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Prostate Cancer Recovery: Lifestyle and Connection

Natasha Gupta, MD MSc
Assistant Professor
Departments of Urology and Population Health
NYU Grossman School of Medicine
Attending Urologist, Manhattan Veterans Affairs

NYU Langone Health



Disclosures and Funding

Grant Research Support: National Cancer Institute K08CA293275
Consultant: Movember™

Overview

- Importance of lifestyle for sexual health after prostate cancer
- Importance of talking about sex with healthcare providers
- Impact of prostate cancer and sexual health issues on partners

Sexual dysfunction is common after prostate cancer

- Prostate cancer is the most common non-skin cancer among U.S. men
- Each step of the prostate cancer journey can impact sexual function (diagnostic biopsy → treatment)
  - Up to 90% of men experience short- or long-term sexual side effects
  - E.g., erectile dysfunction, incontinence, ejaculatory dysfunction, penile deformity, decreased libido, depressive symptoms, relationship conflict

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Capogrosso et al. *Eur Urol*, 2019; Emanu et al. *Curr Opin Support Palliat Care,* 2016; Nelson et al. *J Sex Med* 2010 and 2011; Schover et al. *Cancer* 2002; Tal et al. *J Sex Med* 2009; Sanda et al. *NEJM* 2008; Charlick et al. *Transl Androl Urol 2025*

Sexual dysfunction negatively impacts quality of life

- Associated with treatment regret, reduced quality of life for patients and partners
- Frequently-reported #1 unmet need among prostate cancer survivors in multiple studies

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Capogrosso et al. *Eur Urol*, 2019; Emanu et al. *Curr Opin Support Palliat Care,* 2016; Nelson et al. *J Sex Med* 2010 and 2011; Schover et al. *Cancer* 2002; Tal et al. *J Sex Med* 2009; Sanda et al. *NEJM* 2008; Charlick et al. *Transl Androl Urol 2025*

The importance of lifestyle

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Plant-based diet associated with better quality of life in prostate cancer survivors

Stacy Loeb MD, MSc, PhD (Hon)[1] | Qi Hua MSc[2] | Scott R. Bauer MD, ScM[3,4,5]
Stacey A. Kenfield ScM ScD[3,4] | Alicia K. Morgans MD, MPH[6] |
June M. Chan ScD[3,4] | Erin L. Van Blarigan ScM, ScD[3,4] | Alaina H. Shreves MS[2]
Lorelei A. Mucci MPH, ScD[2,7]



- 3,505 patients with non-metastatic prostate cancer in Health Professionals Follow-up Study

- Greater adherence to a plant-based diet was associated with better quality of life in multiple domains (sexual, urinary, bowel and vitality)

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Cancer, 2024

Mediterranean diet after prostate cancer diagnosis and urinary and sexual functioning: The health professionals follow-up study

Scott R. Bauer[1] | Erin L. Van Blarigan[2,3] | Meir J. Stampfer[4] | June M. Chan[2,3] | Stacey A. Kenfield[3,5]

- 2,960 patients with non-metastatic prostate cancer in Health Professionals Follow-up Study

- Higher adherence to a Mediterranean diet was not significantly associated with better post-diagnosis sexual or urinary function

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The Prostate, 2018

Healthy Plant-Based Diet → Less Erectile Dysfunction

Consumption of a Healthy Plant-based Diet is Associated With a Decreased Risk of Erectile Dysfunction: A Cross-sectional Study of the National Health and Nutrition Examination Survey

Chase Carto, Manjari Pagalavan, Sirpi Nackeeran, Ruben Blachman-Braun, Eliyahu Kresch, Manish Kuchakulla, and Ranjith Ramasamy



Plant-based diet index and erectile dysfunction in the Health Professionals Follow-Up Study

Heiko Yang[1], Benjamin N. Breyer[1], Eric B. Rimm[2,3], Edward Giovannucci[2,3], Stacy Loeb[4], Stacey A. Kenfield[1,5] and Scott R. Bauer[1,6,7]

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Urology, 2022; *BJU Int*, 2022

Ways that Eating More Plant-Based Foods Can Support Erectile Function

- Improve blood flow
- Increase nitric oxide, less atherosclerosis
- Improve nerve function
- Less inflammation (antioxidant properties)
- Weight loss

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Courtesy of Stacy Loeb, MD MSc PhD (hon)

Physical activity

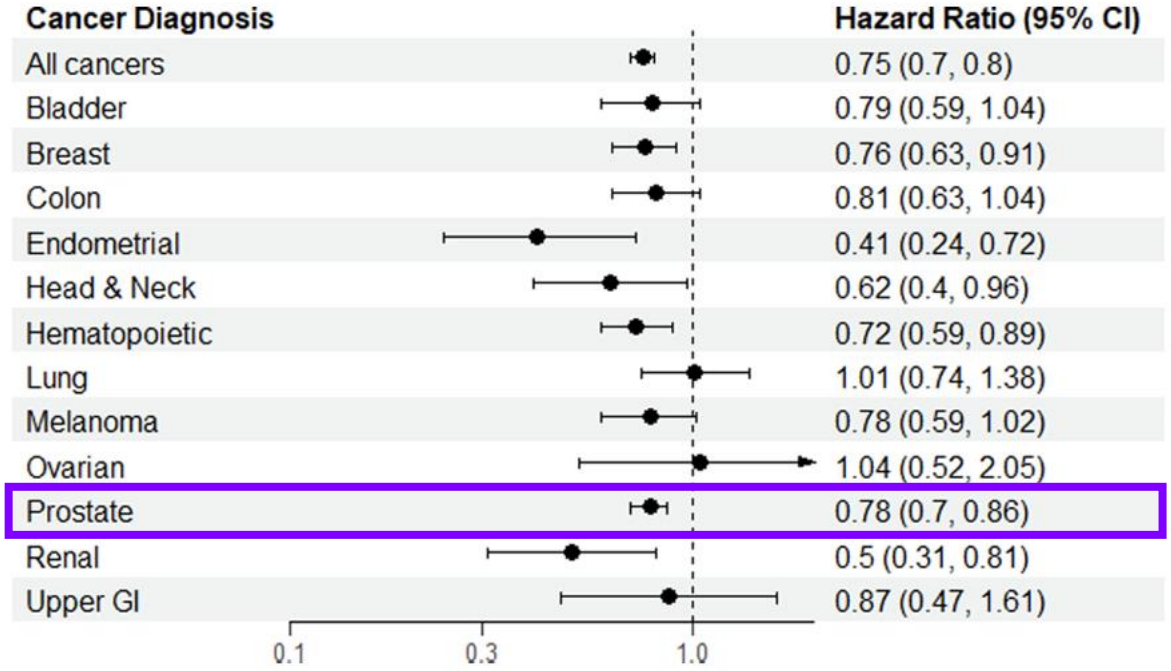
American Cancer Society PCa Survivorship Care Guidelines

- Maintain a healthy weight
- Eat a diet high in fruits/vegetables/whole grains
- Engage in ≥ 150 mins/week of physical activity
- Avoid smoking

Pan-Cancer Analysis of Post-Diagnosis Exercise and Mortality

Jessica A. Lavery, MS[1], Paul C. Boutros, PhD[3,4,5,6], Jessica M. Scott, PhD[1,2], Tuomas Tammela, MD, PhD[7], Chaya S. Moskowitz, PhD[1,2], Lee W. Jones, PhD[1,2]

- N= 11, 480 patients from PLCO screening trial, median f/u: 16 years from dx



All cause mortality with adherence to exercise guidelines

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JCO 2023

Exercise and Psychosexual Education to Improve Sexual Function in Men With Prostate Cancer

A Randomized Clinical Trial

Daniel A. Galvão, PhD; Robert U. Newton, PhD, DSc; Dennis R. Taaffe, PhD, DSc, MPH; Prue Cormie, PhD; Oliver Schumacher, PhD; Christian J. Nelson, PhD; Robert A. Gardiner, MBBS, MD; Nigel Spry, MBBS, PhD; David Joseph, MBBS; Colin Tang, MBBS; Hao Luo, PhD; Raphael Chee, MBBS; Dickon Hayne, MBBS, MD; Suzanne K. Chambers, PhD

- N= 112 patients (sexual concern)
  - → 6 months aerobic/resistance exercise
  - → 6 months exercise + education
  - → Usual care

- **Significant improvement in erectile function with exercise** (3.5 difference in IIEF score, p=0.04) vs. usual care



- No additional improvement with psychosexual education

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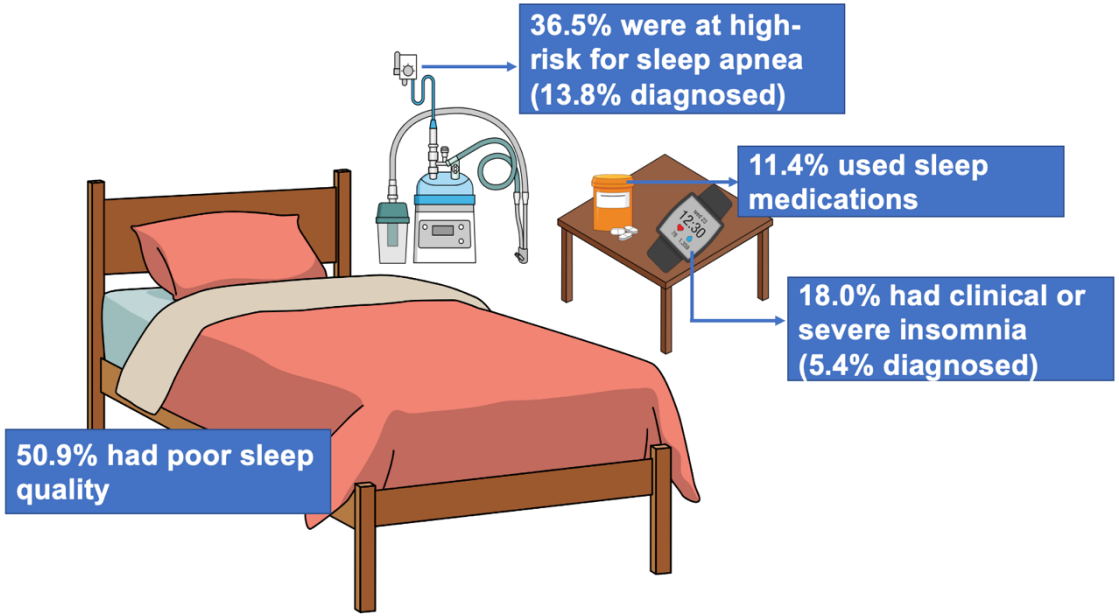
JAMA Network Open 2025

Sleep disturbances are underappreciated in prostate cancer survivorship

Fred Gong[1✉], Stacy Loeb[2,3], Katherine Siu[2,3], Akya Myrie[4], Stephanie Orstad[2,3], Stacey A. Kenfield[5], Alicia Morgans[6], Sameer Thakker[2], Rebecca Robbins[7], Patricia Carter[8], Girardin Jean-Louis[9], Tatiana Sanchez Nolasco[2,3], Nataliya Byrne[2,3] and Natasha Gupta[2,3]

- Cross-sectional survey of N=167 survivors across U.S.
- Validated sleep health questionnaires



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Prostate Cancer and Prostatic Diseases 2022

Sleep apnea → Increased risk of ED

- N=50 men with sleep apnea
  - no history of ED
- Mean age: 48 ± 10 years
- Mean duration, sleep problems:

  2.5 ± 1.5 years

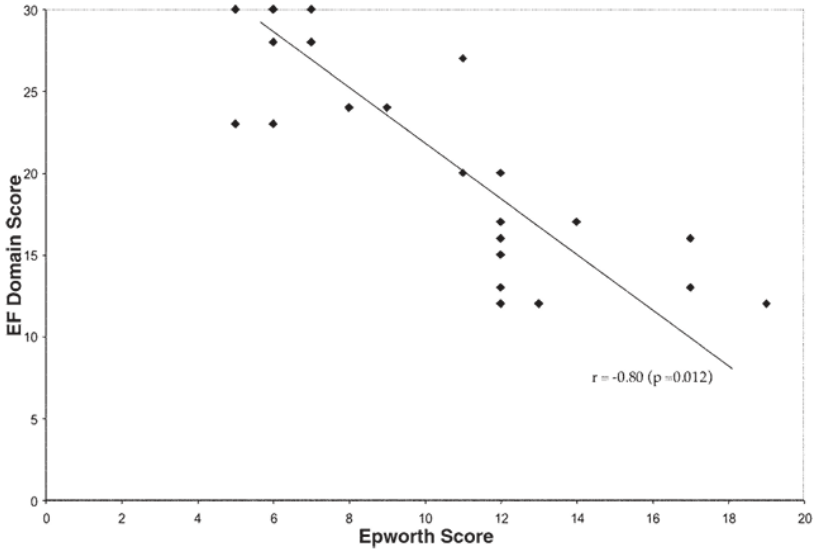

FIGURE 1. *Graphic representation of correlation between Epworth Sleepiness score and IIEF erectile function domain score.*

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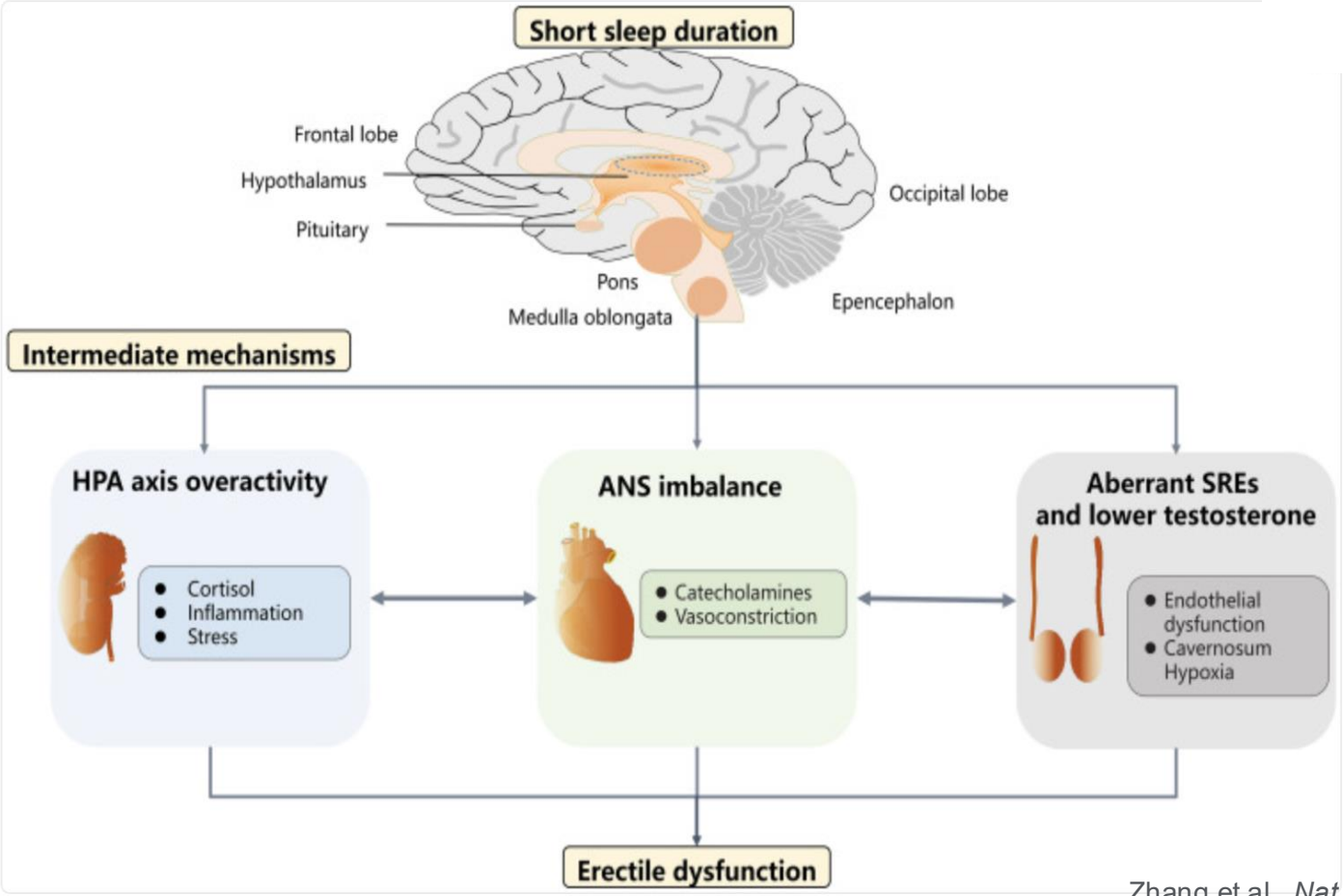
Teloken et al., *Urology* 2005

Poor sleep → Increased risk of ED



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Zhang et al., *Nat Sci Sleep* 2022

GUIDELINES FOR SEXUAL HEALTH CARE FOR PROSTATE CANCER PATIENTS

Patients and their partners should be advised that certain lifestyle factors can have a positive impact on erectile function:



Quitting smoking



Alcohol in moderation
≤2 drinks/day



Physical activity
≥150 mins moderate intensity (or ≥75 vigorous) per week



Plant-based heart-healthy diet

The importance of talking about sex and prostate cancer

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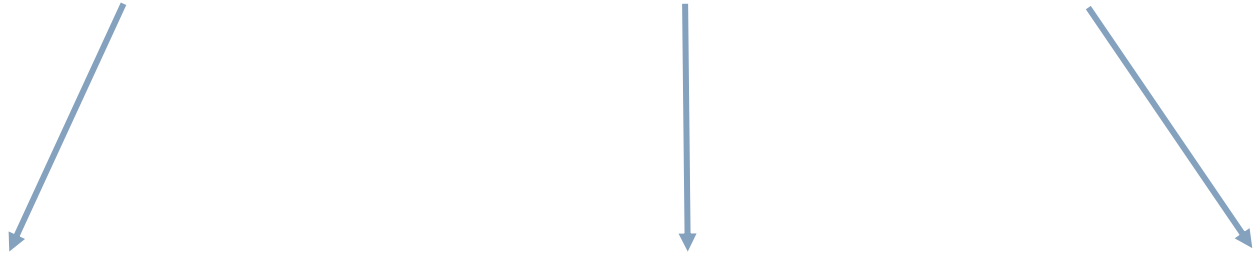
Many patients “suffer silently”

40-57% of patients have never discussed bothersome sexual problems with a provider, even if they sought help for other prostate cancer-related symptoms



↓ Use of sexual dysfunction therapies

↑ Sexual distress

↓ Overall health-related quality of life

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Skolarus et al. *Urol Oncol* 2017; Darwish-Yassine et al. *J Cancer Surviv* 2014; Schover et al. *Cancer* 2002; Flynn et al. *Psychooncology* 2012; Schover et al. *Arch Sex Behav* 2004; Neese et al. *Psychooncology* 2003; Maliski et al. *Urology* 2004; Heckman et al. *J Urol* 2011; Hyde et al. *Support Care Cancer* 2021

GUIDELINES FOR SEXUAL HEALTH CARE FOR PROSTATE CANCER PATIENTS



Healthcare providers should regularly and openly discuss sexual health concerns with prostate cancer survivors to address their needs effectively.

The impact on partners

THE JOURNAL OF
SEXUAL MEDICINE

BRIEF COMMUNICATION

ONCOLOGY

Unmet Sexual Health Needs of Patients and Female Partners Following Diagnosis and Treatment for Prostate Cancer

Check for updates

Randall Li, MD,[a] Daniela Wittmann, PhD, MSW,[b] Christian J. Nelson, PhD,[c] Carolyn A. Salter, MD,[d] John P. Mulhall, MD,[e] Nataliya Byrne, BA,[a] Tatiana Sanchez Nolasco, MPH,[a] Marina Ness, MPH,[f] Natasha Gupta, MD,[a] Caroline Cassidy, BA,[c] Theodore Crisostomo-Wynne, MD,[d] and Stacy Loeb, MD, MSc, PhD[a]

- Mixed-methods study using data from Inspire UsTOO Prostate Cancer Online Support & Discussion Community
- 6193 posts about sexual health and intimacy (661 from females)
  - Selected random 10% sample of female posts (n=66) and equal number of male posts
  - Thematic analysis

Results



PARTNER POSTS were more likely to discuss:

- Relationship conflict
- Sexual health needs overlooked



PATIENT POSTS were more likely to discuss:

- Lack of access to erectile aids



SHARED THEMES:

- Embracing a “new normal”
- Frustration with insufficient counseling from clinicians about sexual health
- Desire to share experiences with sexual dysfunction therapies

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The Journal of Sexual Medicine, 2023, **20**, 651–660
https://doi.org/10.1093/jsxmed/qdad027
Advance access publication date 20 March 2023
Original Research

Understanding the sexual health perceptions, concerns, and needs of female partners of prostate cancer survivors

Natasha Gupta, MD[1,2,3,*], Laura Zebib, MPH[4], Daniela Wittmann, PhD[4], Christian J. Nelson, PhD[5], Carolyn A. Salter, MD[6], John P. Mulhall, MD, MSc, FECSM, FACS, FRCSI[7], Nataliya Byrne, BA[1,2,3], Tatiana Sanchez Nolasco, MPH[1,2,3], Stacy Loeb, MD, MSc, PhD (hon)[1,2,3]

- Recruited female partners from multiple clinical locations, national online support groups
- Conducted in-depth telephone interviews about PCa and sexual health; interviews were recorded and transcribed
- Interviews were analyzed to identify major recurring themes, conducted until no new themes emerged (12th interview)

Major themes and representative quotes
Female sexual health/losses in the context of aging/cancer *"I've been going through menopause…we used a lot of lube because [vaginal] dryness was really the biggest issue."*
Sexual dysfunction as a couple's disease, recovery as a dyadic process *"I think any cancer is a partner struggle, but especially when you take out the sex component."*
Survival vs sex *"Would you rather have intercourse or have a live partner? I'd rather have a live partner."*
Expanding the sexual repertoire *"We do a lot of skin-on-skin contact, cuddling, we talk to each other a lot, we look into each other's eyes ."*
Coping: Being proactive versus avoidant *"He did not have the urge anymore to have intercourse. So I kind of became the instigator."*

Major themes and representative quotes
Coping: Coming to terms with sexual function changes *"However, the change after he had the surgery, we've not been able to have penetrating sex…it has affected our sex life but not our relationship."*
Difficulty communicating about sex *"So then, if you're a wife who's trying to learn that and understand that and still have your own needs met, at what point do you say the right thing or the wrong thing?"*
Lack of physician-led sexual health counseling/support *"There is no quality of information [about sexual health]. First of all, they don't tell you, and you have no idea…People are afraid to touch sex with a 10-foot pole, even doctors."*
Benefit of peer interactions, proactive information seeking in addressing unmet needs *"It's something that if women could talk to each other and know they're not alone, some of these terrible things in their relationships that you just think you can't overcome, you find new strength to be able to do it."*

Unmet needs and preferences for interventions to address needs

- Combined data from n=12 qualitative interviews and n=200 survey responses
- Major emergent themes:
  - Benefits/drawbacks of technology-based sexual health interventions (desire for technology-based interventions, technology as a facilitator of face-to-face interactions, concerns about online misinformation)
  - Importance of sexual health resources throughout the PCa journey
  - Desire for sexual health support groups that include partners

Sexual health resource need	Want more information (n=200)
Female sexual health topics, n (%)	
Libido/arousal problems	49 (24.5)
Problems with orgasm (e.g., cannot have orgasm, change in intensity of orgasm)	39 (19.5)
Vaginal issues (e.g., dryness, pain)	38 (19.0)
Other issue with yourself	13 (6.5)
Male sexual health topics, n (%)	
Libido problems	60 (30.0)
Erectile dysfunction	53 (26.5)
Problems with orgasm (e.g., cannot have orgasm, pain with orgasm)	44 (22.0)
Other problems with penis (e.g., curvature, shortening)	31 (15.5)
Problems with ejaculation	20 (10.0)
Other issue with your partner	14 (7.0)
Psychosocial support services for themselves or their partner, n (%)	
PCa support group (partners only)	70 (35.0)
PCa support group (partners and patients)	59 (29.5)
PCa support group (patients only)	46 (23.0)
Individual counseling	43 (21.5)
Couples' counseling	40 (20.0)
Sex therapist	40 (20.0)
Medication for anxiety or depression	28 (14.0)
Other	5 (2.5)
Medical therapies for male sexual dysfunction, n (%)	
Sexual medicine healthcare provider	47 (23.5)
Erectile aids	43 (21.5)
Medical therapies for female sexual dysfunction, n (%)	
Sexual aids (e.g., lubricants)	27 (13.5)
Sexual medicine healthcare provider	26 (13.0)
Other resources, n (%)	
Website recommendations	83 (41.5)
Book recommendations	66 (33.0)
Sex toys	41 (20.5)

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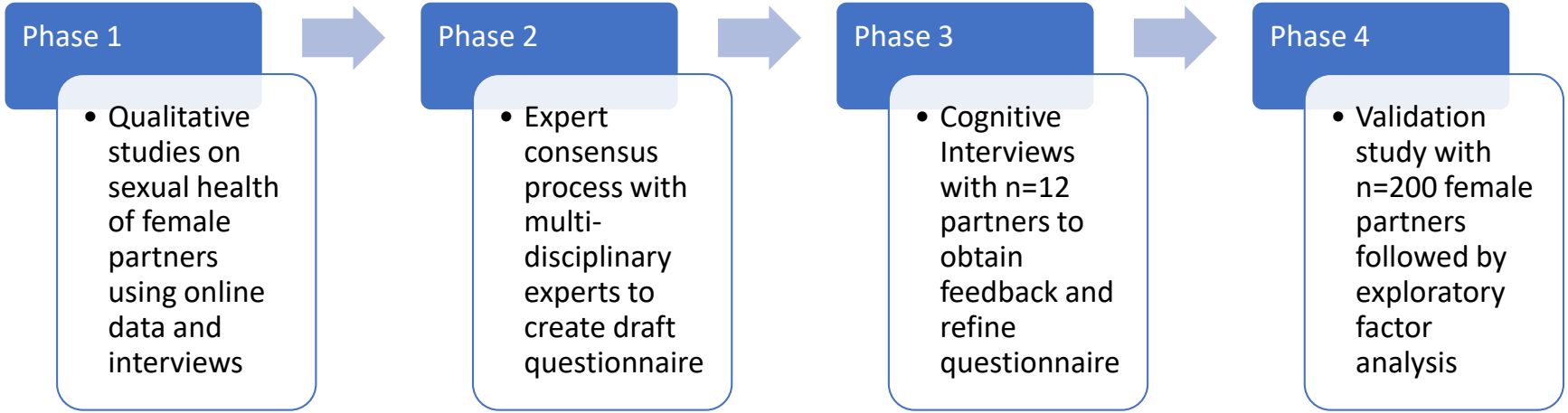
Recommendation	Action item
Develop technology-based sexual health interventions	Develop websites with evidence-based sexual health education, video testimonials from other partners and couples that have successfully navigated sexual dysfunction, and platform for virtual interaction with peers and providers to discuss sexual health
Focus sexual health education materials on topics most relevant to female partners	Provide sexual health educational materials pertaining to libido and arousal problems, erectile dysfunction, sexual medicine specialists, and erectile aids
Increase involvement of female partners in PCa support groups that focus on sexual health	Develop female partner-specific support groups and couples-based support groups focused on sexual health
Provide resources to partners throughout the PCa journey	Provide easy-to-find links to online, publicly-available, evidence-based sexual health resources

Development and Validation of New Survey to Measure Sexual Quality of Life in Female Partners



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Participant demographics (n=200)

Characteristic	M (SD)
Age (Years)	61.65 (8.6), (Range: 34-86)
Race/Ethnicity, n (%)	
White	166 (83%)
Black	23 (12%)
Asian	3 (2%)
Mixed Race	1 (<1%)
Other/Missing	7 (4%)
Education, n(%)	
Did not graduate high school	2 (1%)
High school or GED	9 (5%)
Some college or post-secondary	39 (20%)
College degree	73 (37%)
Graduate degree	61 (31%)
Professional degree	16 (8%)
Relationship to patient, n(%)	
Wife	183 (92%)
Partner	16 (8%)
Other	1 (<1%)
Menopausal, n(%)	155 (78%)
Time in relationship (Years)	25.88 (8.7)
Time since diagnosis (Years)	5.89 (4.8)
Treatments received by their partner, n(%)	35 (18%)
Active Surveillance	120 (60%)
Prostatectomy	94 (47%)
Radiation	0 (0%)
Cryotherapy	6 (3%)
HIFU	83 (42%)
Hormonal	21 (11%)
Chemotherapy	

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Sexual Health In Partners of Patients with Prostate cancer (SCIPPP-

Item	Response Scoring	Weight
Distress/Satisfaction		
1-I am experiencing distress related to the sexual changes from the prostate cancer diagnosis and/or treatment.	Not at all (0) to Very much (4)	0.69
2-I am satisfied with the current state of my sex life with my partner since the prostate cancer diagnosis and/or treatment.	*Very much (0) to Not at all (4)*	0.78
3-My sexual needs are currently being met.	*Very much (0) to Not at all (4)*	0.76
4-My sex life is worse since the prostate cancer diagnosis and/or treatment.	Not at all (0) to Very much (4)	0.78
5-I feel a loss of intimacy from my partner since the prostate cancer diagnosis and/or treatment.	Not at all (0) to Very much (4)	0.91
6-My partner avoids intimate situations since the prostate cancer diagnosis and/or treatment.	Not at all (0) to Very much (4)	0.83
Loss of connection as a couple		
7- I feel less physically attracted to my partner since the prostate cancer diagnosis and/or treatment.	Not at all (0) to Very much (4)	0.65
8-I have felt more isolated from my partner since he was diagnosed with prostate cancer.	Not at all (0) to Very much (4)	0.93
9-I feel invisible to my partner since he was diagnosed with prostate cancer.	Not at all (0) to Very much (4)	0.79
10-My partner and I are less close since the prostate cancer was diagnosed.	Not at all (0) to Very much (4)	0.77
Communicating		
11-I tell my partner how I feel about our current sex life.	*Very much (0) to Not at all (4)*	0.88
12-My partner tells me how he feels about our current sex life.	*Very much (0) to Not at all (4)*	0.82
Discomfort with Communication		
13-I am uncomfortable talking with my partner about our sexual problems.	Not at all (0) to Very much (4)	1
Frustration with Sexual Counseling		
14-I received a satisfactory explanation of the sexual side effects of prostate cancer procedure(s) and/or treatment(s).	*Very much (0) to Not at all (4)*	0.80
15-I am frustrated/angry about the lack of information we received about sexual health.	Not at all (0) to Very much (4)	0.73
16-I felt prepared for the sexual side effects.	*Very much (0) to Not at all (4)*	0.73
Expansion of Sexual Repertoire		
17-I am comfortable trying new ways to achieve sexual satisfaction outside of intercourse.	*Very much (0) to Not at all (4)*	0.44
18-We have become more flexible in how we initiate physical intimacy (e.g., who initiates, type of contact) since the prostate cancer diagnosis and/or treatment.	*Very much (0) to Not at all (4)*	0.91

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The Sexual Concerns In Partners of Patients with Prostate cancer SCIPPP-F survey and other sexual health resources are available on the Prostate Cancer Foundation website

https://www.pcf.org/sexual-health-changes/impact-of-prostate-cancer-on-partners-sexual-quality-of-life/

GUIDELINES FOR SEXUAL HEALTH CARE FOR PROSTATE CANCER PATIENTS



Prostate cancer is a couple's disease:
In cases where the patient is in a relationship, involving the partner in all stages of pre- and post-treatment evaluation and counseling is best. Couples working together as a team tend to have better sexual recovery outcomes.

Conclusions

- **Lifestyle changes (e.g., diet and exercise)** can help reduce the negative impact of prostate cancer on sexual health
- **Effective communication between patients and providers about sexual health** is critical to regaining sexual health and intimacy after a prostate cancer diagnosis.
- Prostate cancer-related sexual dysfunction is a **couples' disease** that impacts both patients and partners, and **partner involvement** is important.

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Thank you

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