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Biology Contribution

Qualitative Assessment of Academic Radiation Oncology Department Chairs' Insights on Diversity, Equity, and Inclusion: Progress, Challenges, and Future Aspirations

Rochelle D. Jones, MS,[*] Christina H. Chapman, MD,[†] Emma B. Holliday, MD,[‡] Nafisha Lalani, MD,[§] Emily Wilson, BS,[‖] James A. Bonner, MD,[¶] Benjamin Movsas, MD,[#] Shalom Kalnicki, MD,[**] Silvia C. Formenti, MD,[††] Charles R. Thomas, Jr, MD,[‡‡] Stephen M. Hahn, MD,[‡] Fei-Fei Liu, MD,[§§] and Reshma Jagsi, MD, DPhil,[*,†] for the Society of Chairs of Academic Radiation Oncology Programs (SCAROP)

[*]Center for Bioethics and Social Science in Medicine, and [†]Department of Radiation Oncology, University of Michigan, Ann Arbor, Michigan; [‡]Department of Radiation Oncology, The University of Texas MD Anderson Cancer Center, Houston, Texas; [§]Department of Radiation Oncology, University of Toronto, Toronto, Ontario, Canada; [‖]Society of Chairs of Academic Radiation Oncology Programs and American Society of Radiation Oncology, Alexandria, Virginia; [¶]Department of Radiation Oncology, University of Alabama, Birmingham, Alabama; [#]Department of Radiation Oncology, Henry Ford Hospital System, Detroit, Michigan; [**]Department of Radiation Oncology, Albert Einstein College of Medicine, Bronx, New York; [††]Department of Radiation Oncology, Weill Cornell Medicine, New York, New York; [‡‡]Department of Radiation Medicine, Oregon Health & Science University, Portland, Oregon; and [§§]Department of Radiation Oncology, University of Toronto and Princess Margaret Cancer Center, Toronto, Ontario, Canada

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Reprint requests to: Reshma Jagsi, MD, DPhil, Department of Radiation Oncology, University of Michigan, UHB2C490, SPC 5010, 1500 East Medical Center Dr, Ann Arbor, MI 48109-5010. Tel: (734) 936-7810; E-mail: rjagsi@med.umich.edu

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Summary

The present qualitative study sought to understand how to promote diversity, equity, and inclusion in radiation oncology. We conducted telephone interviews with department chairs, with attention to the experiences of the few women and underrepresented minorities in these positions. The chairs' insights had policy-relevant implications. Bias training should attempt to tap into the sensitive contextual areas of tokenism, blindness, and intersectionality. Efforts to recruit and support diverse talent should be deliberate and proactive. Bridge programs could engage diverse learners across the education spectrum.

Purpose: A lack of diversity has been observed in radiation oncology (RO), with women and certain racial/ethnic groups underrepresented as trainees, faculty, and practicing physicians. We sought to gain a nuanced understanding of how to best promote diversity, equity, and inclusion (DEI) based on the insights of RO department chairs, with particular attention given to the experiences of the few women and underrepresented minorities (URMs) in these influential positions.

Methods and Materials: From March to June 2016, we conducted telephone interviews with 24 RO department chairs (of 27 invited). Purposive sampling was used to invite all chairs who were women (n = 13) or URMs (n = 3) and 11 male chairs who were not URMs. Multiple analysts coded the verbatim transcripts.

Results: Five themes were identified: (*1*) commitment to DEI promotes quality health care and innovation; (*2*) gaps remain despite some progress with promoting diversity in RO; (*3*) women and URM faculty continue to experience challenges in various career domains; (*4*) solutions to DEI issues would be facilitated by acknowledging realities of gender and race; and (*5*) expansion of the career pipeline is needed.

Conclusions: The chairs' insights had policy-relevant implications. Bias training should broach tokenism, blindness, and intersectionality. Efforts to recruit and support diverse talent should be deliberate and proactive. Bridge programs could engage students before their application to medical school.

Introduction

As demographic shifts result in an increasingly diverse society (1), attention has been directed toward developing a physician workforce that is both diverse and culturally competent (2-4). Key components of this mission are the promotion of gender equity (5) and the recruitment and cultivation of historically underrepresented minority (URM) groups (6, 7). Yet, despite efforts to enhance medical school diversity, women and URMs often face barriers to retention and promotion, and their presence in academic medicine does not mirror that in the general population (8). This is concerning, given observations that diversity can lead to superior productivity of teams and enhanced collective intelligence (9-11).

In radiation oncology (RO), women and URMs are underrepresented throughout the pipeline (12-14). A number of challenges have been identified that could contribute to this stark underrepresentation. URM groups are often limited in their exposure to RO in medical school (12, 14) and might not receive adequate mentoring (12, 14) or sponsorship opportunities (15) to prepare them to enter the field. Women often face unique challenges to their professional advancement, such as pregnancy and disproportionate childcare responsibilities (14, 16, 17). Both women and URM groups are also affected by unconscious bias (18, 19) and present-day overt discrimination and harassment (19, 20). Therefore, attention has been given to reducing the barriers and creating more inclusive environments in RO (13, 14).

The goal of the present study was to explore the insights of RO department chairs, with attention to the experiences of the few women and URMs in these positions. We sought to gain a more nuanced understanding of how to best promote diversity, equity, and inclusion (DEI) in RO using the valuable insights of these successful leaders in the field.

Methods and Materials

Sample and data collection

The University of Michigan institutional review board approved the present study. We used purposive sampling to identify RO chairs from the membership list of the Society of Chairs of Academic Radiation Oncology Programs in 2016. We sampled all women, all URMs, and a purposefully selected subset of men (diverse for years of experience, age of appointment to chair, and size and/or prestige of the RO program).

In March 2016, we invited 27 purposefully selected chairs to participate in a telephone interview. The interviews were conducted between March and June 2016 with 24 participants. The respondents gave verbal consent to participate. The interviewer (R.D.J.) was deliberately selected as a non-

radiation oncologist to protect confidentiality. The interviews averaged 47 minutes, were recorded for professional transcription, and were de-identified.

Interview guide

The semistructured interview included both closed and open-ended questions addressing a number of domains, such as leadership style, knowledge and skills, career aspirations and accomplishments, and experiences with both obtaining and managing a chair position. The interview included questions to elicit thoughts on how to promote DEI from the vantage point of an institutional leader. The interviewer also asked the chairs for any perceived impact of their own gender or race on their career evolution or leadership experiences.

Statistical analysis

De-identified transcript data were analyzed using methodologically sound techniques of qualitative analysis (21-23). The transcripts were independently reviewed and coded by multiple analysts (R.D.J, C.H.C, E.B.H, N.L.), using a web-based application for analyzing qualitative research (Dedoose) (24). Each transcript was reviewed by ≥2 coders. The analysts were diverse in their professional and personal backgrounds (21). An iterative process of coding, interpretation, and analysis was continued to identify and further refine overarching themes (25).

Results

From the 27 invited chairs, 13 men and 11 women agreed to, and participated in, the telephone interviews. Of the 24 participants, 14 were white, 7 were Asian, and 3 were a URM (all African-American). The other characteristics of the participants and the departments they lead are presented in Table 1.

Several themes touched specifically on DEI issues, with illustrative quotes presented in Tables 2-6 and numbered for reference. These themes could be organized into 5 clusters: (*1*) commitment to DEI promotes quality health care and innovation; (*2*) gaps remain despite some progress with promoting diversity in RO; (*3*) women and URM faculty continue to experience challenges in various career domains; (*4*) solutions to DEI issues would be facilitated by acknowledging realities of gender and race; and (*5*) expansion of the career pipeline is needed.

Table 1 Participant characteristics (n = 24)

Characteristic	n (%)
Individual	
Sex	
Women	11 (45.8)
Men	13 (54.2)
Race	
White	14 (58.3)
Asian/Asian American	7 (29.2)
Black/African American	3 (12.5)
Year MD received	
1970-1979	1 (4.2)
1980-1989	14 (58.3)
1990-1999	9 (37.5)
Residency program	
Geographic region	
Midwestern US	5 (20.8)
Northeastern US	6 (25.0)
Southeastern US	5 (20.8)
Southwestern US	1 (4.2)
Western US	6 (25.0)
Canada	1 (4.2)
Reputation* (top 10 residency program)	3 (12.5)
Department size*	
1-5	1 (4.2)
6-10	14 (58.3)
11-15	4 (16.7)
16-20	1 (4.2)
>20	1 (4.2)
Not reported	3 (12.5)
Alumni publication percentile*	
<50	6 (25.0)
50-59	3 (12.5)
60-69	1 (4.2)
70-79	3 (12.5)
80-89	5 (20.8)
>90	2 (8.3)
Not reported	4 (16.7)
Alumni clinical trial percentile*	
<50	5 (20.8)
50-59	4 (16.7)
60-69	3 (12.5)
70-79	4 (16.7)
80-89	1 (4.2)
>90	1 (4.2)
Not reported	6 (25.0)
Board certified* (%)	
80-89	4 (16.7)
90-99	5 (20.8)
100	10 (41.7)
Not reported	5 (20.8)

* Based on Doximity Residency Navigator Directory of Radiation Oncology Programs (accessed March 2016 and November 2017).

Commitment to DEI promotes quality health care and innovation

It was generally acknowledged that commitment to DEI promotes innovation in academic medicine and quality health care for future generations. One chair remarked that different perspectives were central to academic progress (quote Q1). Another chair stated that recruiting a diverse RO faculty was critical to ensuring quality care for an increasingly diverse patient population (Q2). Some also

Table 2 Theme: commitment to diversity, equity, and inclusion promotes quality health care and innovation

Subtheme	Exemplar quotes
Different perspectives central to academic progress	Q1. … *I think it's real[ly] important for any position that's open to make every effort possible to interview people from a variety of backgrounds … try to do everything that you can to make sure that your applicant pool includes a diverse group of people because having a diverse faculty just brings different perspectives into the environment, which are key for any academic department to move forward.* (Male, White)
Critical to ensure quality care for an increasingly diverse patient population	Q2. … *I actually work with the minority office to figure out how best to identify the female professors … and [a] minority professor will personally make calls … it's an important issue too, because you know our patients have become very much diverse and we need to have a diverse faculty to take care of our patients.* (Female, Asian)
Vital need for diverse role models for future cohorts of medical professionals	Q3. … *I really, really, really want to hire an African American because I think it's a good role model*. (Male, White)
	Q4. … *people model themselves on what they see so I think for many people seeing a woman leader might make them think, "oh, I can do that" … when we are choosing people to be on committees or choosing people for our faculty or anything where you are pulling someone into your sphere, you should consider diversity … . women go to medical school, but then, when you get to the top of the medical profession, there is not really a lot of women leaders … people in leadership positions should consider diversity when they are making choices.* (Female, White)
Diverse leaders might facilitate recruitment of future generations of diverse talent	Q5. *A lot of chairs tell me they can't find African-American residents, they can't find African-American fellows …. . I have never had a problem with … diversity in my residency or my fellowship or my faculty … . I think you have to make folks feel they are going to be safe. And when you interview for a job and you look on the wall of all the folks that come before you and nobody on that wall looks like you, it's hard to make somebody feel safe. If you come look at the residents who have come through my program—our program … it's clear that there is safety in women coming and there is safety in minorities coming … when they interview for these positions, they look around and they look at who is interviewing them, and it's people who look like them and so there is an advantage to being an African American, I think, when we are recruiting minorities … .* (Male, African American)
	Q6. … *it's very interesting how, since I became the chair, I'm getting a lot a lot of applicants who are minority, being a diverse population, which is very interesting to me because in a way … to them, I am part of them and they don't feel threatened; they feel comfortable applying to [a] position. So I think putting a person of minority or a diverse population in the leadership position, in itself makes a difference to attract a diverse applicant or faculty and minority to apply.* (Female, Asian)

Abbreviation: Q = quote.

observed that a vital need exists for more women and URMs who can serve as role models for future cohorts of medical professionals (Q3, Q4). Others further noted that chairs in RO who come from diverse ethnic or racial backgrounds might be able to more easily attract future generations of talent who might view them as evidence that the institution offers a safe environment where all can thrive professionally (Q5, Q6).

Gaps remain despite some progress with promoting diversity in RO

Ongoing efforts to address DEI issues in RO were observed, with the caveat that despite progress there is "still work to be done" (Q7). There was general acknowledgement of both the desire and the need to continue promoting gender equity and diversity (Q7, Q8). There was the perception of a lack of women in RO departments and in leadership positions but also mention of efforts to ameliorate this issue and progress toward greater representation (Q9). Although some chairs highlighted the progress toward diversity in their department, others observed the limited presence of nonwhite faculty. One chair perceived that Asian Americans still appear to be underrepresented in positions of leadership despite being relatively well represented in the field of medicine overall (Q10). Despite budding interest in highly qualified URMs (Q11), the dearth of faculty members and leaders from URM groups, in particular, was recognized, especially compared with the progress made with regard to the inclusion of faculty from other diverse backgrounds (Q12, Q13).

Women and URM faculty continue to experience challenges in various career domains

The ongoing discrimination and other challenges faced by women and URMs were often discussed. These included

Table 3 Theme: gaps remain despite some progress with promoting diversity in radiation oncology

Subtheme	Exemplar quotes
Acknowledgment of desire and need to continue promoting gender equity and diversity in radiation oncology	Q7. *I am at an institution which has both [current and past female leaders]. And so I think that having, … for gender equity, having leaders within the institution … sends a powerful message that regardless of your gender, certainly there are opportunities for women in leadership roles. However, having said that, I think that once you do have sort of women in certain leadership roles, it doesn't necessarily mean there is gender equity throughout the institution. So, certainly, just because you have a couple of female leaders, it doesn't mean the rest of the institution follows suit … women are still underrepresented even though there are women in the [top] positions. In terms of representation of underrepresented minorities, I think that we are probably not doing as well as what we could be doing … . [W]e are doing well, I think, for promoting gender equity but I think there is still work to be done.* (Female, Asian) Q8. *In radiation oncology, … for whatever reason, the minority in terms of race [or] ethnic background is a very limited pool. And even the female gender is also to some degree [a] limited pool compared to perhaps other fields. So if you'*re *OB/GYN, pediatrics, internal medicine, there are a lot more female faculty members. Radiation oncology, I think the pool is still very limited … I think it's important from my point of view, having gender balance and ethnic balance, [it's] lopsided.* (Male, Asian)
Perceived lack of women in radiation oncology departments and in leadership positions but mention of efforts to ameliorate this issue and progress toward greater representation	Q9. *… we didn't have any female faculty members in the department, which was very noticeable. I think in the field of radiation oncology only about … 27 percent of faculty is female, so it was very low to start with. So that was one of my goals from the outset to create more equity in terms of gender in the department. So we went from zero percent female faculty, historically, to [a much greater percentage of] female faculty. [W]e'*re *actually significantly above the national average for female faculty [now].* (Male, Asian)
Some progress toward representing various racial, ethnic, and cultural backgrounds in radiation oncology departments, yet limited presence of nonwhite faculty and leaders still observed	Q10. *Well, I think when I think of chairs in the field of radiation oncology, although there are a large number of Asian-Americans in the field of medicine, there aren't a huge number of Asian-American chairs. So, you know one can debate all day long why there's a discrepancy… I think I'm the only Asian-American chair, at least clinical chair, at [institution] … I think it would be nice to kind of open that door, I guess, to more people with diverse backgrounds. That is something desirable.* (Male, Asian)
Despite interest in highly qualified underrepresented minorities, continued dearth of faculty members and leaders from historically underrepresented racial and ethnic groups	Q11. *I think people were crying for a highly qualified under-represented minority person who could compete at that level, so I think that was something that was genuinely there.* (Male, African American) Q12. *… when I look at my faculty, they'*re *very diverse, but they'*re *not underrepresented minorities but there are Asians and Southeast Indians and Caucasians and females and males … .* (Male, White) Q13. *… we don't have a black leader, unfortunately, but we certainly have a lot of South Asians.* (Female, Asian)

Abbreviation: Q = quote.

descriptions of instances ranging from unconscious biases to wholly overt harassment.

Gaining respect and exercising authority

Chairs explained that some individuals do not perceive women (Q14, Q15) or URMs (Q16) as leaders and consequently challenge their authority (Q14-Q16). One African-American chair commented that he had been subjected to racist comments from subordinates after he became chair (Q16).

Obtaining resources and financial compensation

Gender-based salary discrepancies were observed (Q17). A few chairs suggested that women (Q18-Q20) and URMs (Q20) receive less training on, and have less favorable outcomes with, negotiation, especially for themselves (Q18).

Entering and advancing along the career pipeline

Gender inequity was perceived in the hiring and promotions process (Q21-Q22). A few female chairs acknowledged efforts to actively consider women for chair positions. However, the perception that gender might factor into decisions seemed to be regarded as both an advantage and liability, because some might question the reason behind the woman's promotion (Q23-Q25). It was noted that gender bias might make it difficult for some women to further advance in their careers without receiving support (Q26). Comments also suggested that URMs experience challenges at the very outset of the career pipeline. The issue of a very limited applicant pool was observed. Chairs recounted that they tried to recruit URM faculty but with great difficulty, and their efforts yielded few results (Q27, Q28). It was noted that those who are successfully recruited

Table 4 Theme: women and underrepresented minority faculty continue to experience challenges in various career domains

Subtheme	Categories	Exemplar quotes
Gaining respect and exercising authority		Q14. *I think to establish the authority of a female chair is slightly more complex…—it's taken for granted that a male chair is a chair and these are the rules and this is the way we are going to do things. But with a female chair, you know, it's a little bit more complicated … .* (Female, White) Q15. *… I think there is more than one aspect of why people can move forward in any work environment and it's also how people perceive them. And so we generally, if we think leader, if we don't think woman; we think, you know, 50- to 60-year old male.* (Female, White) Q16. *I think there are certain places that still aren't used to having an African-American male or female, you know, describe to them what their job is or demote them … and I've had things said to me sort of, you know, behind the scenes of "be careful … they were using language about you that is probably totally inappropriate"—which I knew what that meant … . When I wasn't telling people what to do, I was okay. But when I became chair and started telling people what they could and couldn't do, you know, it was different …* (Male, African American)
Obtaining resources and financial compensation		
	Salary	Q17. *I came to realize that my salary was a lot lower than the other chairs in the hospital who were all male … I don't have proof that it was a gender thing but you would suspect that, being the only female and after you discussed it with many males, learning kind of where they are on the pay scale for each of their disciplines …* (Female, White)
	Negotiation	Q18. *I would say I do well when it doesn't come to myself, and that's probably one of the things I have not learned is how to negotiate for myself. I do very well negotiating for others or my department … . But I think negotiating for myself in terms of fair equity or other things, I'm not as equipped yet … . I mean it may not be just a gender-ish thing, it's just we are never given education on how to negotiate for salaries, and I just find that difficult.* (Female, White) Q19. *Well, it's harder for women to negotiate and I think we are not as skilled—and are probably getting better over the last maybe couple decades … if I had been more assertive to make something happen, I would have probably been more successful in a certain niche, let's say, in negotiating support for the department need or negotiating my own salary or getting into the loop in certain ways.* (Female, White) Q20. *… if we're just talking about females or underserved as leaders, we don't really get proper education on personal negotiation so I think there could always be some gender or racial bias involved in sort of equity as a chair at an institution.* (Female, White)
Entering and advancing along the career pipeline		
	Effect of gender bias on promotion and advancement	Q21. *I feel that [in] the workplace in general, a lot of leaders don't realize they have bias against certain gender … . [U]nless you walk in their shoes, you actually don't know. [Once, a leadership] position was given to a man, and the man took the job for 2 days and said, "I quit. I don't want to do it." Then, it was offered to me. So to me, why wouldn't they offer it to me first? Right? So I live with this type of situation every day, and I think there is inherent bias that a lot of people don't realize they have, although they intentionally want to promote diversity and … gender equity … .* (Female, Asian) Q22. *… I do think there are certain women faculty I think … [who] may not get promoted as quickly as their male counterparts.* (Female, Asian) Q23. *I'm not saying that's why I got the job I did but, you know, females in leadership positions for academic medicine, I would think they are considered a minority so perhaps that helps … . [I]t's [possible] that the female factor played in me obtaining this job, you know. I have no knowledge that it was but it potentially could have been.* (Female, White) Q24. *The joke that I always tell people: the only reason I got my first faculty position is because I filled three minority groups. Right? I'm female; I'm Asian, and I'm short.* (Female, Asian)

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Table 4 (*continued*)

Subtheme	Categories	Exemplar quotes
		Q25. … *part of me wonders whether the reason they picked me was they wanted a woman. You know, that's my insecurity popping through … . I really don't believe that but you wonder.* (Female, White)
		Q26. … *if I think back, like from the time I was a medical student to an intern to a resident, the doctors who were the males saw themselves in the young men they were training but they didn't see themselves in the young women they were training. And so all along the whole line, they would give more opportunities to the males, I think, or think of them when they were looking for something. So I can say that but, on the other hand, I have had leadership positions and people have helped me and supported me so I just think it's a mixed bag—but gender certainly is important.* (Female, White)
	Limited applicant pool and lack of opportunities for underrepresented racial and ethnic groups	Q27. *In terms of racial diversity, that's really difficult. We just went through a search … . There was only one [candidate who] was from what would be identified as an unrepresented minority group … it's very difficult because the pool is very, very small.* (Male, White)
		Q28. … *it's difficult because the pipeline isn't there. We struggle with this on a national level all the time, you know we want a pipeline of underrepresented people in the med school … the underrepresented minorities that are good, everybody wants to have.* (Male, White)
		Q29. *So I am [part of] an underrepresented minority group. The only things I was asked to do with my previous institution were things that were associated with underrepresented minority groups so I was limited as far as what was presented to me for opportunities.* (Male, African American)
Double standards		Q30. *I had to work that much harder to prove myself but it's part of my daily existence, so I know nothing else so it's normal for me.* (Male, African American)
		Q31. … *I felt a burden to be an exceptional chair.* (Male, African American)
		Q32. *[M]aybe the other chair will try to tell me how I should manage my department … . [I]n my mind, I can take care of it; I don't need your help, right? If I needed help, I would ask … . If I were a man, I'm not sure someone would do that, you know. So I think that's microaggression—but maybe they do that to men too. I have no idea, right?* (Female, Asian)
		Q33. … *I think women are a little bit more, you know, in a vulnerable situation, women leaders because I think while it is very acceptable that a paternal figure or a male figure of a chair or a leader is kind of demanding and straight and firm and exacting, right? When a woman applies the same set of characteristics is immediately attacked for being too tough … .* (Female, White)
		Q34. *I think there are gender issues in leadership, like women tend to take it very personally when things don't work … . Sometimes, you know, the expectations are so different between the chair and the faculty that you cannot really fix it… . An enormous amount of energy goes into a department like radiation oncology … you have to retrofit documentation, retrofit their checks, make sure they are safe … . [W]hen you realize that … there is no improvement, you have to start a process to document, … get into more disciplinary action, and that takes an enormous amount of time and energy. And while it is not even necessary when a man is in charge; with a woman in charge, it's much more complex.* (Female, White)
		Q35. *I just think there are some biases and assumptions that people make. And I'm watching the elections just like everybody else is watching the elections and, if a woman says it this way it means one thing; if a man says it, it means something different. Wow, you know, that isn't how it should be. I think you get what I'm saying.* (Male, African American)
Transcending internalized discrimination		Q36. … *this might be true for men as well, I don't know. But I know that I am constantly doubting myself and feeling like I'm unprepared or unworthy or inferior and that might be because I am a woman or it might just be because I am who I am. But I see a lot of women who feel that way whereas men seem more innately confident.* (Female, White)
		Q37. … *I felt really insecure about the whole process of promoting myself to be a full professor. I think women tend to be—maybe not all women but just less confident, less self-promoting than, sometimes, men are.* (Female, White)
		Q38. … *I will just put it out there. I am an African American … my assumption was that [institutional leader] wanted me to [participate in career development training] because [he/she] didn't think I was up for the job … . That was bad thinking on my part …* (Male, African American)

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Table 4 (*continued*)

Subtheme	Categories	Exemplar quotes
Challenges most prominent among women		
	Gender dynamics and communication barriers	Q39. *I still feel that in the academia when a lot of chairs are together, I think there is a sense as certain males, they group together, they form their little groups, social things, and they don't include women in there … they probably feel more comfortable, you know, with their own gender … it doesn't bother me that much but I do know it does happen.* (Female, Asian)
		Q40. *… in my current role, the majority of chairs are Caucasian males. And I do see some dynamics that are really more comfortable for guys and I do see where you know there are certain interactions where women may have a different approach and it's just a little uncomfortable because the approach might not be in the guy mode.* (Female, Asian)
		Q41. *I've been terrified, literally terrified, about the possibility that if I were to challenge or correct a female resident or a female staff member that I could have an HR [human resource] complaint … I haven't served some women in particular well in demanding excellence from them.* (Male, African American)
		Q42. *Well, I think some sort of formal training is important … . I think there is some disadvantage for men being a leader and have to deal with a woman staff or faculty with issues because, you know, they worry about being blamed for any discrimination whereas, me coming in to take care of this type of issue, it was to my advantage. So I am not sure, I think men probably need more training in that regard than women. And I don't have formal training in that but I do feel blessed in a way that to me, you know, it's an easier situation being a woman to deal with that.* (Female, Asian)
	Sexual harassment	Q43. *I have a faculty member …. This faculty member is male … one of the women staff in the department experienced some significant unwanted touching, extended her way by this physician.* (Male, White)
		Q44. *… I would hear things that were derogatory toward women that were totally unnecessary … . I really don't want to share too many specifics because it's a little embarrassing but it's a lot of things … . It's stuff you know about physical characteristics. I had a resident of mine gave a wonderful presentation and some comment was made about how she looked that day. I'm like, "you know, that presentation was an A-plus presentation that you could never give in a million years, and your comment is about how she looked." What is that?* (Male, African-American)
	Disproportionate responsibilities of caregiving	Q45. *… I was always the main person responsible for the house and the children … I think that offered unique challenges so whereas my male counterparts would very often go to … let's say, dinners with visiting professors or they would travel when they were invited. I would, for the most part, decline those invitations and not go to many of these semisocial interactions or meetings because I didn't want to be away from my children, and the children were my prime responsibility … I would work hard during the day and then it was my responsibility to make sure that the kids were cared for and that there was food in the house … I see some of my male counterparts and they have spouses, often who don't work, who take care of a lot of the exigencies of life that I think add a lot of stress to one's life.* (Female, White)
		Q46. *What I see and have seen over the years is we really aggressively tried to recruit women into our department, either as residents or as faculty, and I have seen varying degrees of success of our ability to advance women up the academic ladder and seniority ladder …. I think the issues are very, very challenging for women in medicine as, particularly, they go into these extended periods of training and then try to develop a faculty career at the junior stages of faculty and, at the same time, dealing with the issues of child rearing. It's just a real challenge to strike that balance, I think, for the individual faculty member and for the department to make accommodations for that faculty so that they can be successful. It's a big challenge.* (Male, White)
		Q47. *… I still think that most of our female colleagues take on the traditional female role of the primary care giver for the kids, which is hard to work 80 hours a week when you have more primary child-raising responsibilities. I mean, I couldn't have done what I did if my wife didn't work and take care of most of the household and children stuff … . I think the only way to really get around that from a leadership position is to encourage the*

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Table 4 (*continued*)

Subtheme	Categories	Exemplar quotes
		nontraditional, you know maybe the man stays, the guy stays at home if there's a partnership. So I think that's always a little tricky… (Male, White) Q48. *… if my children were any younger, I definitely would not have taken the position. Probably because they are a little bit older, I felt I could do it but, certainly, it is a sacrifice to one's family life and your children. And I think that especially as a female chair, I think it's a huge sacrifice.* (Female, Asian) Q49. *… life balance is important and I've always worked very hard as a mother and as an academician … . I really wanted to think through whether or not we had, as a family, we had the bandwidth to accommodate me taking this appointment. And, after multiple discussions and thinking through what we could do, the collective conclusion was yes. So, I never would have done it without the support of my spouse.* (Female, Asian)

Abbreviation: Q = quote.

still often face additional hurdles. One chair mentioned being only solicited for leadership roles that were associated with his status as a URM, in contrast to other activities related to clinical, research, or leadership that are important for advancement (Q29).

Double standards

Comments suggested that women and URMs often are subject to double standards in the form of greater scrutiny or enhanced pressure to demonstrate their capabilities. The additional energy exerted to work hard and succeed as one of very few URM leaders in RO was also mentioned (Q30, Q31). The notion that female leaders are more likely than male leaders to have their competency or authority challenged in the form of unsolicited advice (perhaps related to the perceptions of women as weak leaders) (Q32) and penalties for displaying assertive leadership styles was also discussed (Q33-Q35).

Transcending internalized discrimination

Comments indicated that women and URM faculty might internalize the discrimination they experience throughout their lives, which can lead to self-doubt (Q36), avoidance of self-promotion (Q37), and missed opportunities for career development (Q38). The lack of confidence described vividly by some of our respondents, not only in those whom they observed but also in their own lived experiences, was remarkable, given the accomplishments of the uniformly high-achieving group of leaders in the field who served as our informants.

Challenges most problematic for women

Comments suggested that some barriers tend to be more detrimental to the careers of women than to those of men.

Gender dynamics and communication

Some chairs observed that gender dynamics can lead to social situations that result in the exclusion of women (Q39, Q40) or that contribute to men withholding feedback to women for fear of misperception (Q41). It was suggested that training is needed to improve communication between the genders (Q42).

Sexual harassment

One male chair described, when prompted to discuss a difficult situation as chair, an incident involving "significant unwanted touching" of a female staff member by a male faculty member in his department (Q43), which he ultimately escalated to human resources and legal. Another male chair described "derogatory" comments made about a female faculty member's appearance by her colleagues overheard during his "pre-chair days"; he noted that this treatment undermines women's professional accomplishments (Q44). His opinion was that "when you become a chair, people know better than to say things in front of you" but believed that such behavior is an ongoing challenge for women.

Disproportionate responsibilities of caregiving

Chairs observed that young faculty members often struggle with work—life balance issues, especially if raising young children. It was noted that performing a disproportionate share of the domestic work (Q45-Q47), having younger children (Q48), or receiving less spousal support (Q49) can inhibit career advancement for women.

Solutions to DEI issues would be facilitated by acknowledging realities of gender and race

Views regarding how to best address DEI issues were often influenced by personal experiences. Hence, solutions to DEI issues could be facilitated by acknowledging bias and increasing mutual understanding of others' experiences.

Salience of race/gender

Opinions differed on the impact of race or gender on career progression. A few chairs perceived that recruitment practices and advancement opportunities in their careers were merit based and fair (Q50, Q51), perhaps related to their

Table 5 Theme: solutions to diversity, equity, and inclusion issues would be facilitated by acknowledging realities of gender and race

Subtheme	Categories	Subcategories	Exemplar quotes
Salience of race/gender			
	Meritocracy	Assuming merit-based system ensures objectivity and limits bias	Q50. *I've always felt that there have been opportunities as one can only pursue goals and opportunities to the best of your ability, and I've never felt that I've been judged differently because of my gender or my race or it has been based—I would hope—on my accomplishments or, perhaps, on what the institution may or may not feel about contributions, and based on one's merits, if you will.* (Male, White)
			Q51. *You know, when you write grant applications … people don't care what you are; it's what does this grant say. So because it's a fairly merit-based system, I haven't experienced anything … . I don't think, you know, my sort of gender or being a visible minority has hindered [my career] because the program has been very merit-based so it's less subjective, if you will.* (Female, Asian)
		Considering impact of personal characteristics, such as personality and communication style, but not perceiving impact of own race/gender	Q52. *… I don't feel that my ethnicity has hindered or helped in any respect, I think it's how you interact with people on a one on one basis and to make sure that you have that concept of mutual respect for everybody.* (Male, White)
			Q53. *… I feel like people trust me and have confidence in me as a person whether I'm male or black or white or female, I'm not sure if that matters as much as my personality … although I, myself am not an underrepresented minority … obviously you know there's nothing you can do about the fact that you're a white male … . I guess I would say it's personality and I don't see my gender having been either a help or an obstruction or another issue.* (Male, White)
	Blindness	Being blind to race/gender and focusing solely on an individual's qualifications	Q54. *…I don't believe in … how do I say this … focusing extensively on gender, ethnicity, or race. And we do that in an extreme way because numbers and statistics don't look good. I think if we get our mind off that and focus on the person, and don't see and don't focus on the gender but what does the person really bring to the table, I think we may do better …. I think really talking, thinking about what the person brings to the table rather than I don't want to hire you because you are African American or I must hire you because you are African American … . I hire you because you are the best person for this job.* (Female, White)
			Q55. *But bringing in a woman when we hire people, we are completely like blinded to that, like it's not an issue. We will take the best candidate. We don't care whether they are purple, brown, or pink. It doesn't matter. That's not an issue … we don't pay attention to the gender and the visible minority status; we just take the best person.* (Female, Asian)
			Q56. *I will mentor men just like I mentor women. I am pretty blind to gender and color.* (Female, White)
			Q57. *… this may be a naïveté that I have; I think that most of us are pretty gender, race, ethnicity agnostic.* (Male, White)
	Awareness		
		Cultivating awareness and recognition of DEI issues	Q58. *You have to realize that there are gender, diversity, inclusion issues out there; you can't just be blind to it. And, you know, call it out when you see it. And you try to be a role model for inclusive thinking.* (Female, White)
		Encouraging and modeling culture of mindfulness with regard to experiences of minority and non-dominant groups	Q59. *One [issue], is the recognition of barriers. In this institution, there has seemed to be with rare exception—very rare exception, a glass ceiling for women. I have kind of, you know, pointed that out on multiple occasions and when I have, people have kind of taken a look at that and said, "you know, you're right." And so just naming it, I think, is a step forward.* (Male, White)
			Q60. *I think that the acknowledgment that there weren't many [women] chairs was actually really helpful to me because it was put on the table that it wouldn't necessarily be easy—which was validating. You know,*

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Table 5 (*continued*)

Subtheme	Categories	Subcategories	Exemplar quotes
			sometimes it's not easy so it was validating and also I felt like it was something I could discuss with those who hired me. It was a topic of conversation that was initiated by others but not me so that opened the conversation for when that might be an issue. (Female, White)
			Q61. *I know when I interviewed, one of the senior people in the cancer center was very open. People don't realize how important that is. They said "what do you think about being [an] African-American man at the cancer center?" And I said "I'm anxious about it." And they said, "well, you shouldn't be … . We want to see you succeed … ." In some ways, you know, I had people pulling for me … when I became chair, there were a lot of folks in the medical center who went out of their way and said, you know, "what can I do to make this work for you?"* (Male, African American)
		Engaging in self-reflection	Q62. *… I grew up—all I had was [female relatives who] were very accomplished … that's who I grew up with and just assumed that was part of the working environment. I think in our field in my role as chair, I have come to a much more nuanced perspective, particularly related to gender issues in the workplace and, particularly, in the academic department. I think that's the issue I really struggle with on a daily basis.* (Male, White)
			Q63. *… I knew a guy once who was [responsible for diversity issues who] said to me, "How often do you think about what race you are? You know, how often do you think about that?" And I said, "Well, never, really. I don't really think about the fact that I'm white." And he said, "Well, you know, when you are black, you think about it every day. There is something that happens every day where you are reminded that you are black or you are Hispanic or you are whatever, Native American." And so that has really stuck with me. But, you know, I'm a privileged white person and I don't take that for granted.* (Female, White)
			Q64. *I think that I've been a very fortunate person and I have to say that I've been able to go to college and go to medical school and have wonderful experiences. And I think it's very important for an individual [who] has had a lot of opportunities to be sure that they recognize that many people don't have these opportunities and one of our responsibilities is to be able to … identify and support individuals [who] have tremendous talent but may not have had these opportunities … that's, I think, a necessary commitment that we all have to make…* (Male, White)
			Q65. *My [relative] … experienced very significant anti-Semitism in [his/her] life … I have no doubt whatsoever that can be part of a human being, to be negative that way or part of a society to be negative that way. Am I fine-tuned to recognize it when I encounter it? Yes, I am … it also means I am highly sensitive to recognizing that others may have experienced different forms of prejudice and to help those people overcome that as well … [it] feels like something that a debt of honor that I can help, that I can try to repay.* (Male, White)
Intersectionality			
			Q66. *I think it's more of a gender thing than a race thing.* (Female, Asian)
			Q67. *I think gender in my situation outweighs race or ethnicity.* (Female, White)
			Q68. *… I have [an] accent; English is not my first language … probably people would make fun of my accent to try to diminish me and I have learned to smile about it, to make a joke about it, to absolutely not be defensive … the truth of the matter is, particularly in our field that is radiation oncologists, there are so many foreigners … the accent is [the] last of my problems. But gender is not light …* (Female)
			Q69. *I don't think there's a whole lot of women and women also being Asian… . [W]hen I go to [a women's leadership development program] … my other [program] buddies, they are all women … . Yes, there is*

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Table 5 (*continued*)

Subtheme	Categories	Subcategories	Exemplar quotes
			something in common being women … across whatever ethnicity is or whatever race is, something common but, certainly, being a different race, there is different type of challenge that they could not experience what I experienced … . (Female, Asian)
			Q70. *… I have seen gender still touches women in a way that's just not right. I think for men, even if you are of African-American descent, which I am, it doesn't seem—at least it doesn't seem—I don't perceive it. Maybe it's still there but I don't perceive it but if you can imagine, I have been in a room with a number of leadership people who say things about, you know, females. I'm thinking, "Wow! You know, you still think that way!" … . So the gender thing for me for women is still harder.* (Male, African American)
			Q71. *There was not the awareness … how we today make a lot of accommodations for child care … it wasn't there at the time. This was [years ago]. And so we worked really hard. We had [nannies] … . We never stopped working. We worked all week in order to be funded, you know, and having a very heavy clinical schedule. I don't see a lot of people willing to do this today. So we were almost the silent generation … . I don't think that this paradigm applies today. People are not willing to do that. A good example is when I had my [child] born, you know, the family leave act law was already in place … . What do you do? Do you say no to your boss? You probably would [now]. You might go file a grievance. That was not an option then …* (Female, White)
			Q72. *You have to be organized … I don't think that it would be asked of you today. But you still want to be organized and do your part and raise your children while you are doing it. There are wonderful examples of that. I mean Eleanor Montague is a legendary radiation oncologist in a time when there really weren't very many women doing it and had five children and an accomplished career.* (Female, White)
			Q73. *I think the only thing that might have impacted is I grew up really poor so I think it may have made me a little bit more driven than I would have been if I didn't.* (Male, White)
			Q74. *I came from a socioeconomically very disadvantaged background so I tend to see—at least the racial issues in diversity more in the context of socioeconomics than purely race. So, you know, so I think those issues are complicated.* (Male, White)

Abbreviations: DEI = diversity, equity, and inclusion; Q = quote.

own personality and communication style (Q52, Q53), but unrelated to gender or race/ethnicity. Chairs acknowledged the underrepresentation of certain groups, but some recommended emphasizing qualifications over gender, race, or ethnicity (Q54-Q56). Some perceived no impact of race/ethnicity or gender on hiring or promotions, describing themselves or their institutions as color or gender "blind" (Q55, Q56). However, 1 white male chair who endorsed the concept of not considering gender or race/ethnicity also noted that his perception of whether the system is equitable might not be held by others who have had different experiences (Q57).

In contrast to adhering to color/gender blindness, others emphasized the importance of recognizing DEI issues and ongoing bias (Q58). Some chairs believed it was important for leaders and those from well-represented groups to openly acknowledge the ongoing disparities and barriers experienced by others (Q59-Q61). Chairs also discussed engaging in self-reflection. One chair admitted that he struggles with recognizing subtle nuances with regard to gender issues in the workplace (Q62). A few non-URM chairs discussed having experienced advantages because of their race or gender (Q63, Q64). Others recognized that their personal experiences with prejudice have increased their awareness of the bias experienced by others (Q65).

Intersectionality

Comments were also indicative of intersectionality (26), the interlocking of different social classifications that comprise a person's identity and result in experiences, including those of discrimination, that do not simply represent the sum of each identity individually (eg, the experience of African-American women will not be adequately captured by compiling the experiences of white women and African-American men).

Some participants alluded to the interconnectedness between various social categories (eg, gender, race, age,

Table 6 Theme: expansion of the career pipeline is needed

Subtheme	Categories	Exemplar quotes
Engage in deliberate, proactive efforts to identify, recruit, and support diverse talent		Q75. *You have to be deliberate about appointing more women and individuals of diverse backgrounds into leadership. You have to be very deliberate about it … . I think that if you ignore diversity and gender equality, it's to the peril of the whole institution. So I think institutional leaders need to be very deliberate about it and then they have to support the leaders that they bring in that are not necessarily of their same like.* (Female, Asian) Q76. *I think people need to be proactive and that really needs to go from the top, not from just the office of diversity. So that needs to be really the presidential level, the dean level, the chair level and that's something we'*re *serious about … . So when you'*re *at a meeting, you'*re *always an ambassador for your department so I believe in proactively identifying highly qualified, underrepresented minority talent … highly qualified women talent.* (Male, African American) Q77. *The question of getting people into the system is a much more difficult challenge … because in general, the number of talented candidates coming from minority groups tends to be limited. You know the departments at the institutions, they are not charities; they have to meet their goals, they have to meet their targets, they have to do things right. Patients and institutions depend on that, families depend on that so you have to always be careful to not compromise that. On the other hand, when people apply who are from minority status, you certainly want to take those applications extremely seriously and if you feel that person can be successful, even with a little extra work, you should definitely give them the benefit of the doubt. Is that a tricky walk? Yeah, I find it to be a very tricky walk but it can also be a very satisfying walk … it's nice to be able to help people achieve their potential, particularly when that achievement has been associated with maybe some additional barriers.* (Male, White) Q78. … *I think there are needs by committees to have diversity in their application pools so a lot of chair jobs that have opened up in the last 5 to 10 years that I thought were good jobs, I got solicited. I'd like to think most of that is because I'm a good radiation oncology chair and I've got the reputation, but I don't hesitate for a minute to think somebody said, "you know, we don't have anybody African American on the list… . Get him on the list!" I'm not insulted by that at all …* (Male, African American)
Expand the pipeline by building diversity on the front end		
	Facilitate DEI efforts at beginning of career paths and at earliest stages of medical education	Q79. … *I think the building of diversity I really think has to be at the front end, how can we get more underrepresented people in the medical school, and I know that we've been trying to get the underrepresented people to consider being a radiation oncologist. I think that that is a bigger societal issue than our field.* (Male, White) Q80. *I'm aware of the fact that I need to promote underrepresented minorities and to mentor women and underrepresented minorities from very early on in their careers.* (Female, White) Q81. … *we have two to three underrepresented minority right now in our residency and we think that's where things should be—you know you expand the pipeline so then you can bring in to the faculty position and so we'*re *very focusing on that.* (Female, Asian)
	Quality opportunities across the education spectrum should be made accessible for all	Q82. … *you almost have to start young with the mentoring. So you have to kind of mentor the talent of diversity if you find it even before college or in college or in medical school or for the other fields, again, in the schooling for those fields and just mentor them…* (Female, White) Q83. *If I see talented individuals, even if they are in high school, let's say, I will make special efforts to bring them along and make sure they understand they are welcome and my door is always open. I make sure I am always available to them and encouraging to them and give them the opportunities that everybody should be afforded, but make sure they understand that the field is welcoming and supportive.* (Female, White) Q84. … *we'*re *going to have to improve education for young kids and opportunities; it's way before it gets to where we can do something about it—if that makes sense?* (Male, White)

Abbreviation: Q = quote.

socioeconomic status), describing perceptions of advantage and disadvantage reflective of the unique components of their own identity (Q66-Q74).

Although some female chairs (all of whom were of white or Asian race) commented that gender issues were much more relevant for them than issues pertaining to race

or ethnicity (Q66-Q68), another noted unique challenges that she had experienced as an Asian woman (Q69). One male African-American chair perceived that women face more barriers to career advancement in RO because of their gender even compared with men of color who are of comparable professional status (Q70).

One female chair proposed generational differences in the work−life balance. She stated that earlier generations were able to combine career and family when little attention was given to such issues (Q71) and suggested that previously successful women achieved this by working extremely hard (Q72).

Two white male chairs perceived the effect of socioeconomic status, but not race, on their careers (Q73, Q74), and one perceived race issues as being primarily related to socioeconomics (Q74).

Expansion of the career pipeline is needed

Deliberate, proactive efforts to identify, recruit, and support diverse talent

Some supported deliberate, proactive efforts to recruit and support highly qualified talent from diverse backgrounds (Q75, Q76), although 1 chair framed this as a tension between a limited talent pool and the need to maintain professional standards (Q77). Nevertheless, he acknowledged the importance of identifying potential in diverse candidates and providing them with opportunities to achieve success (Q77). One African-American chair alluded to the benefits of the "Rooney rule" (27), which ensures that qualified candidates are, at minimum, considered for leadership roles by expecting a search to be questioned if $\geq$1 female and $\geq$1 URM candidate are not on the short list sent forward by a committee (Q78). He supported recruiters proactively pursuing diverse individuals because candidates exist, like himself who are talented and qualified, but are not always given opportunities (Q78).

Expansion of the pipeline by building diversity on the front end

Expansion of the career pipeline "at the front end" (Q79) was regarded as essential to promoting DEI. Some noted that women and URMs should be treated equitably early on in their careers and education (Q79-Q84).

Discussion

Qualitative analysis revealed that current academic RO department chairs are generally committed to DEI initiatives. Overall, study participants acknowledged that such efforts are vital to the future of health care. We believe our findings suggest a commitment to more than cosmetic diversity or tokenism, with a true desire among leaders in the field, including those who are not themselves women or URMs, to embrace cultural competency and inclusiveness. However, our findings also suggest that considerable barriers to the retention and promotion of diverse faculty continue to exist within RO.

Consistent with hypotheses generated in other settings, participants described experiences with discrimination (28), gender bias (29), sexual harassment (30, 31), and caregiving challenges (16, 17). Participants also illuminated subtle instances in which they faced additional burdens because of their minority status, such as a sense of uncertainty, enhanced scrutiny, or performance pressure despite having more than adequate qualifications. Leaders from nondominant groups can experience problematic interactions and additional challenges because they are perceived as hyper-visible "tokens" (32), such as in the case of women who are perceived as too aggressive or URMs who face increased performance pressure. These groups can also experience invisibility (33) in other situations, such as when they are overlooked for opportunities even when highly qualified.

Differences were found in acknowledgment of the role that race and gender can play on career advancement. Some chairs described the system as both color/gender "blind" and merit based, and others discussed experiences with and the need to acknowledge persistent discrimination on the basis of these factors. Blinded reviews can reduce bias in situations in which written work is being considered for acceptance (34). However, although blinded review of a single piece of work might protect against unconscious bias, the broader evaluation of a candidate's entire life work might require some acknowledgement and understanding of the race- or gender-specific challenges or advantages that could be relevant when evaluating a candidate's potential for future success. Savas (35) proposed that leaders in higher education "should work closely with people of color to better understand their voice instead of labeling them as invalid." He asserted that the "discourse of meritocracy and color-blindness" ignores the "difficult life-circumstances and everyday racism that people of color experience" (35). In a study by Offermann et al (36), it was demonstrated that color-blind attitudes can impede the ability to recognize subtle forms of discrimination in the workplace. In a similar vein, Mavin et al (37) argued that ignoring gender has served to "magnify the choice to collude with the status quo" of traditional management practices based on male dominance. They suggested that being "gender aware" is vital to promoting organizational change that will support female managers and relinquish forms of management based on male dominance.

Our findings are also indicative of the concept known as intersectionality, the "interaction between gender, race, and other categories of difference in individual lives, social practices, institutional arrangements, and cultural ideologies and the outcomes of these interactions in terms of power" (38). The concept of intersectionality was introduced as a framework for identifying the ways in which both racism and sexism converge to marginalize African-American women (26). It is particularly important to note that our sample was completely devoid of women who were

also a member of a URM; no such individuals existed within the eligible sample at the time of the study. Had such individuals existed, they might well have offered additional insights. Also, scholars have proposed that the curricula for training health professionals should reflect an "intersectional framework" (39) to better promote cultural competency when treating patients and to alleviate health disparities. Previous research has further suggested that the concept of intersectionality is vitally important to understanding how complex intersections might shape the experiences of URMs in academic medicine, especially women of color (40).

Finally, our findings emphasize the need to focus on expanding the career pipeline. Participants noted the importance of engaging in deliberate, proactive efforts to recruit and support diverse talent. They advocated for building diversity at the earliest stages of STEM (science, technology, engineering, mathematics) education. Medical schools should continue to encourage programs that support faculty from all backgrounds to ensure their continued professional advancement (41). Investment is needed in programs that engage promising learners across the education spectrum, with attention of leaders to the diversity of the population from which they are ultimately recruiting (42, 43). Medical school administrators should consider partnering with public schools (44) to promote academic achievement and access to health careers among diverse students.

The strengths of the present study include its use of a well-designed interview guide, the good response rate, the rich set of narrative data, and the observance of rigorous qualitative research methods, including well-reasoned participant selection, and a robust analytical approach (ie, iterative examination of the data, followed by member checking of the manuscript draft) (21, 22). The present study intentionally adhered to the strictest standards for rigor in qualitative analysis (21-23). In qualitative analysis, the power of the study does not derive from the number of participants but, rather, from the detail and richness of the participants' comments and the insights that emerge from the analysis of their lived experiences. The reliance on the criterion of thematic saturation to determine the sample size is a well-recognized and accepted technique for ensuring the validity of qualitative research findings (21, 23).

Our study, however, certainly had limitations. A qualitative approach sacrifices some breadth to achieve greater depth; however, our use of purposive sampling should have reduced concerns in this regard. To minimize the risk of social desirability biases in the responses, we used a nonbiased interviewer to allow for anonymity and to ensure "safe" and flexible discourse. However, it is possible that the interviewer's overall verbal tone and selective cueing might have contributed to confirmation bias (45). Because we limited our focus to chairs of academic RO departments, it is also possible that our results might not be generalizable to those in different medical specialties or those who have different career aspirations, although our approach should provide a framework that others can build on to conduct research across the spectrum of medicine. Finally, the interview guide was not designed to delve into complex issues surrounding race and socioeconomic status. Future studies should seek to further investigate the role that racial discrimination might play in further marginalizing those in poverty (38).

Conclusions

The findings of the present work highlight that the process of addressing DEI issues in academic medicine is both vitally important and extremely complex. RO departments will benefit from a better understanding of the challenges faced by women and URM faculty seeking leadership positions, as might broader professional bodies, such as Society of Chairs of Academic Radiation Oncology Programs, Association for Directors of Radiation Oncology Programs, and American Society for Radiation Oncology. Further research is necessary, and promising avenues include investigations that focus on other leaders with responsibility for ensuring equity and diversity, both senior and junior to the subjects of the present study, including deans and residency program directors. Still, while such research is ongoing, DEI initiatives should validate and learn from the unique stories recounted by our study subjects regarding their experiences in attempting to support the growing female and URM contingents of the medical workforce (sometimes from the vantage point of membership within those same communities). Bias training should discuss intersectionality, blindness, and hypervisibility/tokenism, as well as invisibility. Efforts to recruit and support diverse talent should be deliberate, proactive, and a priority. The career pipeline could be further built and expanded through investment in bridge programs that would proactively engage promising students before their application to medical school. Such efforts to promote diversity in medical education and the health care profession will lead to an enriched physician workforce and improved quality health care for all (10).

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