

Barriers to advancing global oncology in an NCI-designated cancer center: A cross-sectional survey of faculty perspectives

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Abstract: Global oncology seeks to advance equitable cancer care across diverse populations worldwide. Recognizing its importance, the National Cancer Institute (NCI) has designated it as a strategic priority for its cancer centers. However, many struggle to integrate it into their clinical, scientific, and educational missions. We conducted an exploratory institutional needs assessment using a de-identified, cross-sectional survey at the University of Colorado Cancer Center (UCCC), an NCI-designated comprehensive cancer center. The survey, adapted from the NCI Global Oncology Assessment Survey, was distributed *via* email to UCCC members and assessed familiarity, prior involvement, motivations, and perceived barriers in global oncology work. Twenty-two members completed the survey. Over one-third (36%, 95% CI: 19.7%–57.0%) were unfamiliar with global oncology, and only 45% (95% CI: 26.9%–65.3%) had prior involvement in related initiatives. Motivators for engaging in global oncology included personal interest, opportunities for collaboration, and a commitment to addressing health disparities. Key barriers were limited funding, lack of time, and lack of institutional support. Among those with prior global oncology experience, most reported challenges securing funding, limited institutional support, administrative burdens, and a lack of academic recognition for global work. Despite strong personal interest and alignment with NCI priorities, global oncology remains under-recognized and under-supported at our institution, and may reflect similar challenges in other academic centers. Barriers impeding further engagement include limited funding, lack of institutional support, and administrative complexity. Targeted support, dedicated funding, and academic recognition could strengthen institutional capacity to advance cancer care locally and globally.

Keywords: global health, global oncology, equity

1. Introduction

Global oncology has emerged as a branch of global health focused on addressing disparities in cancer care (1). In recent decades, there has been an increase in incidence and mortality in low- and middle-income countries (LMICs). According to the Global Cancer Observatory (GLOBOCAN), there were an estimated 20 million new cancer cases and 9.7 million cancer deaths worldwide in 2022, with disproportionately higher mortality rates in African and Asian regions (2). This growing burden highlights the urgency of strengthening global oncology efforts, prompting United States-based organizations such as the American Society of Clinical Oncology (ASCO) or the National Comprehensive Cancer Network (NCCN) to establish dedicated task forces and programs (3).

The National Cancer Institute (NCI) created the Center of Global Health (CGH) in 2011 to incorporate

cancer control into global health programs, to coordinate NCI's engagement in global cancer control, and to encourage NCI-designated cancer centers to engage in global oncology projects. However, global oncology programs within NCI-designated cancer centers are still mostly underdeveloped, even with such initiatives (4). To better understand progress and persistent barriers, the NCI CGH developed and distributed a survey to assess the state of global oncology at all NCI-designated cancer centers. The most recent results, published in 2021, showed that 42% of cancer centers have formal global oncology programs, while an extra 49% engage in global oncology activities (5). Global oncology programs reported several challenges, such as a lack of funding and balancing global oncology projects with other professional demands (5). These findings are corroborated by reports from major academic institutions in the United States, noting that limited resources and institutional support are obstacles for

global collaboration (6).

The University of Colorado Cancer Center (UCCC) serves the entire state of Colorado as its catchment area, engaging more than 80 % of the state's population, including a significant immigrant population. Building on these domestic efforts, UCCC formally established a global oncology program in 2024 to foster global cancer research and equitable, bidirectional partnerships (7-9). In this research, we aimed to assess institutional engagement and identify barriers to global oncology advancement at UCCC before the initiation of the global oncology program, to better define strategies for successful implementation.

2. Study design

This exploratory, cross-sectional institutional needs assessment survey was conducted from February to March 2025, using an instrument adapted from the existing NCI Global Oncology Assessment Survey used in prior national assessments (5). No additional formal validation was performed for this adapted version. Eligible participants included UCCC members from both clinical and nonclinical divisions. The de-identified, voluntary survey was distributed *via* email to all UCCC members and collected in a secure Microsoft Smartsheet page, with five weekly reminders sent to maximize response rates. The main topics of the survey included: Familiarity and Definition of Global Oncology; Prior Experience and Engagement in Global Oncology; Barriers and Challenges; Motivations and Support Needs; and Future Directions (Supplementary File, <https://www.globalhealthmedicine.com/site/supplementaldata.html?ID=120>).

All survey responses were stored securely on institutional servers. Data analysis was performed using Stata V15.0, and descriptive statistics, including frequencies and percentages, were calculated. For key proportions, 95% confidence intervals (CIs) were calculated using the Wilson score method. The secondary analysis of de-identified survey data was reviewed and determined to be exempt by the University of Colorado Institutional Review Board under 45 CFR 46.104(d) (4).

3. Key research findings

3.1. Survey results

The survey was distributed to 622 UCCC members, of whom 22 (3.5%) completed it. Of the 22 respondents, 14 (64%, 95% CI: 43.0%–80.3%) were familiar with the concept of global oncology, and 10 (45%, 95% CI: 26.9%–65.3%) had participated in global oncology research in collaboration with international partners. Only 3 had collaborated with a global oncology department or team at UCCC.

Respondents represented a diverse range of

disciplines within oncology, with the majority working in medical oncology ($n = 6$), followed by molecular oncology ($n = 4$), immunology ($n = 3$), and hematology oncology ($n = 2$). Smaller numbers identified their primary area of work as surgical oncology ($n = 1$), pediatric oncology ($n = 2$), palliative/supportive care ($n = 2$), or other disciplines ($n = 2$). Participation in UCCC programs was most reported in Developmental Therapeutics (45%), followed by Tumor–Host Interactions (23%), Molecular and Cellular Oncology (14%), and Cancer Prevention and Control (9%), with an additional 9% participating in other programs. With respect to research involvement, seven participants (32%) reported dedicating 76–100% of their professional time to research, six each (27%) reported dedicating 51–75% or 11–25%, and smaller proportions spent 26–50% (9%) or 0–10% (5%) of their time on research activities.

Motivations for involvement in global oncology initiatives were primarily driven by personal interest ($n = 17$, 77.3%, 95% CI: 56.6%–89.9%) and opportunities for collaboration ($n = 17$, 77.3%, 95% CI: 56.6%–89.9%). Addressing health disparities was also a major motivator, cited by 11 (50.0%, 95% CI: 30.7%–69.3%) respondents. Fewer participants identified institutional goals ($n = 3$) as a primary motivator. Regarding the focus of their global oncology projects, the most frequent responses were research collaboration with international institutions ($n = 8$) and clinical care or onsite cancer care delivery ($n = 5$). Other prominent areas included global cancer research networks ($n = 4$), capacity building and training in international settings ($n = 4$), and implementation of cancer control programs ($n = 1$). Research collaborators were identified in 57 countries across all continents, with most located in Europe and Latin America (Figure 1). When asked about the classification of their global research according to the Common Scientific Outline (CSO), projects were most often categorized as treatment ($n = 4$), followed by etiology ($n = 2$), biology ($n = 1$), and early detection, diagnosis, and prognosis ($n = 1$), while two projects remained uncoded.

Funding sources for global oncology projects were heterogeneous. The most frequently reported were charitable or philanthropic funds ($n = 6$), followed by international non-profit organizations ($n = 4$), investigator discretionary funds ($n = 3$), and NIH support ($n = 3$). Smaller numbers received U.S. government non-NIH funds ($n = 2$), administrative or U.S. non-profit support ($n = 1$ each), or were unfunded ($n = 1$).

Key challenges reported in conducting global oncology research included limited funding opportunities or timelines that do not align with real-world needs ($n = 8$) and limited institutional support for global initiatives ($n = 6$). Other commonly cited barriers were lack of recognition or credit for global oncology work ($n = 5$), bureaucratic hurdles ($n = 5$), and limited opportunities for academic advancement ($n = 3$). Reported barriers differed by level of engagement: participants more



Figure 1. Geographic distribution of global oncology research collaborators affiliated with the University of Colorado Cancer Center. Regions with reported collaborations are highlighted in red, most frequently in Europe and Latin America.

frequently cited structural challenges such as funding limitations and administrative burden, whereas non-participants more commonly reported lack of time and limited opportunities.

Our exploratory institutional needs assessment shows that a substantial proportion of respondents were unfamiliar with the concept of global oncology, indicating that awareness and understanding of this field remain limited within our institution. The low participation rate is also an important finding, showing that global oncology is either poorly known or not a priority for most oncology researchers. Although most participants expressed strong personal motivation and interest in international collaboration, significant barriers, particularly the lack of dedicated funding and institutional support, continue to hinder the development of global oncology initiatives.

3.2. Global oncology efforts

Over the past decade, increasing efforts have been made to address disparities in cancer care and strengthen global oncology in the United States (1). However, despite a push from the NCI CGH to encourage the creation of formal global oncology programs, faculty across many cancer centers, including UCCC, still report a high number of barriers and are mostly unaware of global oncology. Barriers identified in our study mirror the 2021 NCI Global Oncology Assessment findings, which identified limited institutional support and funding, and a lack of recognition of global oncology work as major obstacles across NCI-designated cancer centers (5).

These findings highlight that barriers are not restricted to a single institution, and set the stage for collaborative work to tackle them.

The establishment of an ASCO Global Oncology Task Force and the creation of investigator awards have been successful at increasing awareness about the relevance of global oncology (1). However, as demonstrated, efforts are still necessary to increase awareness. The Task Force published recommendations encouraging the integration of global oncology principles, particularly cancer care delivery in low-resource settings, into Hematology/Oncology training programs (10). Some institutions are already including Global Health as a track in their training due to the increasing interest from the trainees (11). Our institution recently established a Global Oncology Department, with a small percentage of respondents already working with it.

3.3. Limitations of the study

Some notable limitations of our study include its small sample size, single-institution design, and potential for response bias given the low response rate. Familiarity with global oncology is likely even lower than reported, as those already interested or involved in the field were more likely to respond. With almost half of the respondents working in therapeutic development, this may contribute to response bias, as they are more frequently involved in global oncology, such as international clinical trials, than other groups. However, we were unable to compare respondents with non-respondents due to insufficient data. This possible

overestimation further highlights the need to raise awareness and increase engagement in global oncology across academic centers. Additionally, our analysis is descriptive and exploratory, not hypothesis-testing. Although our scope was limited, the overall patterns of engagement and barriers observed were consistent with previous reports, suggesting that our findings may still reflect broader institutional trends (5).

4. Conclusions

Despite growing interest and alignment with NCI priorities, global oncology remains under-recognized and insufficiently supported in our institution, and may reflect a reality within many academic institutions. Structural barriers, including limited funding mechanisms, lack of protected time, insufficient institutional infrastructure, and administrative complexity, continue to hinder meaningful participation. Addressing these challenges through targeted institutional investment, enhanced mentorship, and formal academic recognition could strengthen capacity and sustainability in this emerging field, ultimately advancing equitable cancer care on both local and global scales.

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