






Psychosocial characteristics and quality of life among sexual and gender minority patients with cancer

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Abstract

Background: Underserved and minoritized patients with cancer often experience more psychosocial concerns and inferior quality of life (QOL) compared with majority populations. This study compared patient-reported psychosocial characteristics and QOL among self-identified sexual and gender minority patients with cancer vs cisgender-heterosexual patients with cancer treated at a National Cancer Institute–designated comprehensive cancer center in the United States.

Methods: Self-report data from 51 503 patients were obtained from an institutional standard-of-care electronic patient questionnaire that was completed prior to, or on the day of, the patient's initial visit. The electronic patient questionnaire collects demographic information, including sexual orientation and gender identity, psychosocial variables, and QOL using the validated Short Form Health Survey–12. Sexual orientation and gender identity information was used to identify self-identified sexual and gender minority and cisgender-heterosexual persons (ie, non-self-identified sexual and gender minority). Using parametric analyses, psychosocial variables and QOL measures were compared for self-identified sexual and gender minority vs non-self-identified sexual and gender minority patients with cancer.

Results: Compared with non-self-identified sexual and gender minority patients (n = 50 116), self-identified sexual and gender minority patients (n = 1387, 2.7%) reported statistically significantly greater concerns regarding getting help during treatment (2.6% vs 4.3%, respectively; $P = .001$) and concerns with ability to seek care (16.7% vs 21.6%, respectively, $P < .001$). Self-identified sexual and gender minority patients reported statistically significantly elevated mental health concerns and daily emotional and pain interference (all $P < .001$), whereas there was no statistically significant difference in daily interference due to physical functioning.

Conclusion: These data reveal real-world disparities among self-identified sexual and gender minority patients with cancer, which can be used to develop psychosocial interventions tailored to address the unique psychosocial and QOL needs of this underserved and minoritized population and to ultimately improve cancer care.

Sexual and gender minority persons are those who identify as, but are not limited to, lesbian, gay, bisexual, transgender, queer, asexual, and/or nonbinary (1). Self-identified sexual and gender minority populations are medically underserved and marginalized and experience substantial disparities across the cancer care continuum from prevention to survivorship (2). This is a pressing public health concern as the number of people comfortable identifying as lesbian, gay, bisexual, transgender, or something other than heterosexual has doubled over the last decade to 7.2% (3).

Self-identified sexual and gender minority patients often experience barriers to appropriate care, which can be attributed to limited knowledge of providers regarding self-identified sexual and gender minority health-care needs, lack of self-identified sexual and gender minority–inclusive and –specific guidelines, and lack of health-care clinics creating a welcoming and

inclusive environment (4–9). For example, sexual minority patients with cancer compared with heterosexual patients reported statistically significantly lower satisfaction with overall cancer care because of unmet needs (eg, lack of involvement in decision making) (5). Concealment of self-identified sexual and gender minority identity (9) and various forms of romantic relationships among self-identified sexual and gender minority patients (eg, same-sex partner) (6) may preclude opportunities for a full range of support in cancer care, which may adversely impact general health outcomes in this population (9,10). In particular, self-identified sexual and gender minority patients with cancer reported that the quality of cancer care was negatively affected by the providers' lack of self-identified sexual and gender minority knowledge and skills, safety concerns in disclosure of self-identified sexual and gender minority identities, concerns

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about intersectionality (eg, quality of care affected by an intersection of race, partner status, and self-identified sexual and gender minority status), and lack of integration of nontraditional caregivers (eg, partner vs spouse) in their care (4,11).

One step for addressing unmet needs of self-identified sexual and gender minority patients with cancer is the systematic collection of sexual orientation and gender identity as a standard-of-care demographic in oncology settings. Extant literature has shown self-identified sexual and gender minority persons with cancer compared with cisgender-heterosexual patients with cancer experience higher rates of discrimination (12), greater rates of psychosocial and mental health concerns (12-16), and poorer quality of life (QOL) (12,13). Evidence suggests mental health conditions can have a detrimental impact on cancer outcomes (17) and adherence to cancer treatment (18). However, lack of routine sexual orientation and gender identity data collection in the medical record raises pragmatic challenges in understanding and addressing disparities and inequities among self-identified sexual and gender minority patients, unmet needs in cancer care (eg, psychosocial concerns), and improving quality care (19).

The goal of this study was to analyze self-reported questionnaire data including sexual orientation and gender identity information on more than 50 000 patients from a tertiary cancer center in the United States to determine if self-identified sexual and gender minority patients with cancer compared with cisgender-heterosexual patients with cancer report greater psychosocial concerns and lower QOL. The results from this study could be leveraged to develop interventions to reduce cancer-related health disparities among self-identified sexual and gender minority patients with cancer.

Methods

Study population

This analysis includes patients who came to the H. Lee Moffitt Cancer Center and Research Institute (Tampa, FL, USA) between September 2016 and January 2021 and completed the institutional standard-of-care electronic patient questionnaire. During this time period, the catchment area of the cancer center included 15 counties spanning from West Central to Central Florida, which includes approximately 30% of Florida's total population. All patients were aged 18 years and older. The study was approved by an institutional review board (Advarra, institutional review board protocol #20549).

Electronic patient questionnaire

The primary source of data was the institution-wide electronic patient questionnaire, which every new patient completes prior to or on the day of first visit. Patients can complete the electronic patient questionnaire either through a web-based patient portal or on a tablet in the clinic prior to appointment. The electronic patient questionnaire is comprised of 12 modules collecting demographic information, personal and family history of cancer, medical history, current physical symptoms, cancer risk behaviors, psychosocial factors, and QOL. For this analysis, data were analyzed from the demographic, psychosocial, and QOL modules.

In September 2016, the demographic module was modified to begin collecting sexual orientation and was modified again in April 2018 to begin collecting gender identity. The questions and response options were based on Fenway Institute's "Do Ask, Do Tell" guidelines (20). Specifically, one question collected sexual orientation ("Do you think of yourself as [options]?"), and the other question collected gender identity ("What is your current

gender identity?"). The sexual orientation question response options are lesbian, gay, or homosexual; straight or heterosexual; bisexual; something else with an option of providing free text responses; and don't know. The response options for gender identity include male; female; transgender; gender queer or nonbinary; additional gender category or other; and decline to answer.

Measures

Outcome measures included items in the psychosocial and QOL modules of the electronic patient questionnaire. The 5-item psychosocial module assessed psychosocial needs and concerns including having someone who can help during treatment; living alone; considering having a child or children in the future; wanting to discuss fertility-related issues; and concerns about the ability to seek care at Moffitt (eg, transportation, financial, family care, or spiritual concerns). Response options were yes or no to each item.

The QOL module comprised 13 items including the single-item Eastern Cooperative Oncology Group (ECOG) Performance Status Scale (5-point Likert scale: 1 = completely disabled, 5 = fully active) (21) and 12-item Short-Form Health Survey-12 (22,23). The Short Form Health Survey-12 assessed physical and mental health indexed by 2 scales: physical component summary and mental component summary. The physical component summary comprised items that measured physical functioning, role-physical (experienced difficulties due to physical functioning), bodily pain, and perceived general health. The mental component summary included items that measured vitality, social functioning, role-emotional (experienced limitations due to emotional difficulties), and mental health (eg, feeling blue). Per the scoring instruction (22), the scores of 2 scales (physical component summary and mental component summary) were standardized (mean = 50 [standard deviation = 10]). The 8 subscales, mentioned above, were scored as recommended in the literature (range = 0-100) (24). Lower subscale scores refer to greater difficulty in each scale and subscale.

Statistical analysis

Statistical analyses were performed with the Stata 14.0 (Stata Corporation, College Station, TX, USA) and SPSS Statistics 26 (IBM, Armonk, NY, USA). The sexual orientation and gender identity questions were used to generate a new variable to identify patients as self-identified sexual and gender minority or cisgender-heterosexual patients (ie, non-self-identified sexual and gender minority). Patients who responded "Don't know/Decline to answer" to the sexual orientation and gender identity questions were not included in our analyses because we were unable to identify them as either a sexual minority or gender minority. Because the Short Form Health Survey-12 was one of the main outcome measures, those who did not provide any responses to the Short Form Health Survey-12 were also not included. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to quantify electronic patient questionnaire responses comparing self-identified sexual and gender minority vs non-self-identified sexual and gender minority patients. Pearson χ^2 test and independent sample *t* test were used for categorical and continuous dependent variables, respectively. Correlation analyses were conducted between the outcome variables and demographic variables. Multivariable linear regression was conducted to adjust for demographic variables. Additional self-identified sexual and gender minority subgroup analyses were conducted to explore subgroups, specifically, 1) sexual minority vs non-self-identified

sexual and gender minority after excluding gender minority patients; 2) bisexual vs lesbian, gay, or homosexual patients; and 3) bisexual vs non-self-identified sexual and gender minority patients. All statistical tests were 2-sided, and statistical significance was determined at a *P* value less than .05.

Results

Demographics

Complete electronic patient questionnaire data for the modules of interest were available on 51 503 patients (Table 1). Self-identified sexual and gender minority patients represented 2.7% of the study population. Compared with non-self-identified sexual and gender minority patients with cancer, self-identified sexual and gender minority patients were younger ($P < .001$), more likely to identify as Hispanic or Latinx ($P = .001$), and a racial minority ($P < .001$).

Psychosocial concerns

Self-identified sexual and gender minority patients were statistically significantly (Table 2) less likely to have a family member or friend who could help during their illness and treatment than non-self-identified sexual and gender minority patients (95.7% vs 97.3%; $P = .001$). Self-identified sexual and gender minority patients as compared with non-self-identified sexual and gender minority patients were statistically significantly more likely to live alone (19.2% vs 13.8%; $P < .001$), considering or unsure of having a child or children in the future (8.6% vs 4.6% and 6.4% vs

3.1%, respectively; $P < .001$), wanting to discuss fertility-related issues (4.7% vs 2.5%; $P < .001$), and be concerned about their ability to seek care at Moffitt Cancer Center (21.6% vs 16.7%; $P < .001$).

Quality of life

There were no statistically significant differences between self-identified sexual and gender minority and non-self-identified sexual and gender minority patients for ECOG Performance Status Scale and Physical Component Summary-12. However, there was a statistically significant difference in Mental Component Summary-12. Specifically, self-identified sexual and gender minority patients reported statistically significantly lower mental health functioning as indexed by Mental Component Summary-12. Among the 4 Mental Component Summary-12 subscales, self-identified sexual and gender minority individuals reported lower levels of vitality, social functioning, and mental health (ie, feeling calm or peaceful less frequently, feeling downhearted or blue more frequently), as well as greater levels of perceived limitations due to emotional difficulties (all $P < .001$). Among the 4 Physical Component Summary-12 subscales, self-identified sexual and gender minority patients with cancer reported statistically significantly greater interference with daily activities due to bodily pain ($P < .001$) and poorer general health ($P = .02$). No statistically significant differences between self-identified sexual and gender minority and non-self-identified sexual and gender minority patients were observed in either physical functioning or perceived difficulties due to physical functioning.

Table 1. Patient demographic characteristics (n = 51 503)

Characteristics	Self-identified sexual and gender minority patients (n = 1387)	Non-self-identified sexual and gender minority patients (n = 50 116)	P
Race, No. (%)			<.001
Asian or American Indian	24 (1.7)	944 (1.9)	
Black, African American	61 (4.4)	2558 (5.1)	
White	1200 (86.5)	43 713 (87.2)	
More than one race	36 (2.6)	610 (1.2)	
Other, ^a unknown, prefer not to answer	66 (4.8)	2291 (4.6)	
Ethnicity: Hispanic, Latinx, No. (%)	162 (11.7)	4274 (8.5)	.001
Age, mean (SD); below presented with No. (%), y	48.24 (16.7)	56.27 (15.1)	<.001
18-30	170 (12.3)	1927 (3.8)	
31-40	166 (12.0)	3498 (7.0)	
41-50	208 (15.0)	6076 (12.1)	
51-60	354 (25.5)	10 013 (20.0)	
61-70	300 (21.6)	14 572 (29.1)	
71-80	152 (11.0)	11 081 (22.1)	
81 and older	37 (2.7)	2949 (5.9)	
Sexual orientation, No. (%)			<.001
Lesbian, gay, or homosexual	1087 (78.4)	—	
Bisexual	262 (18.9)	—	
Something else	23 (1.7)	—	
Straight or heterosexual	15 (1.1)	50 116 (100.0)	
Don't know ^b	0 (0.0)	0 (0.0)	
Gender identity, No. (%) ^c			<.001
Female	577 (41.6)	20 406 (40.7)	
Male	427 (30.8)	15 316 (30.6)	
Transgender female or trans woman	8 (0.6)	—	
Transgender male or trans man	13 (0.9)	—	
Genderqueer (nonbinary) or additional gender category (open-ended response)	10 (0.7)	1 (0.0)	
Unknown ^d	352 (25.4)	14 393 (28.7)	

^a Refers to the patients' selection of "other" category. "—" signifies not applicable.

^b A total of 30 sexual minority patients who reported "don't know" were excluded from the analysis because of no Short Form Health Survey-12 responses.

^c A total of 83 individuals selected "decline to answer" and thus were excluded from the analysis because we were unable to identify them as either a sexual or/and gender minority.

^d Includes individuals who skipped gender identity item or who completed the survey prior to the inclusion of gender identity item (ie, before April 2018).

Table 2. Psychosocial concerns and quality of life

Variable	Self-identified sexual and gender minority patients (n = 1387)	Non-self-identified sexual and gender minority patients (n = 50 116)	P
Psychosocial concerns			
Have a family member or friend who can help during my illness and treatment, No. (%)			.001
Yes	1327 (95.7)	48 782 (97.3)	
No	60 (4.3)	1324 (2.6)	
No response	0 (0.0)	10 (0.0)	
Living alone, No. (%)			<.001
Yes	266 (19.2)	6921 (13.8)	
No	1121 (80.8)	43 185 (86.2)	
No response	0 (0.0)	10 (0.0)	
Considering having a child or children in the future, No. (%)			<.001
Yes	120 (8.6)	2313 (4.6)	
No	1178 (84.9)	46 258 (92.3)	
Not sure	89 (6.4)	1539 (3.1)	
No response	0 (0.0)	6 (0.0)	
Would like to discuss fertility-related issues with a specialist, No. (%)			<.001
Yes	65 (4.7)	1258 (2.5)	
No	1243 (89.6)	47 309 (94.4)	
Not sure	79 (5.7)	1543 (3.1)	
No response	0 (0.0)	6 (0.0)	
Have concerns that may interfere with my ability to seek care at Moffitt, No. (%)			<.001
Yes	299 (21.6)	8355 (16.7)	
No	1088 (78.4)	41 755 (83.3)	
No response	0 (0.0)	6 (0.0)	
Quality of life			
Eastern Cooperative Oncology Group Performance Status Scale, No. (%)			.11
Fully active	764 (55.1)	28 015 (55.9)	
Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature	394 (28.4)	14 452 (28.8)	
Ambulatory and capable of all self-care but unable to carry out any work activities	164 (11.8)	4903 (9.8)	
Capable of only limited self-care	59 (4.2)	2494 (5.0)	
Completely disabled	6 (0.4)	252 (0.5)	
Short Form Health Survey–12, mean (SD) ^a			
Mental Component Summary–12 ^a	46.4 (10.9)	49.5 (10.3)	<.001
Vitality ^b	44.1 (28.7)	47.8 (29.0)	<.001
Social functioning ^b	64.8 (32.5)	71.2 (31.9)	<.001
Role-emotional ^b	70.3 (40.5)	77.0 (37.7)	<.001
Mental health ^b	62.3 (22.8)	68.0 (22.2)	<.001
Physical Component Summary–12 ^a	42.6 (12.8)	42.3 (12.8)	.44
Physical functioning ^b	64.9 (37.4)	63.3 (38.0)	.11
Role-physical ^b	51.6 (46.9)	52.9 (47.5)	.34
Bodily pain ^b	65.4 (33.2)	68.8 (32.4)	<.001
General health ^b	55.4 (27.0)	57.1 (27.5)	.02

^a Mental Component Summary–12 and Physical Component Summary–12 scores have a normal distribution of a mean of 50 (10). Short Form Health Survey–12 subscale scores were transformed to a 0–100 scale.

^b Statistically significant difference between self-identified sexual and gender minority and non-self-identified sexual and gender minority patients when controlling for age, ethnicity, and race as compared with the non-self-identified sexual and gender minority individuals.

Because age, ethnicity, and race were statistically significantly different between self-identified sexual and gender minority and non-self-identified sexual and gender minority patients, multivariable regression was used to control for potential confounding. After controlling for age, ethnicity, and race in each model, the overall results did not change except for the models with Physical Component Summary–12, physical functioning, and role-physical. Specifically, the multivariable model revealed that self-identified sexual and gender minority individuals compared with non-self-identified sexual and gender minority individuals reported statistically significantly worse levels of general physical health as indexed by Physical Component Summary–12 ($P = .01$), physical functioning ($P = .02$), and role-physical ($P = .001$).

Exploratory subgroup analyses

The results from the subgroup analyses (Supplementary Tables 1–3, available online) were largely similar to the main results.

Discussion

In this analysis of more than 50 000 patients with cancer treated at a tertiary cancer center, we found self-identified sexual and gender minority patients with cancer were more likely to report statistically significantly greater psychosocial concerns and lower mental health QOL. Specifically, self-identified sexual and gender minority patients reported statistically significantly higher rates of concerns regarding getting help during treatment as well as higher perceived interference with ability to seek care and daily emotional and/or pain interference. These findings have important implications in that self-identified sexual and gender minority patients with cancer have unique psychosocial concerns and needs in their cancer care and may enter their cancer treatment with mental health concerns, which may interact with their engagement in cancer care and relevant outcomes. The exploratory subgroup analyses revealed bisexual patients with cancer reported statistically significantly greater psychosocial concerns

and lower mental health QOL as compared with lesbian, gay, or homosexual patients or non-self-identified sexual and gender minority patients. These findings are consistent with the extant literature that reported bisexual individuals are more prone to experience depressive and anxiety symptoms (25) and lower perceived connection to self-identified sexual and gender minority community (26). To the best of our knowledge, this study is the first that presents the psychosocial concerns and mental health concerns among self-identified sexual and gender minority patients with cancer using standard-of-care sexual orientation and gender identity data collection at a National Cancer Institute (NCI)-designated cancer center.

Unique psychosocial needs and concerns among self-identified sexual and gender minority patients are aligned with extant qualitative (4) and descriptive findings (12-16). For example, self-identified sexual and gender minority patients with cancer experience individual- and structural-level barriers to appropriate care and/or support because of providers' lack of knowledge and/or skills in working with self-identified sexual and gender minority patients and premature assumptions of discrimination over the course of cancer care (eg, misgendering, intersection between racism and heterosexism, mistreatment) (4). Transgender patients with cancer are more likely to receive a cancer diagnosis at a late stage and are less likely to receive appropriate treatment along with poor survival rates compared with cisgender patients (27). The likelihood of self-identified sexual and gender minority patients with cancer seeking support from nonbiological family members (9) and to be younger and unmarried (12,27) may also contribute to the concerns of getting help for their cancer treatment. Furthermore, our results suggest a need for consultation on fertility-related issues and family planning in this population (28). We also note these results are not confounded by self-identified sexual and gender minority patients being statistically significantly younger than the non-self-identified sexual and gender minority patients (Supplementary Table 4, available online).

A stark contrast emerged in the QOL results between mental health and physical health. Although there were no statistically significant differences between self-identified sexual and gender minority and non-self-identified sexual and gender minority patients in physical QOL indices (with the exception of bodily pain and perceived general health), mental QOL was statistically significantly lower among self-identified sexual and gender minority patients. These results are not surprising given low QOL as indexed by Mental Component Summary-12 is reported among disadvantaged and marginalized populations. For example, sexual minority adults as compared with heterosexual adults reported lower QOL as indexed by the Mental Component Summary-12 even after accounting for various demographic and psychosocial factors (29). Mental QOL indexed by Mental Component Summary-12 has been negatively associated with HIV stigma (30) and racial discrimination exposure (31), which supports the role of minority stress in low mental QOL among self-identified sexual and gender minority individuals as posited in Minority Stress Theory (32). Our findings indicate self-identified sexual and gender minority patients with cancer are more likely to suffer from poor mental health, which may make them vulnerable to experiencing high distress throughout their cancer care (eg, because of minority stress from the interaction with providers, less engagement in self-care, and/or lack of support system).

Though self-identified sexual and gender minority patients were statistically significantly younger, there were no differences

between self-identified sexual and gender minority and non-self-identified sexual and gender minority patients in perceived physical functioning as indexed by the ECOG, Physical Component Summary-12, and 2 Physical Component Summary-12 subscales (physical functioning, role-physical), whereas perceived pain interference and perceived general health were statistically significantly lower among self-identified sexual and gender minority patients with cancer. When controlling for age, ethnicity, and race, the self-identified sexual and gender minority patients (vs non-self-identified sexual and gender minority) reported statistically significantly worse physical health, physical functioning, and role-physical. Pain is a complex construct that cuts across objective sensory and subjective emotional experiences that can occur without medical cause (33). Evidence shows pain is linked to emotional difficulties (eg, loneliness, depression) among patients with cancer (34) and individuals with mental health concerns (35). Thus, greater pain interference reported by self-identified sexual and gender minority individuals is well aligned with our findings on mental health concerns.

Limitations of the current study include the results are cross-sectional and do not measure potential temporal changes of psychosocial concerns and/or QOL. Second, the study population comprised patients from a single cancer center and are predominantly non-Hispanic White. Thus, the generalizability of the current findings may be limited. The study population is heterogeneous as it includes patients across different cancer diagnoses and stages. The minority representation of the study population was slightly lower than the catchment area and the United States (Supplementary Table 5, available online). Where possible, future studies need to examine the impact of intersectionality on psychosocial concerns and needs in a more diverse study population. Another limitation was limited number of transgender patients ($n = 21$) and other gender minority patients ($n = 10$), who are often underrepresented in research (14). The gender identity question was added 18 months after the sexual orientation question, so some individuals may be misclassified; however, the results were unchanged when we analyzed only sexual minorities using the sexual orientation question (Supplementary Table 6, available online). Finally, patients who selected "don't know" for sexual orientation and "decline to answer" for gender identity question were not included in the analysis because they could not be classified as a sexual or gender minority or as a non-sexual and gender minority.

We do acknowledge limitations and issues to consider related to the collection of sexual orientation and gender identity and provide some recommendations. The 2-item sexual orientation and gender identity questions allowed patients to select only a single response, which limited consideration of multi-identities. Though patients can skip any question, the sexual orientation question did not have "decline to answer" allowing for nondisclosure. The sexual orientation question grouped lesbian, gay, and homosexual (which is an antiquated term) into 1 response option. To address these complexities, we offer some recommendations based on our experiences: allow for multiple responses for the sexual orientation and gender identity questions, include "decline to answer" for those who are reluctant to identify, do not group identities or orientations into a single response, avoid antiquated and offensive terminology, and include a diverse community advisory board to provide feedback on best ways to collect such information. Our institution is currently revising the response options of the sexual orientation and gender identity questions to overcome these limitations.

This analysis demonstrates the importance of sexual orientation and gender identity collection. Standard-of-care institution-wide sexual orientation and gender identity collection is uncommon as evidenced by the results from a survey led by the self-identified sexual and gender minority task force of the American Society of Clinical Oncology Health Equity Committee (19). The NCI recently launched the sexual orientation and gender identity data collection initiative, providing funding to 14 of 71 NCI-designated cancer centers as of December 2022 (36). Although Moffitt Cancer Center was ahead of such initiatives and has included sexual orientation and gender identity questions as a standard-of-care since 2016, unless patients voluntarily disclose or providers carefully review the medical records including electronic patient questionnaire, it is still the patients' burden to disclose their self-identified sexual and gender minority status. Institutional commitment to collect and include sexual orientation and gender identity data as part of standard cancer care is strongly recommended. The needs of self-identified sexual and gender minority patients should be distinctively identified at both individual (eg, the impact of intersectionality on concerns and/or needs, mental health conditions, existence of social support) and structural levels (eg, providers' own biases and further training, policy advocacy) for a systematic approach to this population's needs (32,37). In particular, attention should be given to unique needs among specific self-identified sexual and gender minority subgroups (eg, bisexual).

To address the unique health-care needs of self-identified sexual and gender minority populations, interventions at system and individual levels should be provided. Through a standardized regular provider training for self-identified sexual and gender minority patients at cancer center level, oncology providers should be equipped to provide culturally and clinically competent care to self-identified sexual and gender minority patients (38). Examples include providing safe environments by using inclusive language and checking desired pronouns and names, being aware of one's premature assumptions about the impact of self-identified sexual and gender minority status on cancer care (eg, relationship with caregiver) (6), demystifying the belief that self-identified sexual and gender minority patients would feel uncomfortable to discuss their self-identified sexual and gender minority status (11,19), and being aware of history of disclosure and planned transition (eg, surgeries, hormone therapy, fertility plans) (4,39). Institutional commitment to train providers regularly on self-identified sexual and gender minority cancer care would also be crucial (19). At the individual-level, psychosocial interventions for self-identified sexual and gender minority patients with cancer and survivors need to be implemented as part of their cancer care, along with research that examines the impact of early intervention on cancer outcomes (12). Examples include connecting self-identified sexual and gender minority patients to self-identified sexual and gender minority peer mentors with cancer experiences and providing self-identified sexual and gender minority caregiver support, psychoeducation on self-identified sexual and gender minority cancer, and a self-identified sexual and gender minority patient support group (11).

Understanding disparities among self-identified sexual and gender minority patients is crucial to providing personalized cancer care for this minoritized population. This is the first study reporting the psychosocial concerns and mental health concerns among self-identified sexual and gender minority patients with cancer based on institution-wide, standard-of-care sexual

orientation and gender identity collection. Importantly, these data provide specific areas to prioritize resources such as ensuring access to quality mental health services. Findings also support efforts for expanding the routine collection of sexual orientation and gender identity data to all health-care facilities including cancer centers. Once implemented, patient-level data collected across cancer centers can be leveraged to reveal crucial information on the unique health-care needs among self-identified sexual and gender minority patients, which will ultimately contribute to improving cancer care and mitigate disparities and inequities. Our results add to the existing literature by elucidating difficulty that patients anticipate in cancer treatment and interference with daily functioning among self-identified sexual and gender minority patients with heterogeneous cancer types.

Data availability

The deidentified data will be shared upon request.

Author contributions

Min-Jeong Yang, PhD (Conceptualization; Formal analysis; Methodology; Writing—original draft), Jaileene Pérez-Morales, PhD (Data curation; Formal analysis; Writing—review & editing), Gwendolyn P. Quinn, PhD (Writing—review & editing), Jarred D. Miller, BS (Data curation; Formal analysis), Vani N. Simmons, PhD (Writing—review & editing), and Matthew B. Schabath, PhD (Funding acquisition; Methodology; Supervision; Writing—review & editing).

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Conflicts of interest

A portion of the current findings was presented as a poster at the annual meeting of the American Association for Cancer Research 2022, New Orleans, LA, USA. Matthew B. Schabath, PhD, is a consultant for Bristol Myers Squibb. Gwendolyn P. Quinn is on the Speakers Bureau for HayMarket. All other authors have nothing to disclose.

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