



Current Considerations in Interventions to Address Sexual Function and Improve Care for Women with Cancer

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Abstract

Purpose of Review Sexual problems after cancer are common and multifaceted, particularly among women. The objective of this paper is to review recent and innovative behavioral (non-pharmacologic) interventions that aim to improve the sexual health of women affected by cancer. The review focuses on studies published within the past 5 years, focusing on interventions in three key areas for women with cancer: interventions to facilitate effective patient–provider communication about sexual health concerns, biopsychosocial interventions targeting women specifically, and interventions using a couple-based approach.

Recent Findings Overall, results suggest advancements in all key areas. First, efforts to facilitate effective clinical communication about sexual health concerns in cancer are growing. Findings from pilot studies were particularly encouraging for brief communication interventions in increasing clinicians' awareness and comfort in discussing sexual health with their patients. Second, studies have also begun demonstrating feasibility, acceptability, and efficacy for biopsychosocial interventions for women to improve sexual health, based on a variety of therapeutic approaches; technology-based approaches are gaining particular traction. Finally, consistent with prior reviews, recent research continues to support the use of couple-based interventions, suggesting that including partners in education and counseling about cancer-related sexual changes and solutions can have positive effects on patients, partners, and relationship functioning. Additionally, although efforts are growing to improve clinical communication and sexual health outcomes in special populations (e.g., adolescent and young adult survivors, sexual and gender minorities), greater efforts are needed.

Summary Findings from the review suggest benefit of recent interventions aimed to address sexual concerns and improve outcomes for women affected by cancer. Limitations of studies include small sample sizes and a lack of tailoring to address individual concerns and diverse populations. Future directions should consider existing barriers to participation while leveraging the opportunities for technology and evidence-based digital health strategies to optimize or individualize content and facilitate delivery.

Keywords Cancer · Sexual function · Sexual health · Women's health · Psycho-oncology · Patient–provider communication

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Introduction

Sexual side effects of cancer treatment are pervasive, particularly among women. At least half of women treated for breast cancer and pelvic malignancies experience sexual dysfunction; other patient groups also report sexual side effects in large numbers (e.g., over 90% of head and neck cancer patients) [1–3]. Cancer-related changes to sexual function can affect all aspects of the female sexual response cycle [4]. Common sexual side effects include vulvovaginal changes (e.g., dryness, irritation, soreness), decreased desire/libido, arousal problems, difficulty achieving orgasm, pain during sex, and decreased sexual satisfaction

or avoidance of sex (solo or partnered). Other side effects of cancer treatment, such as fatigue, nausea, and altered or loss of body parts, and psychosocial factors associated with the cancer experience, such as underlying depression or anxiety and body image concerns, often exacerbate sexual difficulties. Body image concerns (e.g., concerns about the appearance, sensations, and function of the body or body parts), are common and can affect how comfortable a woman feels with her body, sense of connection to bodily sensations, self-concept, and sexual response. For couples, communication about and adjustment to cancer-related changes broadly, and with respect to sexual function and intimacy more directly, can be difficult and add to sexual problems.

Clinical practice guidelines from organizations such as the National Comprehensive Cancer Network (NCCN) and the American Society for Clinical Oncology (ASCO) state that cancer clinicians should initiate discussions about sexual health with patients, irrespective of age, partnership status, or type of cancer history, and offer treatment and referral, as appropriate [5, 6]. Despite this, most patients are not counseled about risks of sexual side effects associated with their treatments and feel ill-prepared for unexpected challenges when they occur [7]. Without intervention, these side effects typically persist or worsen, leaving patients to struggle with long-term difficulties and uncertainty about their options for assistance.

The objective of this paper is to review recent and innovative behavioral (non-pharmacologic) interventions that aim to improve the sexual health of women affected by cancer. Our review focuses on studies of interventions published within the past 5 years to highlight the most recent work in this area. Given that interventions in this vein have begun diversifying to include not only patients and couples but also providers, as when focusing on patient–provider communication about sexual health, we include interventions addressing sexual health for women with cancer without specific limitations on the target of the intervention. In this review, we cite systematic reviews when available to provide a general overview of the evidence base in a specific area, followed by highlighting several particularly new or innovative studies in that area. To provide a comprehensive picture of current directions in the research, we include intervention trials that are currently underway as well as completed trials. We focus on three key areas for our intervention review that appear especially promising in directions for the research: interventions to facilitate effective patient–provider communication about sexual health concerns for women with cancer, biopsychosocial interventions aimed specifically at improving women’s sexual function, and couple-based interventions aimed at addressing sexual concerns of both partners and improving couples’ relationships. We then

focus on specific subgroups of patients who may have unique needs with respect to sexual health interventions (e.g., adolescent and young adult survivors, minoritized groups). Finally, we summarize our review and discuss future directions.

Interventions to Improve Patient–Provider Communication About Sexual Concerns

A number of barriers to patient–provider communication for women with cancer have been cited for both patients and clinicians, including embarrassment or discomfort with the subject; lack of awareness (patients) or training (clinicians) in how to raise such concerns effectively; unhelpful or misguided beliefs, including that the other party (either the patient or clinician) will raise the topic if it is important to do so; and a perceived lack of time available to discuss sexual concerns appropriately, among other barriers [8, 9]. We now know that even when women with cancer experience sexual concerns, the barriers they perceive are often so strong as to hinder their ability or willingness to raise such concerns clinically with their providers [10, 11], making it inappropriate for clinicians to rely on patients to raise this topic. Though lack of time is among the most commonly cited barriers preventing clinicians from raising the topic of sexual health with patients [12], most discussions of sexual health concerns for women with cancer take only a few minutes [10]. Many women would likely benefit from brief, targeted discussions of simple solutions to sexual problems rather than needing in-depth discussions [13, 14].

Efforts have been growing to facilitate effective clinical communication about sexual health concerns in the context of cancer. Most of these efforts have centered on providers and aimed to equip clinicians with information and basic skills needed to raise the topic of sexual health with their patients. A 2020 systematic review of educational interventions aimed at improving sexual healthcare for oncology patients found seven studies of such interventions [15]; two of these studies were focused in breast cancer clinicians specifically [16, 17], whereas the other studies either did not specify the cancer site for clinicians or focused on male-specific tumor site. The two studies that focused on breast cancer clinicians both featured brief, targeted, workshop-type interventions that aimed to increase clinicians’ understanding of sexual concerns for women with breast cancer and provide brief training in effectively raising and responding to sexual issues [16, 17]. One of these studies tested a single 30–45-min training in a sample of 74 clinicians (oncologists, surgeons, and nurses/allied health providers), consisting of didactic education, role plays for communication skill-building, and use of a sexual health assessment tool. The training led to improvements

in clinician self-report measures of comfort with raising the topic and coordinating care, as well as self-reported frequency of addressing sexual issues [16]. Findings were encouraging, showing that a brief communication intervention increased awareness and comfort for practicing clinicians in discussing sexual health with their patients. The other breast cancer clinician intervention reviewed included a brief self-study module (i.e., informational workbook) followed by an in-person 60-min small group workshop that trained clinicians in the first two steps of the stepped care PLISSIT framework for sexual counseling (i.e., to give patients permission (P) to discuss sexuality in clinical encounters and providing limited information (LI) about sexual problems and concerns). The intervention was tested in 7 clinicians (oncologists and advanced practice clinicians) in the context of 134 patient visits [17]. In this single-arm pilot study, the intervention, called iSHARE (improving Sexual Health and Augmenting Relationships through Education), was found to be feasible and acceptable and had positive effects on clinicians' self-reported self-efficacy, outcome expectancies, and barriers to discussing sexual concerns from pre-intervention to 6-month follow-up. Even more intriguing, clinicians' sexual health communication behaviors during audio-recorded clinic encounters with patients increased from pre- to post-intervention, with promising effects seen for raising the topic of sexual health (28% vs. 48%) and asking questions about sexual issues (33% vs. 45%). Although the sample size of clinicians in this pilot study was small, the findings are significant because they included analysis of clinic dialogue, which captured clinicians' actual communication during routine patient visits. The iSHARE intervention content was adapted to a mobile technology-based (mLearning) format showcasing a two-part educational podcast series and subsequently pilot tested in a single-arm trial with 32 breast cancer clinicians [18]. The findings suggested that this shift in format was well-received by clinicians, and positive trends were seen for improvement in clinician self-reports of knowledge, beliefs, and comfort with discussing sexual health concerns. A third, more recent study not included in the systematic review referenced above involved a pilot test of a relationships, body image, and intimacy intervention across four regional cancer centers in Canada [19]. The intervention focused on medical radiation therapists to improve their initiating conversations with radiation therapy patients (both men and women). They received training on relationship, body image, and intimacy topics including modeling of best practices for sexual health conversations with cancer patients. The study demonstrated improvement in conversations from a base rate of 20% to 80% of providers initiating sexual health conversations after the intervention. The study highlights the potential role of trained champions within cancer care units or departments as one method for improving sexual health counseling while

demonstrating the importance of other relevant topics such as body image and relationship function.

Another less commonly pursued option for enhancing patient–provider communication about sexual issues for women with cancer is through patient-focused interventions. A recent randomized trial by Reese and colleagues demonstrated that a multimedia intervention, called Starting the Conversation (STC), consisting of a 30-min educational video, accompanying skills-based workbook, and a detailed resource guide, improved breast cancer patients' communication about sexual health to their providers [20•]. Specifically, in a sample of 144 women, those who participated in the intervention were more likely to raise the topic of and ask a question about sexual health during their next clinic encounter compared to women who received the resource guide alone (control group), and at 2-month follow-up, the intervention group showed greater improvements in their self-efficacy for discussing sexual issues and in their anxiety symptoms and was more likely to be sexually active than women in the control condition. Findings of the study suggest that a simple resource guide is likely not adequate to prompt patients to raise the potentially sensitive subject of sexual health with their clinicians, whereas even a brief, targeted intervention may be helpful in facilitating women's communication. Future directions in this vein should include expanding out from breast cancer other to other in-need cancer populations (e.g., gynecologic cancer, head and neck cancer).

Biopsychosocial Interventions to Improve Survivors' Sexual Health

Recent studies have added to the research demonstrating feasibility, acceptability, and efficacy for patient-focused interventions to improve women's sexual health, based in a variety of therapeutic approaches. One notable example is a study by Bober and colleagues [21], who tested a brief psychoeducational group intervention for women who had undergone treatment for ovarian cancer that consisted of a single half-day seminar covering sexual health education and rehabilitation training. Participants ($N = 46$) were taught cognitive behavioral therapy skills to address sexual symptoms and to improve communication with partners, pelvic floor relaxation exercises, and guided meditation and received one tailored booster telephone call 4 weeks after the group seminar. The intervention led to significant improvements in sexual function and psychological distress at 2- and 6-month follow-up assessments, suggesting that brief group-based interventions may be beneficial to patients to learn skills to address their concerns.

Two additional patient-focused studies are underway targeting women's sexual health after cancer. Gorman

and colleagues [22] adapted a multimodal mindfulness-based intervention to improve sexual health for breast and gynecologic cancer survivors in a community setting. The intervention, Mindful After Cancer, consisted of 8 weekly sessions (1.5–2 h) held virtually that included guided meditations and group discussions about sexuality after cancer and mindfulness skills. In a sample of 22 women, the intervention was found to be feasible with participants completing an average of 6.8 sessions and acceptable as 77% of the participants reported manageable time commitment [23]. Likewise, Chow et al. [24] published a protocol of a nurse-led, 4-session sexual rehabilitation program for newly diagnosed gynecologic cancer survivors (and partners, if they volunteer) aimed to improve sexual function, sexual distress, and marital quality, compared to an attention control group. As part of this study, the nurse facilitator for the program will receive 2 weeks of intensive training on sexual rehabilitation, motivational interviewing skills, and cognitive behavioral therapy. This study thus provides another example of using a dedicated champion who has received specialized training for implementing sexual health interventions within cancer care settings.

Body image may also be an important target of intervention, as body image distress is highly correlated with lower sexual satisfaction and greater sexual distress in women with cancer [25]. Esplen et al. [26] reported on the development of an 8-week group intervention focusing on restoring body image after breast cancer in which themes about sexual function and intimacy were central to women's concerns (e.g., negative feelings about their bodies, avoidance of sexual and intimacy situations among partnered women, and anxieties about dating among single women). Limited findings suggest that body image may be an important target of intervention to improve sexuality and intimacy after cancer.

Combining medical and behavioral content into an intervention seems to hold particular promise for addressing sexual dysfunction. Specifically, in a study of hematopoietic stem cell transplant patients (men and women), the effects of a sexual health intervention were tested in a single-arm pilot trial ($N=47$; of which, 24 were women) [27]. The intervention focused on educating and empowering patients to address sexual health concerns and involved an in-depth assessment of the causes of patients' sexual dysfunction including physical and psychological etiologies; a gynecological examination was done for the female participants when appropriate and referrals were made to a specialized sexual medicine clinic when needed. Participants attended monthly visits (between two to six) that addressed psychological factors related to sexual problems and psychoeducation needs. The interventionists included transplant clinicians (one physician and one advanced practice nurse) who had received specialized training on assessment and treatment of sexual dysfunction in cancer survivors. The intervention

led to a greater proportion of patients being sexually active and improvement in sexual interest, orgasm, and global satisfaction with sex; women also reported improvement in vaginal lubrication and discomfort. Notably, only three participants required a referral to a sexual health clinic, suggesting that many participating patients' concerns could be addressed with first-line behavioral approaches delivered by trained members of the clinic team. This study was unique because it included both men and women with cancer and because the intervention was delivered by experienced transplant clinicians. Although the findings were promising, the intervention appears resource-intensive, thereby potentially limiting widespread dissemination.

Couple-Based Interventions to Improve Sexual Health and Relationships

Couple-based sexual health interventions have demonstrated positive effects on sexual outcomes of female survivors and their partners and for their relationships. A 2016 review of couple-based interventions for sexual problems after breast cancer identified five studies that collectively demonstrated high acceptability and effectiveness of couple-based sex therapy [28]. The interventions consisted of three to six sessions of 60 to 120 min, with some sessions delivered via phone. Findings suggested that a multifaceted approach that includes psychoeducation and psychological treatments for sexual problems with components of sex therapy may be most beneficial. The interventions were associated with improvements in outcomes for both patients and their partners including sexual functioning, sexual relationships, and psychological well-being [28].

More recently, two additional studies add to the literature on couple-focused interventions to improve sexuality and intimacy after cancer. Reese and colleagues piloted a 4-session couple-based intimacy-enhancing intervention, delivered via telephone, for breast cancer survivors and their partners. The intervention was based in social cognitive theory, integrating techniques from cognitive behavioral couple therapy and sex therapy to address cancer-related sexual concerns and improve survivors' and partners' sexual and psychological and relationship function and is now being testing in a randomized controlled trial. [29] It includes education on sexual response models, breast cancer-related sexual changes, vaginal health and treatments, and coping strategies, among others, along with training in skills such as identifying intimacy challenges, goal-setting, communication about intimacy, and physical intimacy training. In the pilot study, medium to large positive effects were observed for survivors' sexual outcomes with smaller effects for partners, and the intervention was well-received by survivors and their partners [30].

The second study, conducted in Iceland, tested a nurse-led couple-based psychosexual intervention designed to improve communication about sexual function and intimacy for women in active cancer treatment and their intimate partners [31]. The intervention consisted of three Couple-Strengths-Oriented Therapeutic Conversations sessions plus a web-based educational resource, which aimed to support couples in managing changes in sexuality and intimacy after cancer through positive communication strategies, including active listening, validation, asking therapeutic questions, addressing constructive illness beliefs, challenging maladaptive beliefs, and providing information. Pre-post intervention changes included positive effects for both women and partners on illness beliefs related to sexuality and intimacy and increased overall relationship quality. Findings suggest that including partners in education and counseling about cancer-related sexual changes and solutions can have added benefits and promote greater intimacy and well-being for patients with cancer and their partners.

Considering Special Populations

Adolescents and Young Adults Much of the research focusing on sexual health among adolescent and young adult (AYA) cancer survivors (15–39 years old) focuses on patient–provider communication and gaps in care. Barriers to sexual health communication may be greater at younger ages and for those treated in pediatric settings. In a study of sexual health communication practices among pediatric oncology clinicians who treated AYAs (15–29 years old), sexual function was discussed only 50% of the time; two-fifths of providers felt they had “little to no role” discussing sexual health, and one-third stated they did not initiate sexual health conversations with those under 18 [32]. Clinical recommendations exist for improving patient–provider communication and clinical management of sexual health concerns for AYAs, accounting for developmental readiness (e.g., providing age-appropriate information and accounting for cancer-related delays in psychosexual development compared to peers) [33, 34]. Future work should consider intervention strategies to reduce barriers and improve adherence to recommendations.

Among young adults, several interventions have been developed targeting sexual health, though efficacy data is limited. Bober, Fine, and Recklitis reported the results of a brief, psychosexual intervention for the management of sexual dysfunction and psychological distress for young breast cancer survivors undergoing ovarian suppression treatment (SHARE-OS) [35]. The intervention consisted of a 4-h psychoeducation session plus a tailored booster telephone call 1 month later that, in a sample of 20 young breast cancer survivors, led to improvements in sexual health and anxiety.

Although not exclusively targeting sexual health, Sella et al. [36] reported feasibility and acceptability of an interactive web-based intervention, Young, Empowered, and Strong (YES), designed to support self-management of symptoms and psychosocial concerns among newly diagnosed young women with early stage or metastatic breast cancer. In a small pilot study of the YES intervention ($N=30$), sexual health was the most frequently triggered need, with 90% of participants reporting concerns. Domain-specific intervention results were not reported, though participant feedback included the need to provide support for individual sexual health along with partnered sexual relationships.

Two additional interventions have been developed for AYA couples. In the first study, Price-Blackshear et al. reported the results of a randomized controlled trial of an 8-week Couple mindfulness-based intervention for young breast cancer couples, which consisted of a manual, 1-h video modules and guided meditation audios [37]. Notably, the intervention appeared to have negative effects on dyadic adjustment and relationship quality; the authors speculated that the online delivery, without an instructor or added support from other couples in group format, may have contributed to this. In the second study, Gorman et al. also adapted a couple-based intervention, Opening the Conversation, to address reproductive and sexual distress experienced by young adult breast and gynecologic cancer survivor couples (trial currently ongoing) [38]. Preliminary work to develop the intervention highlighted young adult couples’ desire to build communication skills that would enhance mutual understanding of management of the sexual health challenges the couples faced together. Notably, in this study, LGBTQ (lesbian, gay, bisexual, transgender, queer) AYA couples required tailored materials and resources to address their specific needs and benefitted particularly from remote delivery of the intervention (e.g., due to feeling unwelcome in clinic/support group settings). This preliminary work highlighted the need for interventions to be flexible to focus on couples’ unique needs.

Minoritized Groups Limited studies have evaluated disparities in sexual health outcomes among women affected by cancer based on racial and/or ethnic identity, and interventions have not been developed targeting the specific issues or barriers that occur. Individual and structural racism affects women’s use of sexual health services [39]. Language barriers and limited financial resources also affect access to care as well as patients’ ability to express their concerns and comfort level communicating with the medical team about sexual problems. Interpreters often lack training to work in sexual healthcare and may not understand the health language needed to have such discussions, and providers report communication challenges having sexual health discussions with patients of limited English proficiency even with the use

of interpreters [40]. In addition to linguistic barriers, cultural and religious differences (e.g., related to modesty) may present barriers to sexual healthcare [41]. There are examples of sexual health interventions that have been developed for women survivors in Iran [42], Brazil [43], and South Korea [44] and African American breast cancer survivors in the USA [45, 46], although not published within the past 5 years (the scope of this paper). These trials demonstrate the feasibility of interventions in different cultural contexts and importance of tailoring to the unique needs of patient populations.

Sexual and gender minority (SGM) groups have also been unrecognized and marginalized within healthcare delivery settings and research. The term SGM encompasses lesbian, gay, bisexual/pan-sexual, asexual, transgender, gender diverse, and intersex identities. In a review of the literature on sexual health and healthcare experiences for SGM patients with cancer, oncology providers report lack of knowledge and discomfort addressing SGM patient concerns related to sex, and, in turn, patients may experience anxiety, medical mistrust, stigma, discrimination, and minority stress [47]. The authors highlight the need for universal provider training on SGM cultural humility, characterized by an approach that centers the patient as the expert of their own experiences and a commitment to being open and willing to learn about these experiences [47].

Evidence suggests that most providers want more education and professional training to treat SGM patients including about sexual health issues [48]. One such training is the Curriculum for Oncologists on LGBTQ populations to Optimize Relevance and Skills (COLORS), a web-based cultural competency training designed specifically for oncologists [49]. The intervention includes topics related to sexual side effects, intimacy, body image, and quality of life. In a pilot study of 44 oncologists, the intervention led to improvements in knowledge, attitudes, and clinical practice behaviors [50]. A randomized pragmatic trial for oncologists is underway to compare the effectiveness of COLORS training versus a general cultural competency training in improving LGBTQ-related knowledge, attitudes, and clinical practices [51]. Another intervention is the Together-Equitable-Accessible-Meaningful (TEAM) training to improve cancer care for SGM patients that included 2.5 h of online self-paced content and 12 one-hour zoom sessions on specialized topics, readings, and activities [52]. In a pilot test with 28 cancer care providers, the intervention led to improvements in four of the five outcomes including environmental cues, knowledge, clinical preparedness, and clinical behaviors [52]. Although larger trials are needed, these studies provide preliminary evidence that interventions are feasible and effective to improve SGM-affirming cancer care including clinical interactions and the built environment. As sexual health is one of many topics covered, further

work is needed to confirm improvement in patient–provider communication about sexual health after cancer and access to appropriate care.

Delivering Sexual Health Interventions via the Internet

Delivering care via the Internet and reducing reliance on clinicians by partially or fully automating care can significantly reduce the social and structural barriers currently preventing wider access to sexual health interventions in oncology care. Across multiple studies, the Internet has been endorsed by cancer survivors as their preferred way to receive sexual healthcare because it is private and convenient [53–55]. Possibly for these reasons, the Internet has particular potential for engaging individuals and couples in care who decline more traditional provider-delivered sexual health interventions [54]. Oncology care providers, too, perceive the Internet as having significant potential to connect more survivors into more comprehensive sexual healthcare as well [56].

Three reviews summarized the existing literature on the delivery of informational resources or more formal intervention by the Internet through 2019 [57–59]. These reviews collectively identified nine published studies of Internet-delivered sexual healthcare to female cancer survivors and largely found that interventions were effective but had yet to exploit the full capabilities of the Internet such as symptom tracking, facilitating patient–provider communication, or tailoring. Regarding the latter, tailoring is a particularly important opportunity for sexual health intervention researchers to explore, as this capability can allow Internet interventions to personalize care for each survivor based on their characteristics, behavior, or imputed data. At the same time, studies should account for access to the Internet and digital platforms across populations of different socioeconomic backgrounds so as not to increase barriers to care. Further clinical evidence differentiating which intervention components — for example, sensate focus exercises or communication skills training — are important for which survivors is necessary to realize this potential.

Conclusions

In this review, we provided an overview of recent, especially innovative approaches to address sexual concerns for women diagnosed with and treated for cancer. There are several major takeaways from our review, as well as key areas to address in future research. First, one interesting area of research that could lead to innovations in cancer care pertains to patient–provider communication interventions.

Specifically, several interventions have shown promise in improving patient–provider communication with a modest amount of training about the sexual side effects of cancer treatment and connecting women to treatment and counseling for their sexual concerns, demonstrating some impact on both patient and provider communication about sexual health. With that said, several of the studies cited used small sample sizes and must be evaluated in larger trials to determine efficacy. Second, our review identified that patient- and couple-based interventions show significant benefits to both sexual health outcomes and psychological and relationship functioning, with several large trials underway. Results of these trials will be critical in determining the efficacy of the interventions, which until recently were only hinted at through small pilot trials. Third, we identified challenges in existing approaches. For instance, time constraint is one of the leading reasons why cancer survivors opt out of sexual health interventions [60, 61]. With regard to couple-based interventions, in particular, much has been written about the specific challenges of recruiting to studies of such interventions, including the necessity to enroll the partner, which can diminish accrual rates [62, 63]. Overall, it will likely be important to have multiple formats for interventions, including those that may be tailored to suit survivors’ wants and desired time commitment. Fourth, our review suggests that little recent work has been done in the area of interventions specifically focused on minoritized groups, and this will be an important direction for future studies. For instance, it will be important to determine the extent to which existing interventions need to be tailored for minoritized groups or whether new interventions need to be developed to meet these groups’ needs and unique barriers to care. Fifth, many of the interventions we review include remote delivery utilizing the Internet. Interventions should continue to leverage the opportunity and advantages of digital platforms for tailoring interventions based on patients’ preferences and needs and across populations. Finally, although our review did not focus on identifying mechanisms of interventions addressing sexual health concerns for women with cancer, we note that little research has been done in this vein and would be critically important to undertake, if more targeted, efficacious, and streamlined interventions are to result. Future directions for sexual health interventions, including those targeting patient–provider communication and patient and couple functioning, should consider existing barriers to participation while leveraging the advantages of technology- and evidence-based digital health strategies to individualize content and facilitate delivery.

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Declarations

Conflict of Interest The authors declare no competing interests.

Human and Animal Rights and Informed Consent All reported studies/experiments with human or animal subjects performed by the authors were performed in accordance with all applicable ethical standards including the Helsinki Declaration and its amendments, institutional/national research committee standards, and international/national/institutional guidelines.

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