legal sufficiency, perceived challenges, and suggestions for reform. Due to pilot study findings highlighting strong interest in LLMs, several survey items focused specifically on these tools. The English version of the survey is included in the supplementary appendix.

Data collection

The survey was administered online through Microsoft Forms from October 16 to November 27, 2024. Invitations were sent via the Turkish Society of Medical Oncology's social media, messaging groups, and email lists. Participation was voluntary, anonymous, and began only after electronic informed consent was provided.

Analysis

Quantitative data were summarized using descriptive statistics including frequencies, percentages, medians, and interquartile ranges. Ordinal regression was applied to identify factors associated with knowledge, attitudes, and concerns. Post hoc power analysis indicated 96% power with a 10% margin of error. Open-ended responses were manually coded to identify themes such as ethical dilemmas, data security, clinical integration, and training needs. All analyses and visualizations were performed using R version 4.4.

Ethics

The study received approval from the institutional ethics committee (AUTF-KAEK 2024/635) and was conducted in line with the Declaration of Helsinki. No personally identifiable information was collected.

Results

Participant characteristics

A total of 147 oncologists completed the survey, representing approximately 11% of Türkiye's estimated oncology workforce [4]. The median age was 39 years (IQR: 35–46), with 63% male. Median total medical experience was 14 years (IQR: 10–22), with 5 years (IQR: 2–14) in oncology. Nearly half (48%) worked in university hospitals, 31% in training and research hospitals, and the remainder in private or state hospitals. Academic ranks were residents/fellows (38%), specialists (22%), professors (21%), associate professors (16%), and assistant professors (2%). Participants came from major urban centers, including Istanbul and Ankara, as well as smaller provinces, offering broad geographic representation.

Table 1. Demographics, AI usage, and education status of participants

Gender, n (%)	
Male	93 (63.3%)
Female	54 (36.7%)
Age, median (IQR)	39 (35–46)
Years as physician, median (IQR)	14 (10–22)
Years in oncology, median (IQR)	5 (2–14)
Site of practice, n (%)	
University hospital	70 (47.6%)
Training and research hospital	46 (31.3%)
Private hospital	20 (13.6%)
State hospital	8 (5.4%)
Private clinic	3 (2.0%)
Educational and academic status, n (%)	
Resident, fellow	56 (38.1%)
Specialist	33 (22.4%)
Professor	31 (21.1%)
Associate professor	24 (16.3%)
Assistant professor	3 (2.0%)
Used any artificial intelligence before, n (%)*	
ChatGPT and other GPT models	114 (77.5%)
Google Gemini	25 (17.0%)
Microsoft Bing	16 (10.9%)
Others**	13 (8.8%)
Have not used any	33 (22.5%)
Artificial intelligence education status, n (%)	
Not received any education	133 (90.5%)
Received basic-level education	10 (6.8%)
Received advanced-level education	3 (2.0%)
Received intermediate-level education	1 (0.7%)
Will to receive education for artificial intelligence, n (%)	
Yes	139 (94.6%)
No	8 (5.4%)
Resources used to acquire knowledge about artificial intelligence, n (%)*	
Colleagues	39 (26.5%)
Academic publications	34 (23.1%)
Online courses and websites (e.g., Coursera, EDx)	32 (21.8%)
Popular science publications	29 (19.7%)
Conferences and workshops	27 (18.4%)
Other periodicals	7 (4.8%)
Others***	8 (5.4%)
Do not using any resources	57 (38.8%)

* Percentages shown for total participant counts
** Other artificial intelligences, include Meta LLAMA, X Grok, Google Bard, Perplexity, Anthropic Claude
*** Other resources include social media and non-academic books
IQR Interquartile range

The majority of respondents were from the Central Anatolia Region of Türkiye (34.0%, n = 50), followed by the Marmara Region (27.2%, n = 40), the Aegean Region (17.0%, n = 25), and the Mediterranean Region (10.2%, n = 15). A regional distribution map of the participants across Türkiye is shown in **Figure 1**.

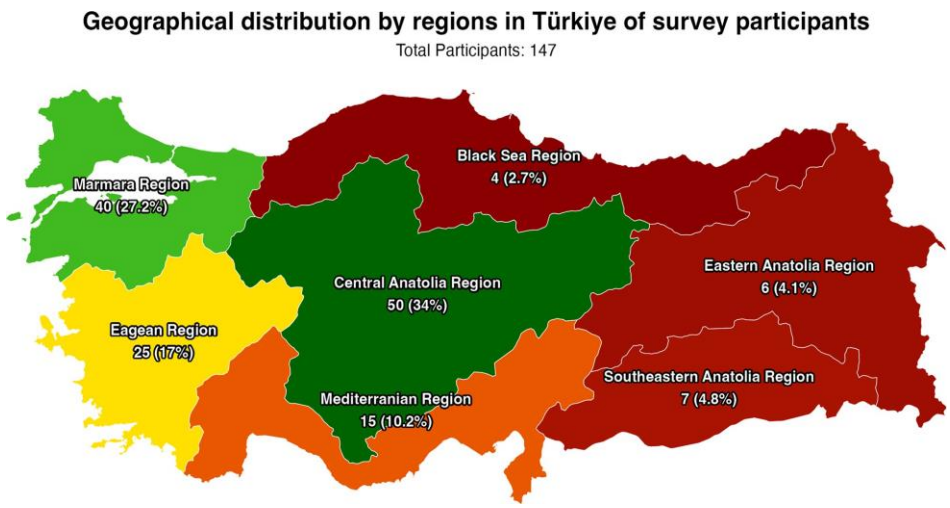


Figure 1. Geographical Distribution of Participants by Regions of Türkiye

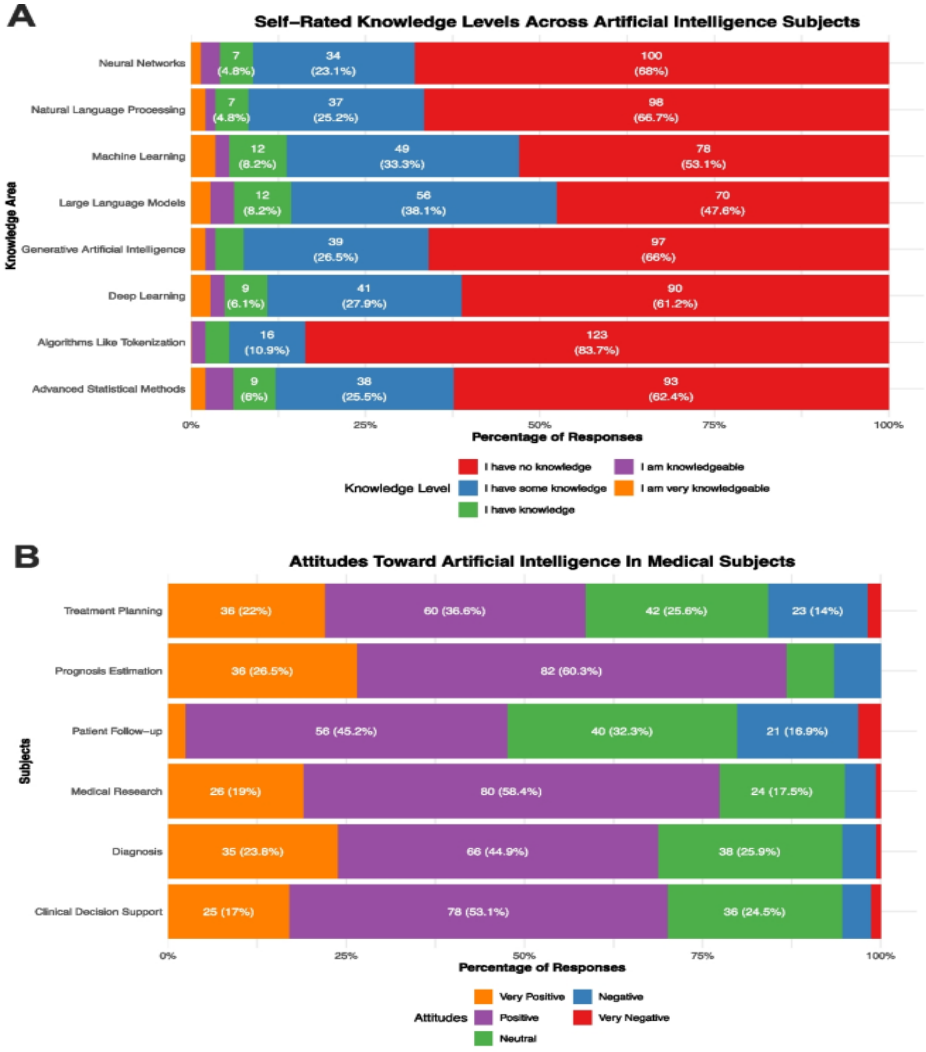
AI Interaction and learning among Turkish oncologists

A substantial portion of the surveyed oncologists have experimented with artificial intelligence in their professional activities. Approximately three out of four participants reported having used at least one AI application. Among these, large language models—such as ChatGPT—dominate usage, reflecting their growing presence in clinical settings. Other platforms, including Google Gemini and Microsoft Bing, were far less commonly explored, while niche tools like Anthropic Claude, Meta Llama-3, and Hugging Face saw minimal engagement.

Despite frequent tool usage, formal education in AI remains scarce. Fewer than one in ten respondents had received any structured training, and even this was mostly introductory. The overwhelming majority expressed a desire for more comprehensive instruction, indicating a significant gap between AI exposure and formal learning opportunities.

Sources of AI knowledge were highly variable. More than one-third of clinicians reported not consulting any materials or resources. Those seeking guidance relied primarily on peers and academic publications, with smaller numbers turning to online courses, popular science articles, or professional meetings. These findings suggest that many oncologists acquire AI knowledge informally rather than through structured education.

When asked to assess their own expertise, most participants acknowledged limited understanding of key AI concepts. Familiarity with machine learning and deep learning was especially low, with over 85% reporting minimal or no knowledge. Basic awareness of large language models and generative AI was also lacking in a significant number of respondents. Similar gaps were noted in areas such as natural language processing and advanced statistical methods, highlighting a widespread need for targeted training to support confident, informed use of AI in oncology.



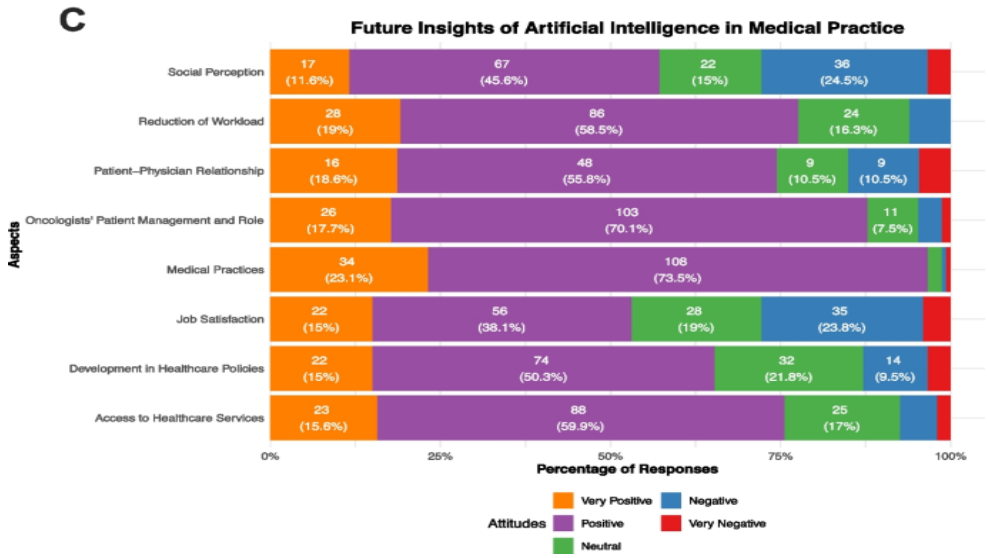


Figure 2. Overview of Oncologists' AI Familiarity, Attitudes, and Perceived Impact. (A) Distribution of participants' self-assessed AI knowledge, (B) attitudes toward AI in various medical practice areas, and (C) insights into AI's broader impact on medical practice

Perspectives on AI in oncology practice

When asked about the use of AI across different clinical activities, participants generally expressed cautious enthusiasm. AI was most positively received for prognosis estimation, where the majority viewed it as a helpful tool. Similarly, a strong endorsement was observed for medical research, with nearly three-quarters of respondents acknowledging AI's potential to support academic work. Opinions were more divided regarding treatment planning and patient follow-up; many clinicians reported neutral views, reflecting uncertainty about AI's reliability and its practical application in these areas. While diagnosis and clinical decision support were largely regarded favorably, some participants remained hesitant, likely due to concerns over validation, accuracy, and the interpretability of AI-generated recommendations.

Looking beyond specific tasks, participants shared nuanced views on how AI might influence broader aspects of oncology practice, such as the physician-patient relationship, societal perception, and health policy. While most agreed that AI could enhance workflow efficiency and overall medical practice, there were widespread concerns that it might reduce the personal touch in patient interactions or affect public trust. Around half of the oncologists recognized AI's potential to improve access to healthcare services, but some remained unsure or skeptical, highlighting worries that technological benefits may not be distributed equally across all patient populations and could inadvertently worsen existing inequalities.

Ethical and legal considerations

Participants also highlighted key ethical and regulatory challenges associated with AI use. The most frequently cited areas of concern were patient management (57.8%, n = 85), academic writing for articles or presentations (51.0%, n = 75), and study design (25.2%, n = 37). Respondents worried that relying on AI in these domains could compromise patient safety, academic integrity, or the validity of research findings. Interestingly, a notable proportion of participants reported actively using AI despite these concerns—13.6% (n = 20) for academic writing and 11.6% (n = 17) for patient management—indicating that convenience or lack of clear guidance may encourage experimental use. Among those employing AI in patient care, only about half acknowledged potential ethical implications, suggesting a tension between perceived utility and ethical caution.

Below is a paraphrased version of the provided tables, restructured and reworded while maintaining the original meaning and data. The tables have been renamed for clarity, and the wording has been adjusted to present the information in a slightly different but equivalent manner.

Table 2. Perspectives on Ethical Issues of AI in Medical Practice

Question	Response	Number of Participants (%)
Supports the use of AI in medical practice	Agree	120 (81.6%)
	Disagree	9 (6.1%)
	Uncertain	18 (12.3%)
Believes healthcare professionals should contribute to AI development	Agree	135 (91.8%)
	Disagree	3 (2.0%)
	Uncertain	9 (6.2%)
Views the following AI-related activities as ethically problematic*	Patient care decisions	85 (57.8%)
	Writing articles/presentations	75 (51.0%)
	Editing articles/presentations	37 (25.2%)
	Research study design	37 (25.2%)
	Ethics committee submissions	33 (22.5%)
	Creating communication materials	22 (14.9%)
	None of these	29 (17.7%)
Has engaged in the following AI-related activities deemed ethically concerning*, †	Patient care decisions	17 (11.6%)
	Writing articles/presentations	20 (13.6%)
	Editing articles/presentations	33 (22.4%)
	Research study design	15 (10.2%)
	Ethics committee submissions	10 (6.8%)
	Creating communication materials	17 (11.6%)
	None of these	16 (10.9%)

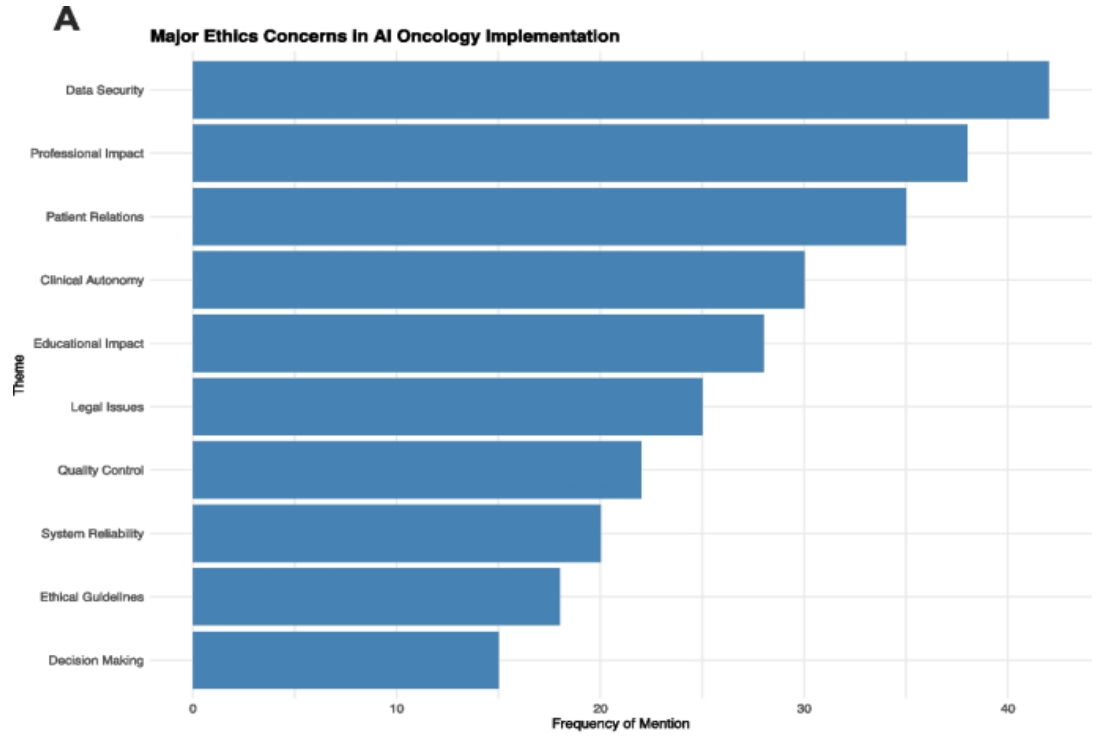
- Percentages reflect the total number of participants. † Optional survey question.

Table 3. Opinions on Ethical AI Development and Regulation

Question	Response	Number of Participants (%)
Recommends the following measures to promote ethical AI development and use in medical practice*	Conducting ethical reviews	111 (75.5%)
	AI training for professionals	105 (71.4%)
	Implementing legal frameworks	105 (71.4%)
	Requiring patient consent	91 (61.9%)
	Forming oversight committees	75 (51.0%)
	Other measures**	2 (1.5%)
Considers current legal regulations for AI applications sufficient	No	117 (79.6%)
	Yes	3 (2.0%)
	Uncertain	27 (18.4%)
Attributes responsibility for AI-supported medical errors to*	Software developers	100 (68.0%)
	Physicians	90 (61.2%)
	Healthcare institutions	57 (38.8%)
	Patients/relatives (with informed consent)	43 (29.3%)
	AI trainers	35 (23.8%)
Suggests the following actions to address legal gaps in AI use in medical practice*	Creating global and national standards	121 (82.3%)
	Passing new legislation	87 (59.2%)
	Establishing AI oversight bodies	79 (53.7%)
	Mandating informed consent for AI use	78 (53.1%)

Revising existing laws	65 (44.2%)

- Percentages reflect the total number of participants. ** Other responses highlighted ethical concerns as significant barriers to AI advancements and clinical trials.



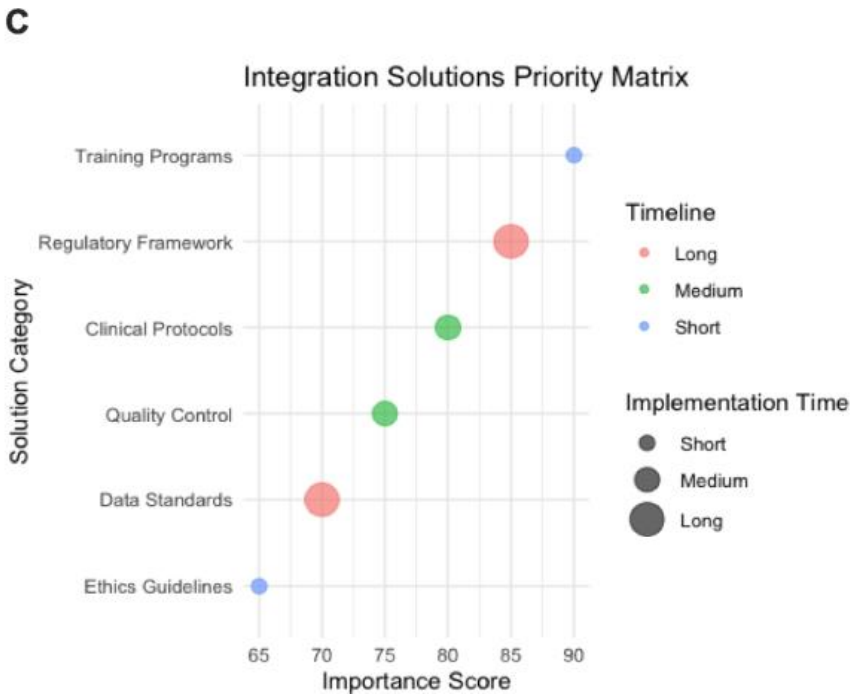


Figure 3. Ethical, Regulatory, and Strategic Perspectives on AI Integration

Participants highlighted several ethical, regulatory, and operational challenges regarding AI use in oncology. **Figure 3** summarizes these insights: major ethical concerns, obstacles to implementation across technical, educational, clinical, and regulatory domains, and suggested strategies for responsible integration. The timeline for implementing these measures was derived from open-ended responses, showing a strong alignment between urgency and projected implementation duration ($R^2 = 1.0$).

Overall, there was broad support for AI in clinical practice, with 82% of oncologists endorsing its use. However, nearly 80% (n = 117) found current legal regulations inadequate. Many respondents advocated for stricter legal frameworks and systematic ethical audits. Obtaining patient consent emerged as a key priority, noted by 61.9% (n = 91), emphasizing the importance of transparency and safeguarding patient rights. Liability issues for AI-related errors were also contentious: 68% (n = 100) assigned partial responsibility to software developers, while 61.2% (n = 90) also implicated clinicians, indicating a preference for shared accountability among multiple stakeholders.

To close these gaps, participants proposed concrete solutions. Standardizing AI practices at both national and international levels (82.3%, n = 121) and introducing new legislation (59.2%, n = 87) were considered essential. More than half supported establishing dedicated oversight institutions (53.7%, n = 79) and incorporating AI-specific informed consent clauses into patient documentation (53.1%, n = 78). Collectively, these responses reflect a strong desire among oncologists for a structured, legally robust environment in which AI tools are deployed responsibly and ethically.

Factors influencing knowledge, attitudes, and concerns

Ordinal regression analysis revealed that formal AI education was the only significant predictor of knowledge levels (ß = 30.534, SE = 0.6404, $p < 0.001$). Other demographic or professional variables, including age, years of practice, oncology experience, and academic rank, were not significantly associated with knowledge.

When examining ethical and practical concerns, no measured factors—including demographics, experience, academic position, prior AI training, or current knowledge—showed a significant influence on concern levels ($p > 0.05$).

Regarding attitudes toward AI integration, two key factors were identified. Willingness to participate in AI training was linked to more positive attitudes (ß = 13.143, SE = 0.6688, p = 0.049), as was having already received AI education (ß = 12.928, SE = 0.6565, p = 0.049).

Higher overall knowledge levels showed a non-significant trend toward more favorable attitudes (ß = 0.3899, SE = 0.2009, p = 0.052). **Table 4** provides a detailed overview of ordinal regression analyses assessing predictors of knowledge, attitudes, and concerns among Turkish medical oncologists.

Table 4. Ordinal regression results for assessing the factors affecting knowledge levels, attitudes and concerns

Domain*	Factor	ß	SE	*p***
Knowledge levels	**Age (per year increase)**	−0.1835	0.1303	0.159
	Years as physician (per year increase)	0.0936	0.1174	0.425
	Years in oncology (per year increase)	0.0270	0.0752	0.719
	Educational and academic status (compared to associate professor)			
	Assistant professor	0.8900	11.048	0.420
	Professor	11.068	0.7912	0.162
	Specialist	−0.3128	0.6078	0.607
	Resident, fellow	−0.9552	0.6371	0.134
	Will to receive AI education (yes vs. no)	−0.6132	0.7887	0.437
	AI education status (any vs. none)	30.534	0.6404	**<.001**
Concern levels	**Age (per year increase)**	−0.0875	0.1004	0.384
	Years as physician (per year increase)	0.0239	0.0922	0.796
	Years in oncology (per year increase)	0.0175	0.0544	0.747
	Educational and academic status (compared to associate professor)			
	Assistant professor	−0.7438	11.487	0.517
	Professor	0.1743	0.7193	0.809
	Specialist	−0.0620	0.5116	0.904
	Resident, fellow	−0.6821	0.5423	0.208
	Will to receive AI education (yes vs. no)	−0.7755	0.7440	0.298
	AI education status (any vs. none)	−0.5828	0.6318	0.356
	Knowledge levels (per one point increase in Likert scale)	0.0384	0.1992	0.847
Attitude levels	**Age (per year increase)**	0.0637	0.1084	0.557
	Years as physician (per year increase)	−0.0361	0.0991	0.715
	Years in oncology (per year increase)	−0.0118	0.0660	0.858
	Educational and academic status (compared to associate professor)			
	Assistant professor	0.0704	11.448	0.951
	Professor	−0.4625	0.7904	0.558
	Specialist	−0.1383	0.5611	0.805
	Resident, fellow	−0.1709	0.5977	0.775
	Will to receive AI education (yes vs. no)	13.143	0.6688	**0.049**
	AI education status (any vs. none)	12.928	0.6565	**0.049**
	Knowledge levels (per one point increase in Likert scale)	0.3899	0.2009	0.052

AI Artificial intelligence, ß Beta estimate in ordinal regression, *SE* Standard error

* Domains are evaluated with median of each component of Likert scales. One-point increase indicates higher knowledge levels and concerns and more positive attitudes

** Significant *p*-values are shown in bold

Qualitative insights

Analysis of the open-ended survey responses highlighted several key themes that complemented the quantitative findings. A dominant message was that AI should serve as an aid, not a replacement, for human clinical expertise. Participants repeatedly emphasized the need for human oversight, particularly to preserve clinical judgment, empathy, and nuanced decision-making. Concerns around data security and patient privacy were widespread, with respondents warning that inadequate safeguards could compromise confidentiality. Cultural and social sensitivity was also raised, as oncologists noted that AI tools must account for diverse patient populations to avoid unintended biases.

Many respondents called for a gradual, carefully monitored approach to AI integration, alongside continuous professional development. Structured education was viewed as essential for enabling clinicians to use AI responsibly and effectively. Overall, while participants recognized AI's potential to enhance oncology practice, they stressed the necessity of clear ethical guidelines, robust regulatory frameworks, and thoughtful implementation strategies.

Discussion

This nationwide survey of Turkish medical oncologists reveals measured optimism toward integrating AI—particularly large language models and generative AI—into oncology workflows. The pilot phase of the study had already indicated strong interest in LLMs, which appears to persist in broader clinical practice. Participants acknowledged AI's potential to support decision-making, research, and treatment planning, but they also highlighted significant gaps in education, ethics, and regulatory oversight.

The widespread use of AI tools, especially LLMs, demonstrates growing clinician engagement. Yet the scarcity of formal training and the strong demand for education suggest a pressing need for structured programs from professional societies, academic institutions, and regulatory agencies. Training initiatives could focus on interpreting AI outputs critically, understanding algorithmic bias, managing data responsibly, and validating AI-driven recommendations. Such programs would equip clinicians to use AI tools effectively and confidently.

Respondents were most positive about AI applications in prognosis estimation and research, where AI can support hypothesis generation, literature synthesis, and data analysis. These findings align with international evidence demonstrating AI's strength in processing large datasets and identifying patterns to inform evidence-based practice [5, 6]. However, concerns about the impact of AI on patient-physician interactions underline the importance of preserving humanistic aspects of care. In some cases, cultural factors specific to Türkiye may influence perceptions of workload and job satisfaction, highlighting the need for locally informed strategies. AI should function as a supportive tool, enhancing rather than replacing empathy, communication, and clinical judgment.

Ethical and regulatory challenges were a major concern. Clinicians identified activities such as patient management and academic writing as areas with potential ethical risk, noting that misinterpretation or misuse of AI outputs could threaten patient safety and research integrity. These concerns echo recent literature emphasizing the ethical reasoning embedded in large-language models and the growing focus on AI's role in publication ethics [7–13]. With most participants judging existing legal frameworks insufficient, the development of robust standards, clear guidelines, and dedicated oversight institutions is essential. While this study reflects the Turkish context, the findings likely have global relevance, underscoring the need for international collaboration and harmonized regulations to clarify liability, ensure patient safety, and align AI deployment with ethical principles [14–17].

Ordinal regression analysis indicated that both willingness to pursue AI education and prior training strongly predicted more favorable attitudes toward AI. Notably, formal training had a substantial effect on knowledge levels, suggesting that even brief educational interventions can significantly enhance clinicians' understanding and competency. However, while education improved knowledge and attitudes, it did not reduce concerns regarding AI use. Ethical and practical apprehensions persisted across all groups, regardless of experience or training. This highlights that while education is crucial for adoption, additional strategies—such as regulatory guidance, oversight mechanisms, and standardized implementation protocols—are needed to address broader concerns and ensure safe, responsible integration of AI into oncology practice.

Qualitative insights on AI in oncology

Responses to open-ended questions highlighted several recurring themes. Data security and potential impacts on professional practice—such as job displacement or reputational risk—were frequently cited, reflecting clinicians' apprehension about uncertainties surrounding AI adoption. Some concerns aligned with findings from previous studies in Türkiye [18–20]. Participants also noted ethical challenges, including risks associated with unauthorized data sharing and breaches of confidentiality.

Although a few respondents reported using non-generative AI tools, such as radiomics platforms, most had little exposure beyond large language models, underscoring the dominance of LLMs in current clinical practice. Open-ended feedback revealed a strong preference for formal AI education before wider clinical implementation, with many clinicians advocating for delaying active use until appropriate training and guidelines are in place. Overall, qualitative analysis suggested generally cautious or negative expectations about AI's immediate impact on oncology practice. Awareness of non-generative AI systems was limited, though some participants expressed interest in broader access to AI-driven risk models.

In research contexts, participants noted that while LLMs dominate discussion, other AI applications—such as big data analysis, imaging techniques, genomics, machine learning–based risk modeling, radio-genomics, and bioinformatics approaches—are advancing rapidly. These innovations have the potential to improve cancer care substantially, yet ethical considerations remain paramount, and additional concerns are likely to emerge as AI adoption expands.

Study Limitations

This study has several limitations. Its focus on a single country limits the generalizability of findings to regions with different healthcare systems, clinical practices, or regulatory environments. Reliance on self-reported data may introduce bias. The survey did not capture the specific purpose or context of AI tool usage, reducing the applicability of some findings to specialized subgroups. Additionally, although the survey instrument was developed with expert input and preliminary qualitative interviews, formal psychometric validation was not performed, which may affect reliability.

Future Directions

Future investigations could benefit from qualitative interviews, focus groups, and longitudinal studies to track changes in attitudes and the impact of educational or policy interventions over time. Comparative research across multiple countries would also help elucidate cultural and systemic factors influencing AI adoption in oncology.

Conclusions

Turkish medical oncologists recognize the potential of AI to enhance oncology practice, particularly in areas such as research, prognosis, and clinical decision support. At the same time, they highlight significant gaps in formal education, ethical guidance, and regulatory frameworks. Their cautious optimism underscores the need for proactive measures—including structured training programs, clear policies, robust oversight mechanisms, and patient-centered safeguards—to ensure that AI complements rather than undermines clinical expertise, professional integrity, and patient trust. While this study is limited to a single-country perspective, the findings provide valuable insights for global efforts to implement AI responsibly in cancer care.

Acknowledgments: None

Conflict of Interest: None

Financial Support: None

Ethics Statement: None

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