Optimizing patients' sexual outcomes in prostate cancer survivorship: Preparing patients and partners for treatment-related sexual side-effects and rehabilitation

Optimizing patients' sexual outcomes in prostate cancer survivorship: Preparing patients and partners for treatment-related sexual side-effects and rehabilitation.

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THE JOURNAL OF
SEXUAL MEDICINE

ORIGINAL RESEARCH & REVIEWS

ONCOLOGY

Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel

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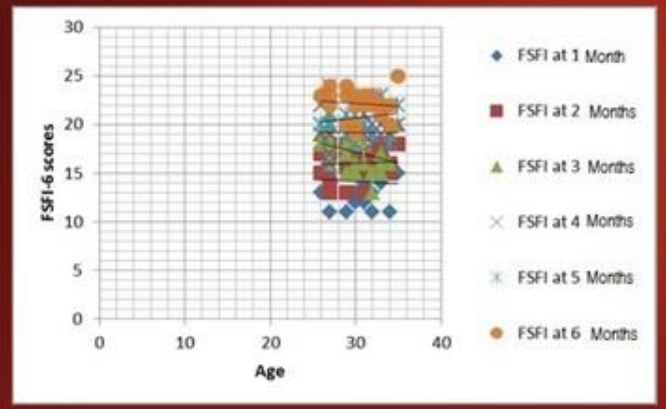


An Official Journal of The International Society for Sexual Medicine

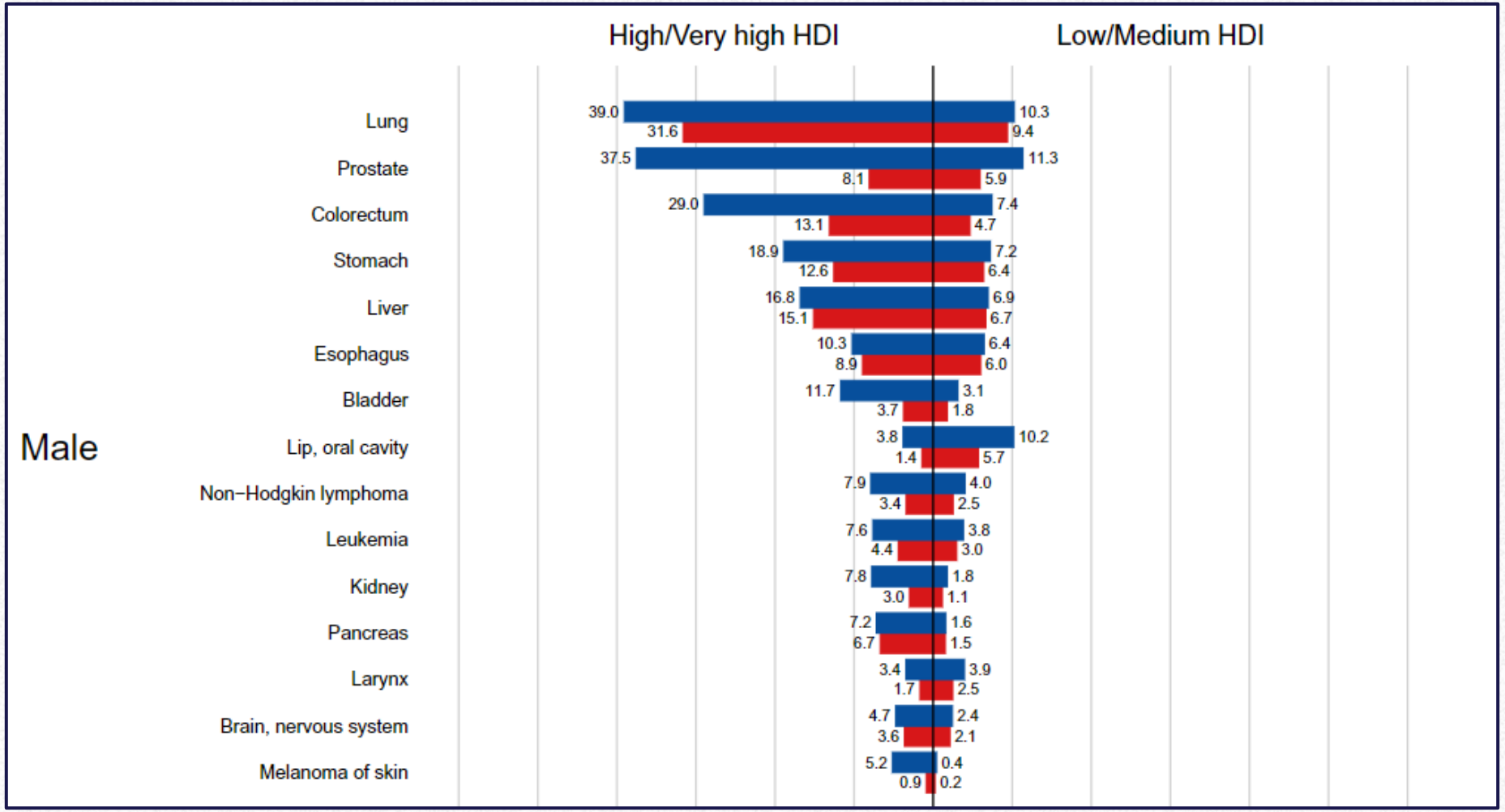
Asia Pacific Society for Sexual Medicine (APSSM); European Society for Sexual Medicine (ESSM); Latin American Society for Sexual Medicine (SLAMS); Middle East Society for Sexual Medicine (MESSM); Sexual Medicine Society of North America (SMSNA); South Asian Society for Sexual Medicine (SASSM); International Society for the Study of Women's Sexual Health (ISSWSH)

ELSEVIER

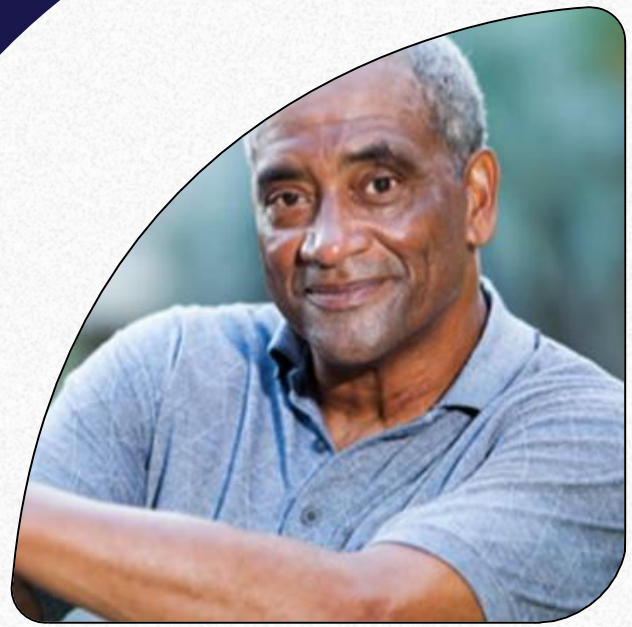
These are the first sexual health guidelines that have been developed for the care of cancer patients.

Background

Global Cancer Incidence and Mortality



Sung et al., CA CANCER J CLIN 2020



- Sexual dysfunction is the most commonly reported health-related quality of life outcome following therapies for prostate cancer, affecting men, partners and their relationships.

- National origin, ethnicity, and race affect perspectives on gender roles, sexual orientation, relationships, culture-driven health beliefs, disparities in access to healthcare, and uptake of healthcare offered.

Complete our session survey to enter a raffle for a **FREE** **one-year ISSM membership**!

Instructions

- Scan the QR code with your device or go to www.issm.info/movember
- This poll gathers insights to improve sexual health guidelines and resources in prostate cancer care through the ISSM and Movember partnership.

Case #1

- John and his wife are seeing you for pre-surgical information.
- He is 63, PSA is 6 and his biopsy was Gleason score 7 (4+3).
- He has reduced erectile function.

Case #1

- John has read extensively about his options and wants definitive therapy but is realistic about erections.
- He is really concerned that he will not obtain sexual pleasure after the surgery.

Case #1

- Do you initiate a “REHAB” program and what are the elements?
- He wants to know if a robotic or open approach is better?

Sexual Function after Radical Prostatectomy

Run Wang MD, FACS
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Director of Sexual Medicine Fellowship Program
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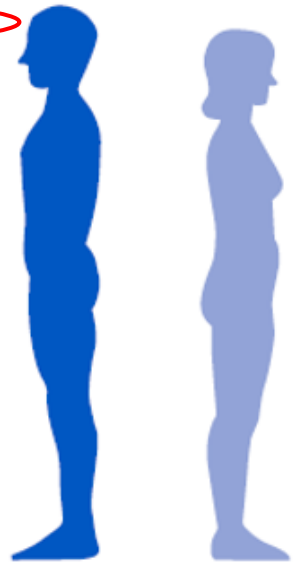
And McGovern Medical School, Houston, Texas, USA

Disclosure

- No Conflict of Interests relevant to this presentation

Estimated number of new cancer cases in the US in 2025

Male		
Prostate	313,780	30%
Lung & bronchus	110,680	11%
Colon & rectum	82,460	8%
Urinary bladder	65,080	6%
Melanoma of the skin	60,550	6%
Kidney & renal pelvis	52,410	5%
Non-Hodgkin lymphoma	45,140	4%
Oral cavity & pharynx	42,500	4%
Leukemia	38,720	4%
Pancreas	34,950	3%
All sites	**1,053,250**	



Female		
Breast	316,950	32%
Lung & bronchus	115,970	12%
Colon & rectum	71,810	7%
Uterine corpus	69,120	7%
Melanoma of the skin	44,410	4%
Non-Hodgkin lymphoma	35,210	4%
Pancreas	32,490	3%
Thyroid	31,350	3%
Kidney & renal pelvis	28,570	3%
Leukemia	28,170	3%
All sites	**988,660**	

Excludes basal cell and squamous cell skin cancers and in situ carcinoma except urinary bladder.
Source: Cancer Facts & Figures 2025.

Information for Robotic Procedures

- More than 5,500 da Vinci robots globally in 2020.
- Intuitive's revenue about $4.5 billion in 2019.
- The biggest impact is in Urology with monopoly on robot-assisted radical prostatectomies (RARP)
- About 90,000 American men underwent radical prostatectomy each year,
  > 90% patients have robot-assisted surgeries since 2014.

Crew B. Nature 2020; 580: S5-S7

Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel

Statement 8

- Patients and partners should be informed there is no clear evidence supporting the advantage of either robotic, laparoscopic, or open radical prostatectomy in terms of post-operative erectile function outcomes.

Wittmann D, Mehta A, McCaughan E, Faraday M, Duby A, Matthew A, Incrocci L, Burnett A, Nelson CJ, Elliott S, Koontz BF, Bober SL, McLeod D, Capogrosso P, Yap T, Higano C, Loeb S, Capellari E, Glodé M, Goltz H, Howell D, Kirby M, Bennett N, Trost L, Odiyo Ouma P, Wang R, Salter C, Skolarus TA, McPhail J, McPhail S, Brandon J, Northouse LL, Paich K, Pollack CE, Shifferd J, Erickson K, Mulhall JP. Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel. J Sex Med 2022;19:1655–1669

ED compared between open and robot-assisted laparoscopic surgery using various definitions and as reported by patients 12 mo after surgery

Definition of erectile dysfunction	Open surgery, *n* (%)	Robot-assisted surgery, *n* (%)	Adjusted A, OR (95% CI) **	Adjusted B, OR (95% CI) †	Adjusted C, OR (95% CI) ‡
IIEF score §	531 (75)	1200 (70)	0.80 (0.64–1.00)	0.79 (0.63–1.00)	0.73 (0.58–0.93)
IIEF-5 score # at 12 mo ≤16	570 (81)	1311 (78)	0.86 (0.68–1.09)	0.75 (0.58–0.96)	0.75 (0.58–0.97)
IIEF-5 score # at 12 mo ≤21	654 (93)	1508 (90)	0.71 (0.50–0.99)	0.61 (0.42–0.88)	0.61 (0.42–0.88)
Penile stiffness less than half of the time	574 (81)	1323 (77)	0.81 (0.64–1.03)	0.75 (0.59–0.96)	0.75 (0.58–0.97)
No spontaneous morning erection	664 (93)	1522 (89)	0.59 (0.42–0.82)	0.52 (0.36–0.76)	0.50 (0.35–0.74)
Erectile dysfunction, combined variable +	561 (79)	1282 (75)	0.80 (0.64–1.00)	0.74 (0.59–0.95)	0.75 (0.58–0.96)

CI = confidence interval; IIEF = International Index of Erectile Function; OR = odds ratio.
Information on unadjusted risk and ORs is available in Supplementary Table 3.
** Adjusted A: adjusted for age at surgery, educational level, smoking, employment, cardiovascular disease.
† Adjusted B: adjusted for same as A plus all four preoperative tumour characteristic variables.
‡ Adjusted C: adjusted for same as A plus B plus degree of neurovascular bundle preservation.
§ IIEF Questionnaire, question 3: "When you had erections with sexual stimulation, how often was your erection hard enough for penetration during the last 3 months?" with cutoff between response 2 and 3. The following responses were available: "No sexual activity" (0); "Almost never or never" (1); "A few times (much less than half the time)" (2); "Sometimes (about half the time)" (3); "Most times (much more than half the time)" (4); and "Almost always or always" (5).
# IIEF Questionnaire modified version with five questions, six answer categories, 0–5 points per question; score ≤16 = erectile dysfunction; score ≤21 = some erectile function.
+ Erectile dysfunction implies a lack of stiffness at sexual activity or morning erection.

Haglind et al. Euro Urol 68:216;2015

Life-Quality Issues After Radical Prostatectomy

- Erectile dysfunction
- Urinary incontinence
- Penile shrinkage
- Peyronie's disease
- Climacturia
- Dysorgasmia
- Anorgasmia
- Altered sensation
- Bladder neck contracture
- Inguinal or umbilical/incision hernia

Alterations of orgasm related organs after RP

- Prostate: removed
- seminal vesicles: removed (most patients)
- Vas deference: disconnected from urinary system

Alterations in orgasmic experience are expected after RP, but most patients can still maintain orgasmic function –

Contractions in the pelvic striated muscles including the bulbospongiousus and ischiocavernosus muscles without ejaculates (no seminal fluid expulsion).

Orgasmic Dysfunction after RP

- Climacturia
- Dysorgasmia
- Anorgasmia
- Altered sensation or decreased orgasm intensity

Climacturia

- Orgasm-associated urinary incontinence
- Involuntary loss of urine at the time of orgasm
- Prevalence ranging from 20% to 93%
- Accumulated data: Prevalence closer to 30%
- “significant bother” in up to 47% of patients

Capogrosso et al. World J Mens Health 2017;35(1): 1-13.
Lee et al. J Urol 2006;176: 2562-5.
Clavell-Hernández J, Martin C, Wang R. Sex Med Rev. 6(1):124-134, 2018.

Dysorgasmia

- Pain during or after orgasm
- Prevalence ranging between 3.2% and 18%
- Location of pain: penis, testis, rectum, abdomen, and other areas
- Improving with times: 72% at 12 m, 26% at 18 m and 7% at 24 m for patients with dysorgasmia (12% - 84/702 patients)
- Open surgery (11.6%) versus robot-assisted RP (7.1%) (p=0.04)

Barnas et al. BJU Int 2004; 94:603-5.
Matsushita et al. J Sex Med 2012;9:1454-8.
Tewari et al. BJU Int 2012;109:596-602.
Capogrosso et al. Eur Urol 2016;70: 223-6.

Anorgasmia

- Inability to achieve an orgasm
- Prevalence in patients <58 years: 16%, 32%, and 33% after bilateral, unilateral and non-nerve sparing retropubic RP (control group: 6%)
- Prevalence in patients >69 years: 42%, 42%, and 70% after BNS, UNS and NNS (control group: 33%)

Hollenbeck et al. J Urol 2003;169: 1453-7.
Dubbelman et al. J Sex Med 2010;7:1216-23.

Altered sensation

- Decreased intensity of orgasm
- Prevalence: 57%-78%

Clavell-Hernández J, Martin C, Wang R. Sex Med Rev. 6(1):124-134, 2018.

Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel

Statement 10

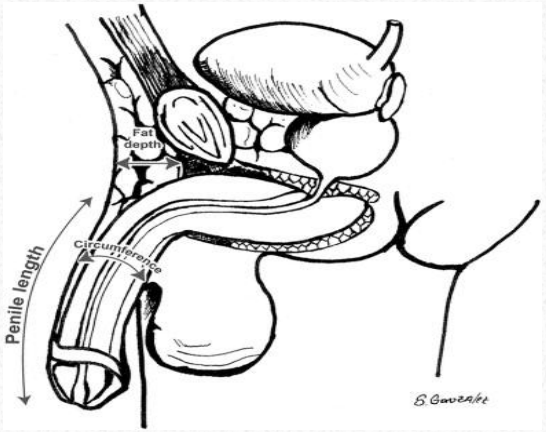
- Patients and partners should be counseled that sexual arousal incontinence and climacturia may occur after radical prostatectomy with the potential to recover with recovery of urinary control.

Wittmann D, Mehta A, McCaughan E, Faraday M, Duby A, Matthew A, Incrocci L, Burnett A, Nelson CJ, Elliott S, Koontz BF, Bober SL, McLeod D, Capogrosso P, Yap T, Higano C, Loeb S, Capellari E, Glodé M, Goltz H, Howell D, Kirby M, Bennett N, Trost L, Odiyo Ouma P, Wang R, Salter C, Skolarus TA, McPhail J, McPhail S, Brandon J, Northouse LL, Paich K, Pollack CE, Shifferd J, Erickson K, Mulhall JP. Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel. J Sex Med 2022;19:1655–1669

Pathophysiology of Post-Prostatectomy ED, PD and penile shrinkage

- **Neuropraxia**: due to cavernous nerves stretch/thermal injury and inflammation from surgical trauma
- **Hypoxia**: reduction in arterial inflow (ligation of accessory internal pudendal arteries) and lack of nocturnal erection
- **Apoptosis**: programmed cell death and then fibrosis

> 70% patients with ED
68% patients have measurable loss of penile size
16% patients develop Peyronie's disease



Savoie et al. J Urol, 169: 1462, 2003
Wang R. J Sex Med 4: 1085, 2007
Tal et al. J Sex Med &:1254; 2010

Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel

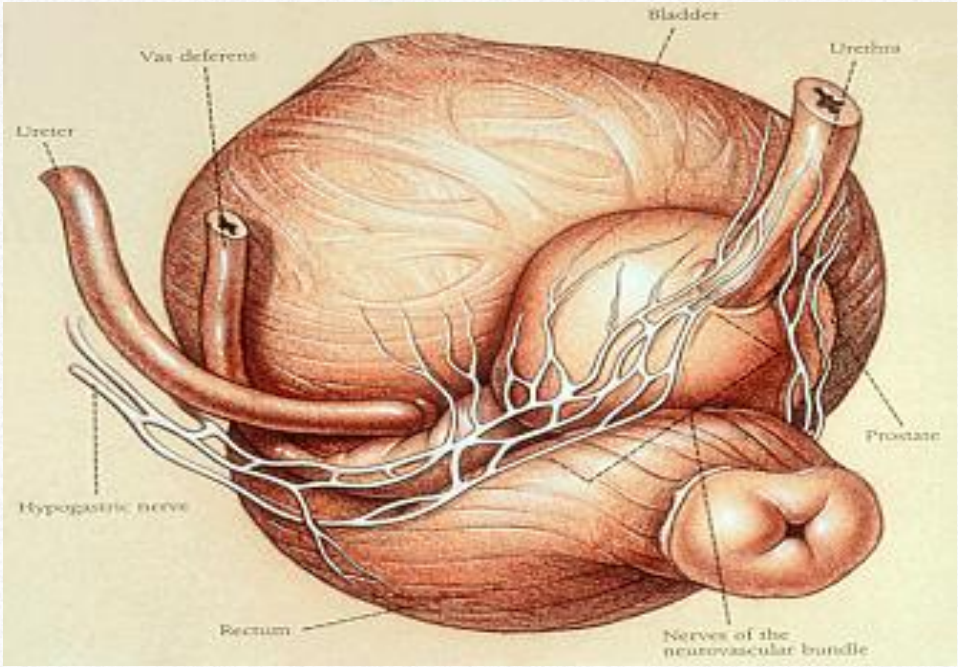
Statements 11 & 12

- Patients and partners should be counseled that penile length and girth/volume loss may occur after radical prostatectomy.
- Patients and partners should be informed that radical prostatectomy may be associated with an increased risk of the development of penile curvature.

Wittmann D, Mehta A, McCaughan E, Faraday M, Duby A, Matthew A, Incrocci L, Burnett A, Nelson CJ, Elliott S, Koontz BF, Bober SL, McLeod D, Capogrosso P, Yap T, Higano C, Loeb S, Capellari E, Glodé M, Goltz H, Howell D, Kirby M, Bennett N, Trost L, Odiyo Ouma P, Wang R, Salter C, Skolarus TA, McPhail J, McPhail S, Brandon J, Northouse LL, Paich K, Pollack CE, Shifferd J, Erickson K, Mulhall JP. Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel. J Sex Med 2022;19:1655–1669

Need: Erectile Dysfunction Management Pathway

- Many urologists believe that we have maximized our techniques for nerve sparing with current technology.
- Needs: Establishing effective pathway to manage ED after radical prostatectomy.



Penile Rehabilitation: adopted >25 years

Why we are still offering penile rehabilitation?

5th International Consultation on Sexual Medicine

Summary of VED after radical prostatectomy

Author	Year	N	Follow-up	Study design	Therapy type	Level of Evidence	Significant findings
Baniel et al [41]	2001	85	12 months	cohort	VED, PDE5s, ICI, or ICI + VED in a step-wise fashion	3	92% of men successfully responded to VED. Among those not responding, 44% were salvaged with ICI + VED.
Gontero et al[48]	2005	76	12 months	cohort	Tiered therapy with oral apomorphine, followed by PDE5s, VED, ICI single agent, ICI multiagent, and PP.	3	Among those failing to respond to apomorphine and PDE5s, 52% were successfully salvaged with a VED.
Raina et al [50]	2005	31	4.5 months	Case series	VED + sildenafil after failed VED monotherapy	3	77% with improved penile rigidity and sexual satisfaction.
Raina et al [49]	2006	109	9 months	RCT	VED daily vs. no VED (rehab)	1	80% response to VED therapy in a mixed cohort of NS and NNS RP men. No difference of EF recovery (32% vs 37%). VED users were less likely to report penile shrinkage (23% vs 63%, respectively).
Dalkin et al [56]	2007	39	3 months	Case series	VED daily (rehab)	3	Only 3% of men with good VED compliance (used device >50% of days) had a decrease in SPL of ≥ 1.0 cm, compared to a prior study of 48% of men after surgery without use of VED and 67% in men with less compliance with VED use.
Köhler et al [53]	2007	28	9.5 months	RCT	VED daily 1 month vs. 6 months after NSRP (rehab)	1	The IIEF scores were significantly higher with early VED users at 3 m (11.5 ± 9.4 vs 1.8 ± 1.4; P = 0.008) and 6 months (12.4 ± 8.7 vs 3.0 ± 1.9; P = 0.012. No EF difference at the final follow ups. 45% delayed vs. 12% early VED users experienced > 2 cm loss of penile length (P < 0.05).
Engel JD [51]	2011	23	12 months	RCT	VED daily + tadalafil 1 month after NSRP vs. tadalafil only (rehab)	1	92% of combination patients responded yes to the vaginal penetration question vs 57% of the Tadalafil group. 92% vs 29% reported orgasm. Compliance to the VED was superior to that of Tadalafil.
Nason et al [54]	2016	65	3 months	cohort	VED use and education provided at dedicated clinic (rehab)	3	Significant differences noted between 3-month postoperative IIEF score and the post-VED use IIEF score (11.3±3.08 vs 16.74±2.62, P=0.0001). All patients reported that the dedicated VED was helpful and would recommend it to other patients.
Zhang et al [55]	2022	100	12 months	RTC	VED vs tadalafil vs VED + tadalafil vs no treatment	1	VED + tadalafil not only improved IIEF-5 scores, it was also resulted in higher rate of successful penetration (SEP 2) compared to other groups. No significant differences in the return to target EF among the groups. VED alone or combined with tadalafil maintained penile length compared to no treatment or tadalafil only groups.

VED=Vacuum Erection Device, N=number of participants, RCT=randomized control trial, NSRP = Nerve Sparing Radical Prostatectomy, IIEF=International Index of Erectile Function, SEP=sexual encounter profile

- Clinicians should offer VED early in the post-operative setting to maintain penile size following radical prostatectomy.
- Clinicians should not offer VED to restore spontaneous erectile function more rapidly or to a greater degree when used as a rehabilitation therapy after radical prostatectomy.

Wang R, Martins FE, Ralph D, Hatzichristodoulou G, Osmonov D, Parker J, Park SH, Moncada I, Bettocchi C, Munarriz R, Kohler T. Vacuum erectile devices for erectile dysfunction: recommendation from the 5th international consultation on sexual medicine. Sex Med Rev (accepted, 2025).

PR may prevent Peyronie's disease post prostatectomy

- Incidence of PD was 2.9% with rehabilitation program compared to historical data of 15.9% in post-RP general population
  (Tal et al. J Sex Med &:1254; 2010)

Cohort characteristics	Follow up after radical prostatectomy for prostate cancer (n=581)
Age (years)	62.6 [58–68]
Race	
White	388 (66.8)
Black	53 (9.1)
Asian	33 (5.7)
Other	79 (13.6)
Unknown	28 (4.8)
Ethnicity	
Hispanic	51 (8.8)
Non-Hispanic	494 (85.0)
Unknown	36 (6.2)
Follow up for all patients (days)	643 [84–1,014.5]
Follow up for patients that developed PD (days)	1,168 [695–1,674]
Patients diagnosed with PD	17 (2.9)
Months after surgery until the diagnosis of PD	28.7 [20–36]

Values are presented as n (%) or median [IQR]. IQR, interquartile range; PD, Peyronie's disease.

Kianian et al. Transl Androl Urol. 2023; 30;12(11):1708-1712.

Benefits of penile rehabilitation

- Improving EF and all pro-erection molecules in animal models (scientific evidence)
- Myogenic effects (both scientific studies and clinical data)
- Tissue oxygenation (both scientific studies and clinical data)
- Penile size preservation (clinical evidence)
- Helping to re-establish sexual life for both the patient and their partners (clinical principal)

Courtesy of Dr. HS Chiang

Walker, Nature Reviews Urology, 2015
Wittmann, J Sex Med, 2014
Clavell and Wang. Transl Androl Urol 6: 2-11, 2017

Attitudes and Practice Patterns of Penile Rehabilitation

ISSM Study

301 physicians from 41 countries

83.7% performed rehab.

Rehab strategies:

- *PDE5 inhibitors* *95.4%*
- *ICI* *75.2%*
- *VED* *30.2%*
- *MUSE* *9.9%*

Teloken et al. JSM 6:2032, 2009

AUA Study

618 urologists

85.8% performed rehab.

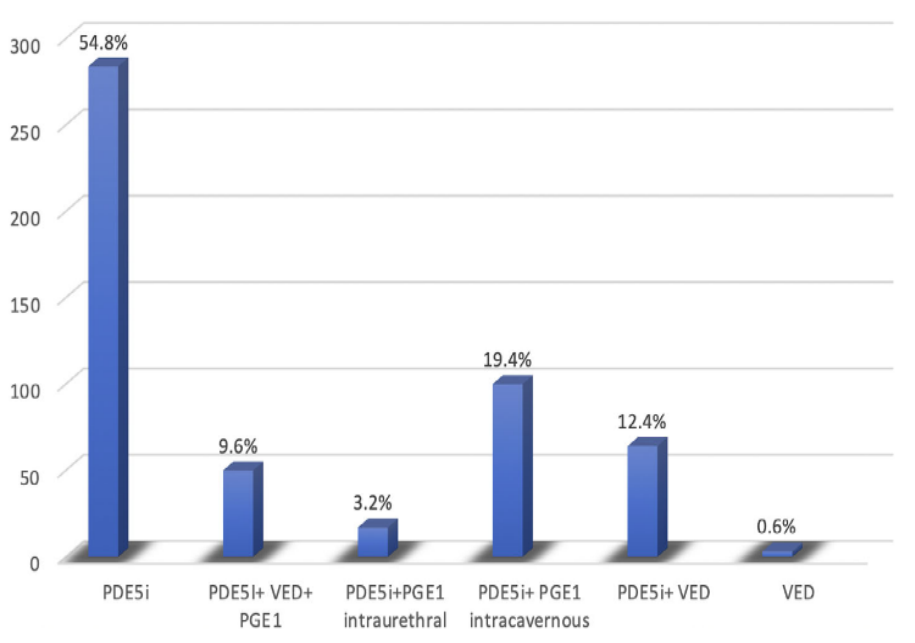
Rehab strategies:

- *PDE5 inhibitors* *1st choice*
- *VED* *2nd choice*
- *ICI* *3rd choice*
- *MUSE* *4th choice*

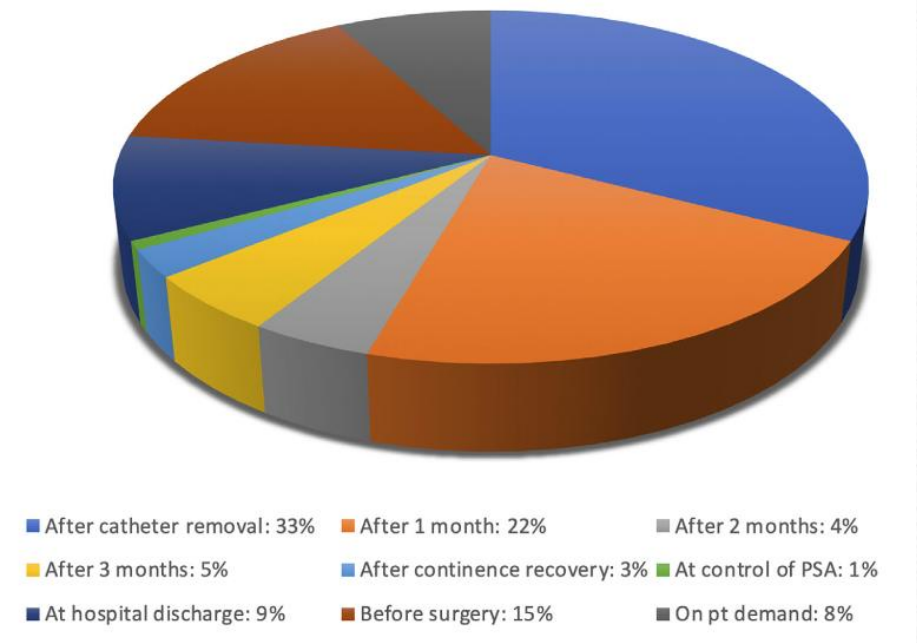
Tal et al. JSM 8: 2370, 2011

Worldwide survey for PR after RP

- The survey between July 15, 2020, and September 15, 2020
- 518 responders from 52 countries (Mostly Europeans).



PR Modalities



Timing to start PR

Rubilotta et al. Andrologia. 54:e14506, 2022

Penile Rehabilitation after Radical Prostatectomy: Summary of PDE5i Clinical Trials

Author	Year	N	Follow-up	Study design	Treatment Duration	Level of Evidence	Significant findings
Padma-Nathan et al.	2008	76	44 weeks	RCT	Nightly sildenafil vs placebo (36 weeks)	2b	Sildenafil had higher IIEF score and increased nocturnal rigidity
Bannowsky et al.	2008	41	52 weeks	Case Control	Nightly Sidenafil vs no treatment	3b	More patients with higher IIEF-5 scores and successful intercourse with rehabilitation
Pace et al.	2010	40	24 weeks	RCT	Nightly Sidenafil vs placebo (8 weeks)	2b	More patients achieved medication unassisted intercourse with rehabilitation
Montorsi et al.	2008	423	13.5 months	RCT	Nightly Vardenafil vs On-demand vs Placebo (9 months)	1b	No difference in EF between groups after a washout period.
Pavlovich et al.	2013	74	13 months	RCT	Daily sildenafil with on-demand placebo vs daily placebo with on demand sildenafil (12 months)	1b	No difference in IIEF scores between treatments
Montorsi et al.	2014	315	13.5 months	RCT	Tadalafil nightly vs on-demand vs placebo (9 months)	1b	No difference in EF between groups after a washout period Tadalafil daily preserves penile length
Kim et al.	2016	74	13 months	RCT	Daily sildenafil with on-demand sildenafil vs daily placebo with on demand sildenafil (12 months)	2b	No difference in IIEF-EF score or Rigiscan parameters between treatment groups

Abbreviations: N= number of patients, RCT= Randomized Control Trial, IIEF = International Index of Erectile Function, EF = erectile function

Clavell and Wang. Transl Androl Urol 6: 2-11, 2017

Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel

Statement 29

- Clinicians should define the intent and goals of penile rehabilitation strategies on an individualized basis, including preservation of penile length, maintenance of corporal tissue quality, and early patient engagement in sexual recovery. Penile rehabilitation should not be equated with treatment for the recovery of unassisted erectile function.

Wittmann D, Mehta A, McCaughan E, Faraday M, Duby A, Matthew A, Incrocci L, Burnett A, Nelson CJ, Elliott S, Koontz BF, Bober SL, McLeod D, Capogrosso P, Yap T, Higano C, Loeb S, Capellari E, Glodé M, Goltz H, Howell D, Kirby M, Bennett N, Trost L, Odiyo Ouma P, Wang R, Salter C, Skolarus TA, McPhail J, McPhail S, Brandon J, Northouse LL, Paich K, Pollack CE, Shifferd J, Erickson K, Mulhall JP. Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel. J Sex Med 2022;19:1655–1669

Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel

Statements 30 & 31

- Clinicians should counsel patients that use of PDE5is for penile rehabilitation in the early post-prostatectomy period (up to 45 days post-surgery) does not improve rates of unassisted and PDE5i-assisted erectile function recovery at 12 months compared to placebo.

- Clinicians should advise patients there is limited evidence to determine the benefit of non-PDE5i approaches for penile rehabilitation in order to promote recovery of erectile function.

Wittmann D, Mehta A, McCaughan E, Faraday M, Duby A, Matthew A, Incrocci L, Burnett A, Nelson CJ, Elliott S, Koontz BF, Bober SL, McLeod D, Capogrosso P, Yap T, Higano C, Loeb S, Capellari E, Glodé M, Goltz H, Howell D, Kirby M, Bennett N, Trost L, Odiyo Ouma P, Wang R, Salter C, Skolarus TA, McPhail J, McPhail S, Brandon J, Northouse LL, Paich K, Pollack CE, Shifferd J, Erickson K, Mulhall JP. Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel. J Sex Med 2022;19:1655–1669

Treatment

Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel

Statement 35

- Clinicians should discuss all available erectile function treatment options with patients following all PCT modalities, including PDE5i, intraurethral suppositories, intracavernosal injections (ICI), vacuum erection devices (VED), penile traction therapy, and penile implants. Clinicians should tailor recommendations based on patient preference, efficacy, and phase of erectile function recovery. This discussion should address benefits, risks, and contraindications associated with each option, as well as patient and partner goals.

Wittmann D, Mehta A, McCaughan E, Faraday M, Duby A, Matthew A, Incrocci L, Burnett A, Nelson CJ, Elliott S, Koontz BF, Bober SL, McLeod D, Capogrosso P, Yap T, Higano C, Loeb S, Capellari E, Glodé M, Goltz H, Howell D, Kirby M, Bennett N, Trost L, Odiyo Ouma P, Wang R, Salter C, Skolarus TA, McPhail J, McPhail S, Brandon J, Northouse LL, Paich K, Pollack CE, Shifferd J, Erickson K, Mulhall JP. Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel. J Sex Med 2022;19:1655–1669

Focus on Pre-Radiotherapy Strategies

Luca Incrocci, MD PhD
Professor of Genito-Urinary Radiotherapy
Erasmus MC Cancer Institute
Rotterdam, The Netherlands

Case #2

- Fred is 68 and generally well but has inflammatory bowel disease.
- His PSA is 9, GS 7 (3+4), on DRE the tumor has broken to the capsule, but imaging does not show any metastases.
- He is planning on radiotherapy.

Case #2

- His erectile function with sildenafil is OK.
- He has noticed that his sexual drive is impaired since he obtained the cancer diagnosis.
- He is concerned about hormonal therapy.

Case #2

- Both he and his wife wonder about how the radiation works.
- Will hormonal therapy be needed and for how long?
- What is the likelihood his T will recover?

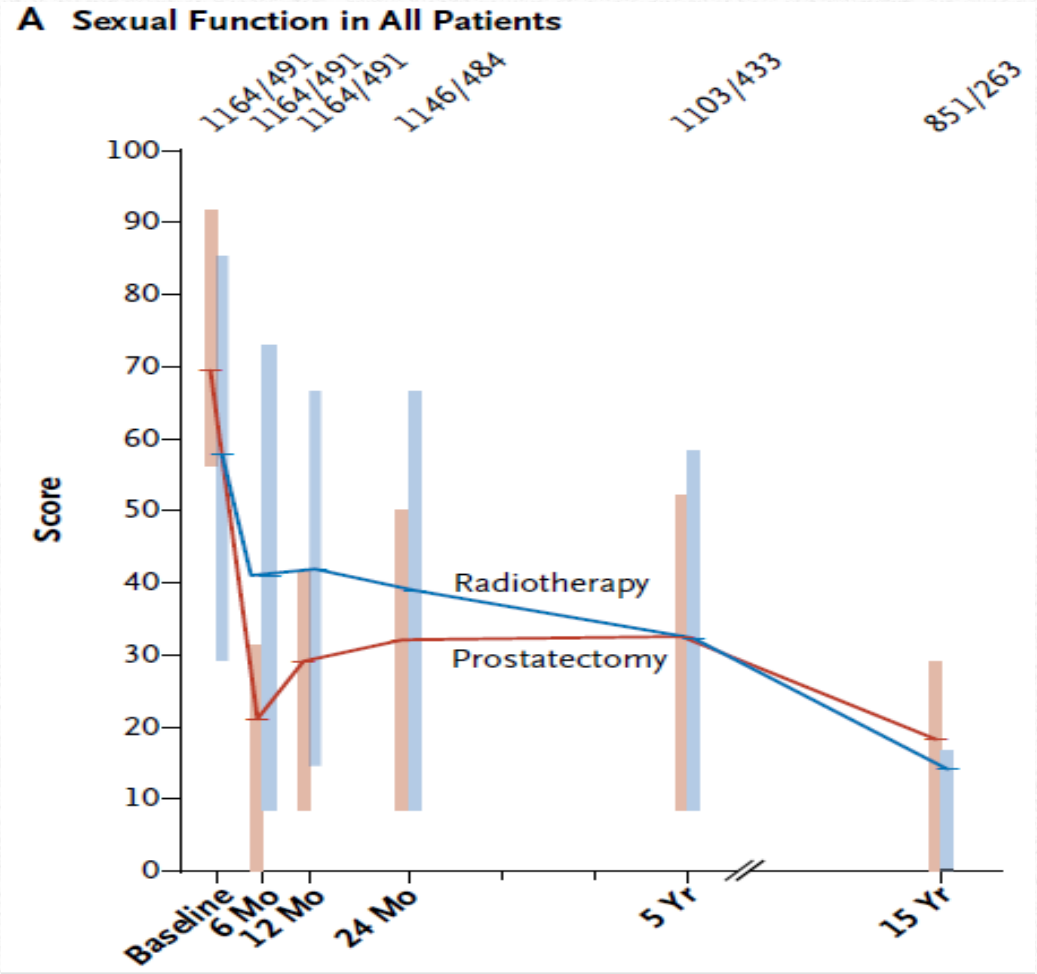
Case #2

- They wonder about the effects on erections and the time course?
- Is rehabilitation of value with radiation therapy?
- Are the newer forms of radiation better, safer or better tolerated?

Disclosure

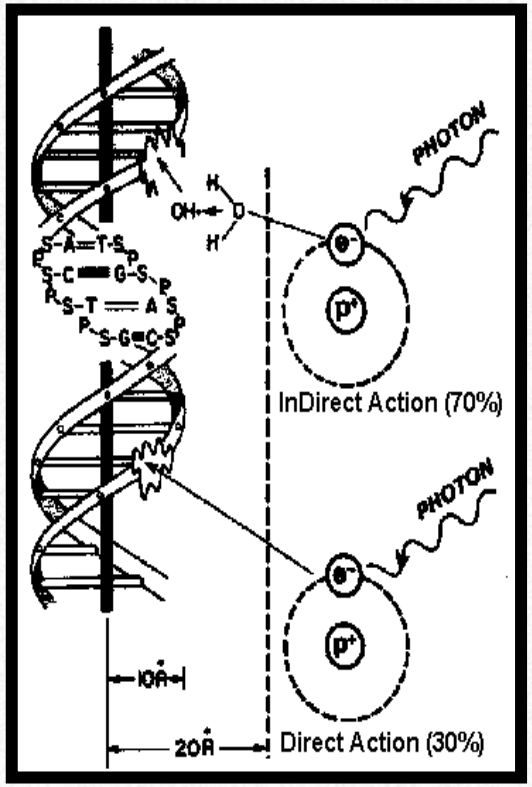
- Nothing to disclose

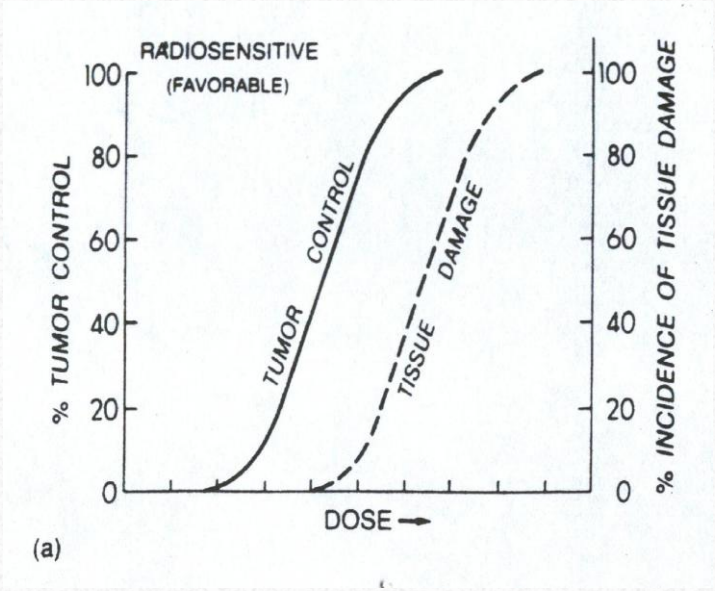
Long-Term Functional Outcomes after Treatment for Localized Prostate Cancer

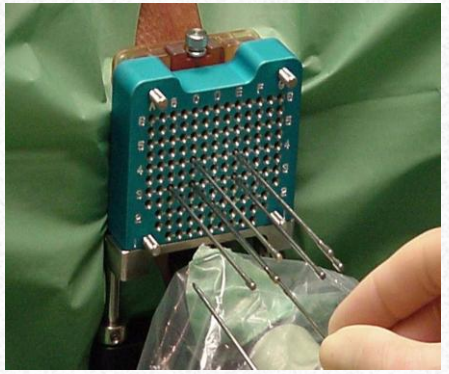


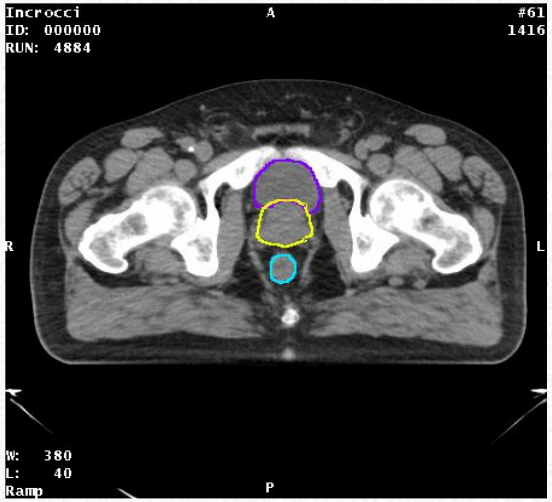
Resnick et al. NEJM 2013;368:436-45

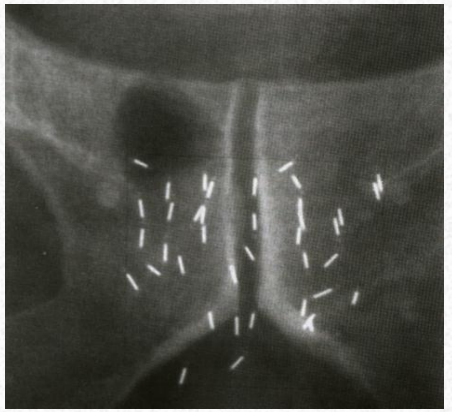
Radiotherapy for Prostate Cancer



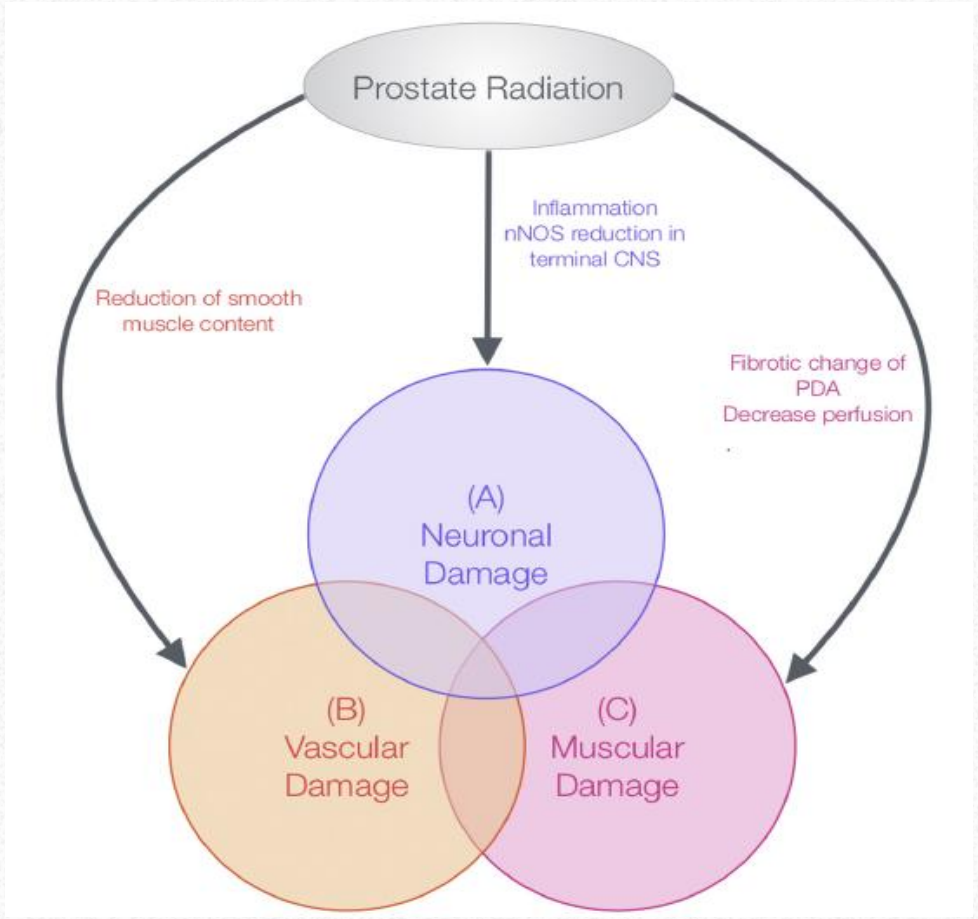




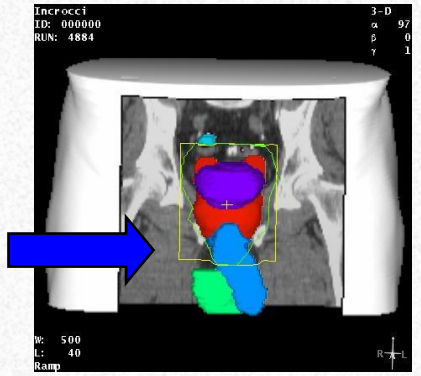




Post-Radiation Erectile Dysfunction



Incidence: 40%
Onset: 1-3 years



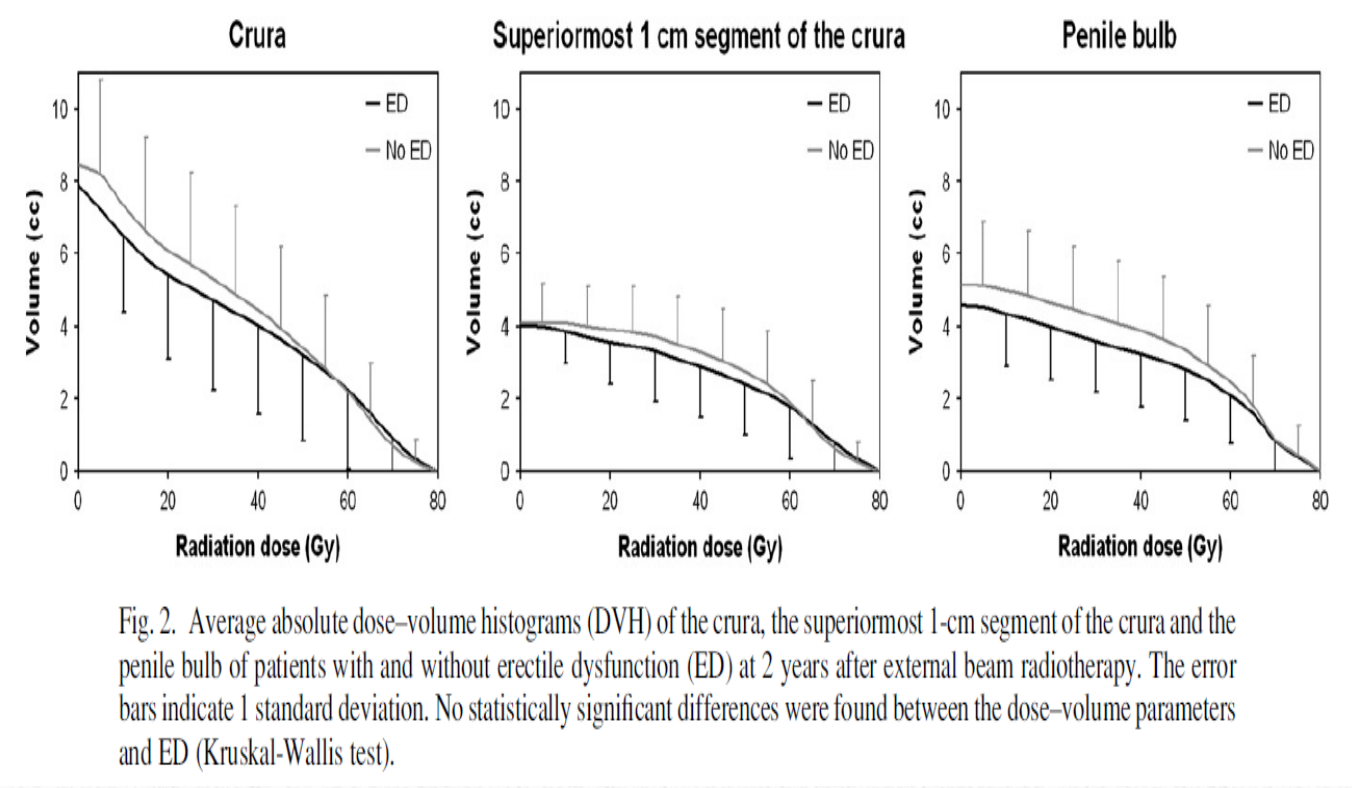
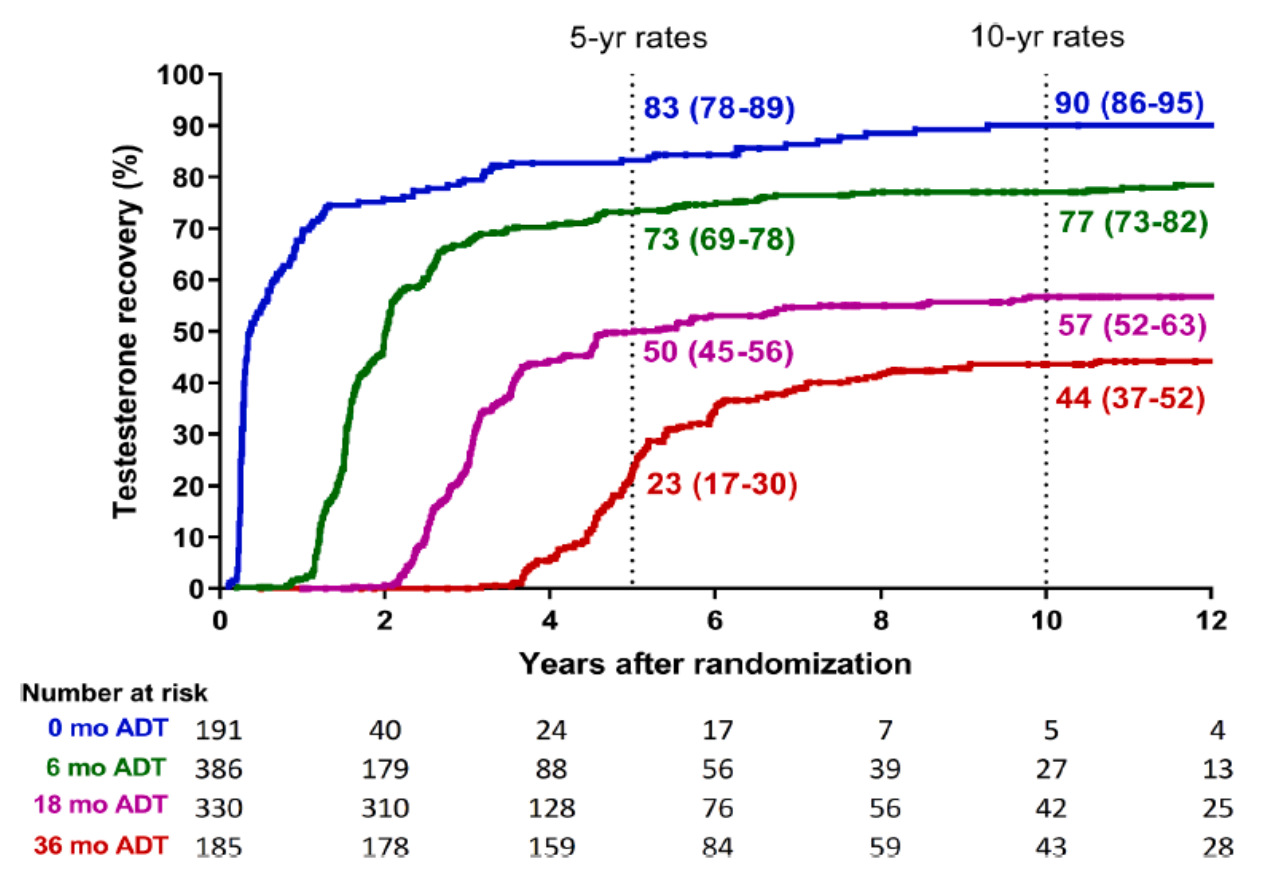


Fig. 2. Average absolute dose–volume histograms (DVH) of the crura, the superiormost 1-cm segment of the crura and the penile bulb of patients with and without erectile dysfunction (ED) at 2 years after external beam radiotherapy. The error bars indicate 1 standard deviation. No statistically significant differences were found between the dose–volume parameters and ED (Kruskal-Wallis test).

Mahmood et al. Adv Radiat Oncol 2016;1:161-169

van der Wielen et al. Int J Radiat Oncol Biol Phys 2008;71:795-800

Testosterone recovery after androgen deprivation therapy from two randomised trials (n=1230)

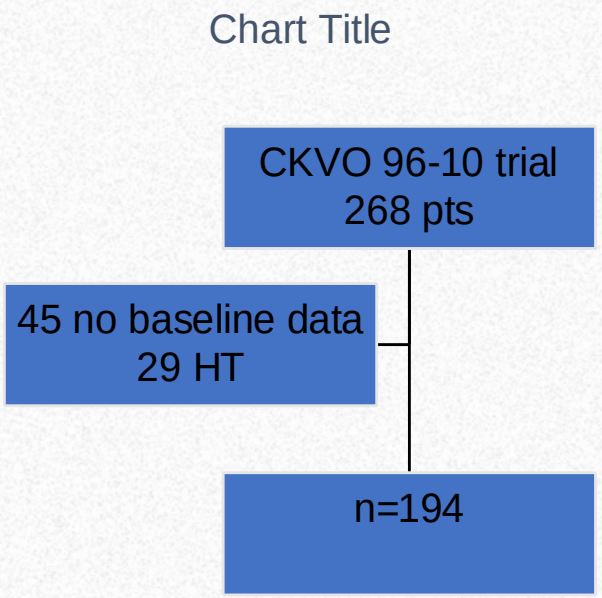


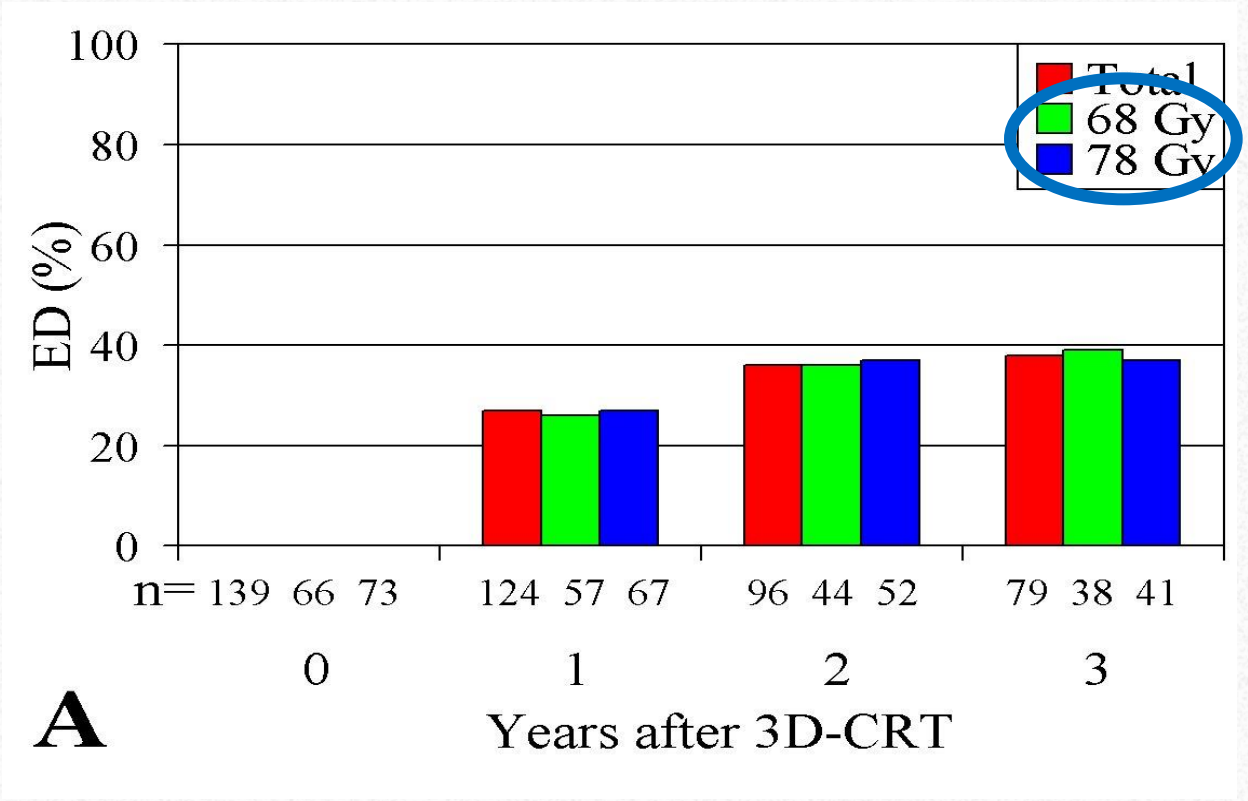
Conclusions

Hormonal duration, baseline T, age and medical comorbidities are the most important variables for T recovery

Nabid A et al. Rad Oncol 2024: https://doi.org/10.1016/j.radonc.2024.110256

Does Total Dose Matter?





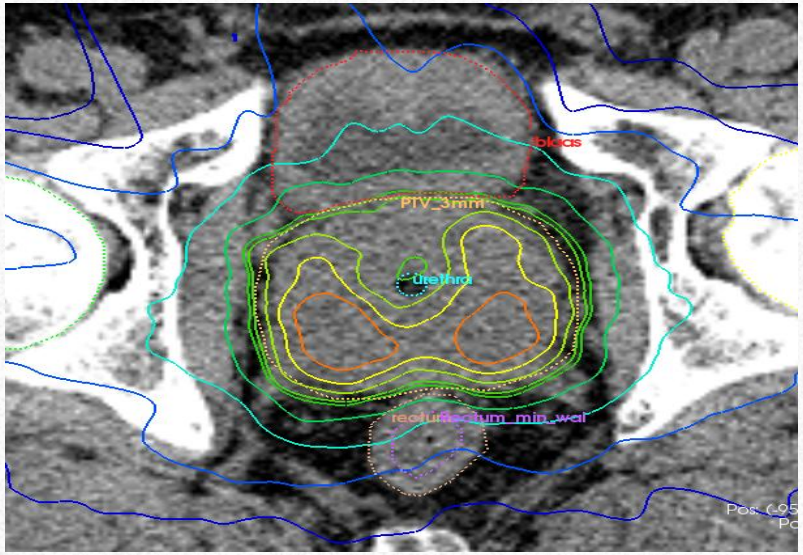
Questionnaire at baseline, 6 mos, 1, 2 & 3 yrs

van der Wielen et al. Int J Radiat Oncol Biol Phys 2007;68:479-84

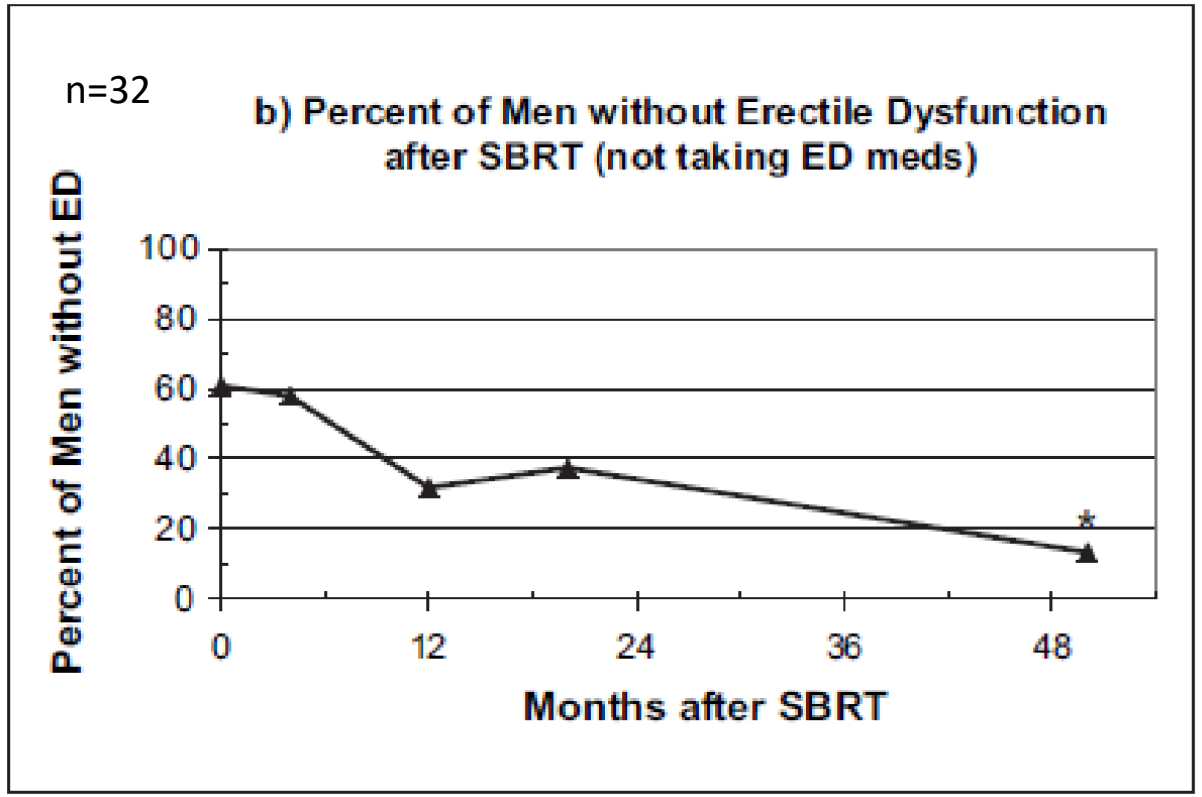
SEXUAL FUNCTION AFTER STEREOTACTIC BODY RADIOTHERAPY FOR PROSTATE CANCER: RESULTS OF A PROSPECTIVE CLINICAL TRIAL

ELLEN A. WIEGNER, M.D., AND CHRISTOPHER R. KING, PH.D., M.D.

Int. J. Radiation Oncology Biol. Phys., Vol. 78, No. 2, pp. 442–448, 2010



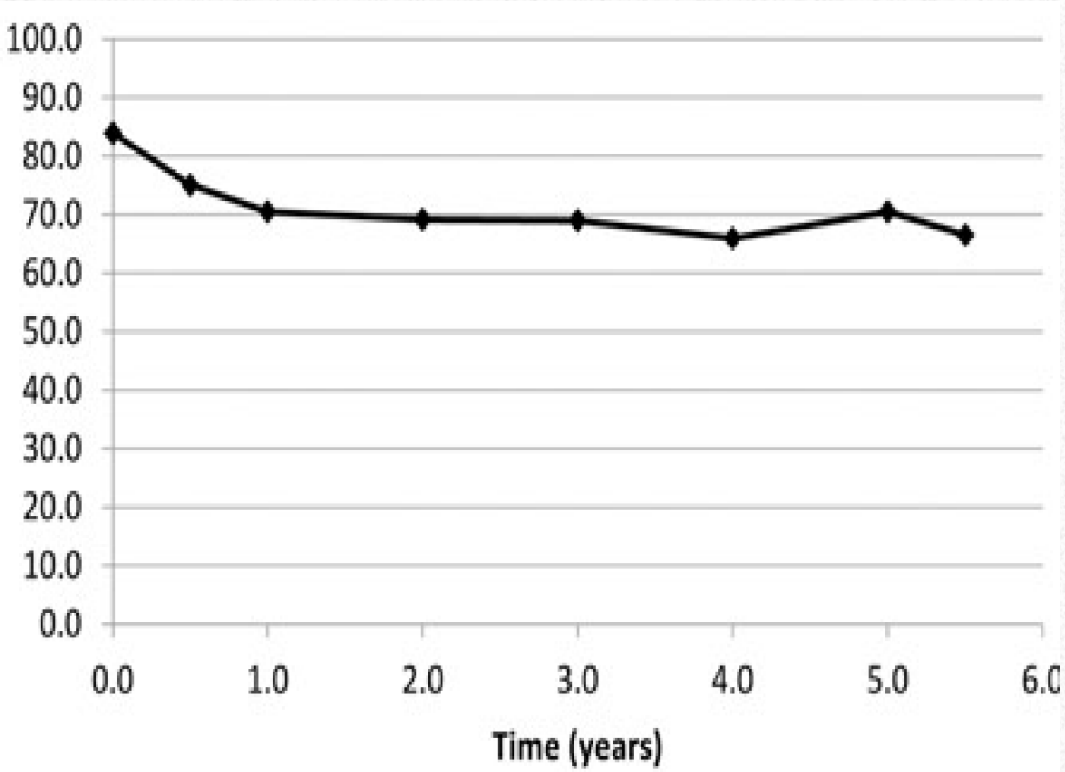
n=32



ED increased from 38% at baseline to 71% post-radiation (p=0.02)

Protons and Prostate Cancer

n=254, **<60 years**, EPIC

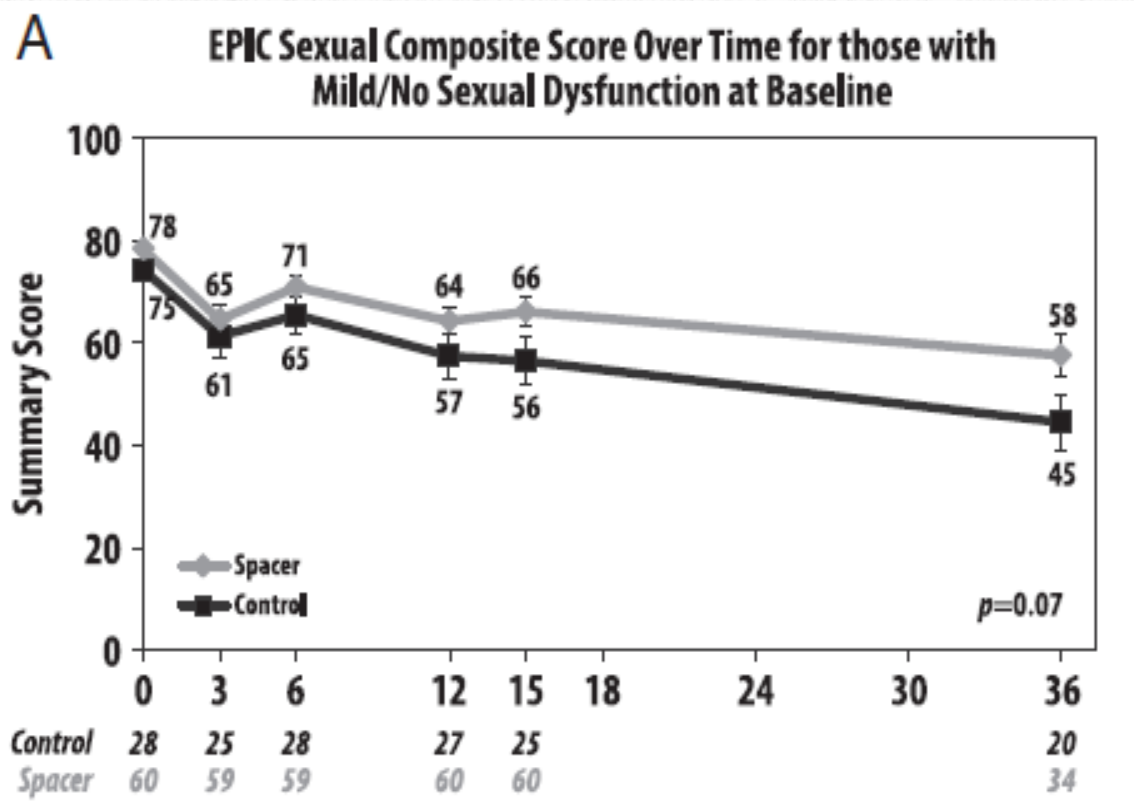


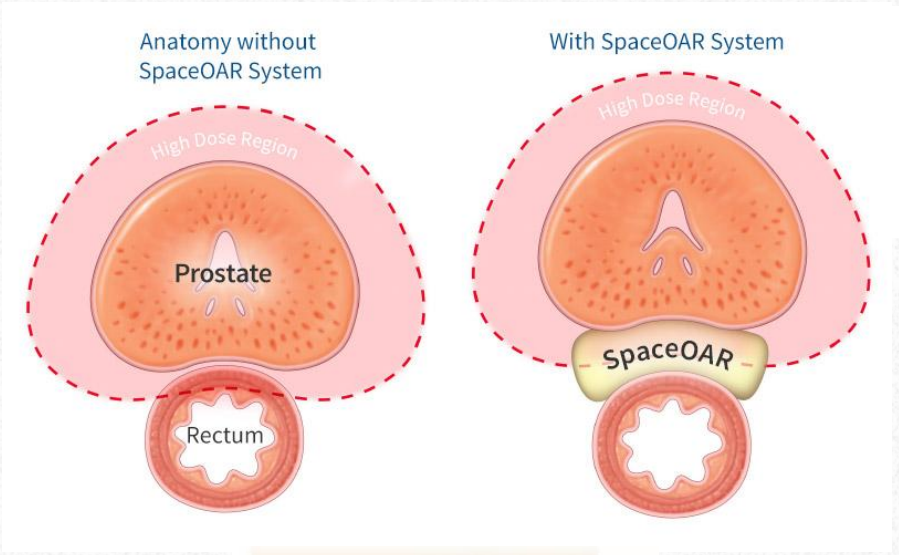
Results: Median follow-up for the cohort was 7.1 years; 7-year biochemical-free survival was 97.8%. Eight men (one high-risk; five intermediate-risk and two low-risk) experienced biochemical progression, including one who died of disease 9 years after treatment. Potency (erections firm enough for sexual intercourse) was 90% at baseline and declined to 72% at the first-year follow-up, but declined to only 67% at 5 years. Only 2% of patients developed urinary incontinence requiring pads. The bowel habits mean score declined from a baseline of 96 to 88 at 1 year, which improved over the following years to 93 at 5 years.

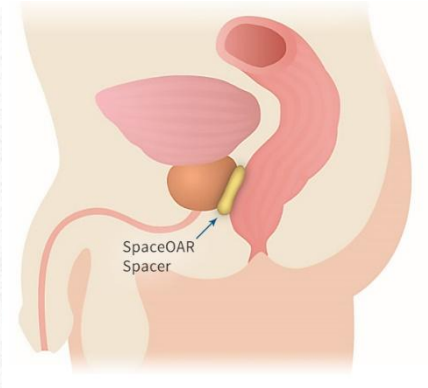
Ho et al. Acta Oncol 2018;57:582-88

Rectal Spacer and Prostate Cancer

n=88, EPIC scores



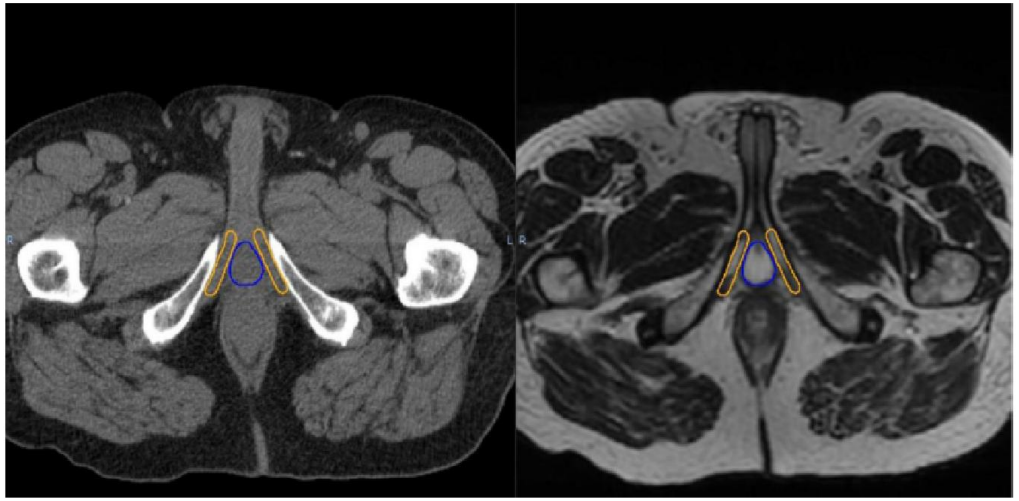




We observed that 70% of men maintained erectile function at 1 year and 57% at 3 years in both arms of the study. Recently a population-based analysis using EPIC

Hamstra et al. Pract Radiat Oncol 2018;8:e7-15

Tissue-Sparing Radiotherapy



n=116
RCT: IMRT vs erectile tissue-sparing IMRT
Limiting dose to penile bulb and bodies
IIEF showed no difference

CONCLUSIONS

Erectile tissue sparing IMRT that limits dose to the penile bulb and corporal bodies is safe and feasible, although there was no significant difference in potency preservation with long-term follow-up.

Zhang et al. Int J Radiat Oncol Biol Phys 2023;115:1074-1084

Neurovascular-Sparing MR-Guided Adaptive Radiotherapy in Prostate Cancer; Defining the Potential Population for Erectile Function-Sparing Treatment

Teunissen et al. J Sex Med 2022;19:1196-1200

n=102
5x7.25Gy
IIEF

Conclusion: A substantial group of 49.0% of patients in our study had mild or no erectile dysfunction at baseline. Of these patients, the NVB could technically have been spared bilaterally in 20.0% and unilaterally in 68.0% during MRgRT. Trials need to assess the effect of neurovascular-sparing MRgRT on erectile function.

Nightly sildenafil to preserve erectile function after radiotherapy for prostate cancer

n=27
Brachytherapy, external-beam radiotherapy
Daily 50mg sildenafil, placebo controlled
6 months treatment
Evaluation 24 months

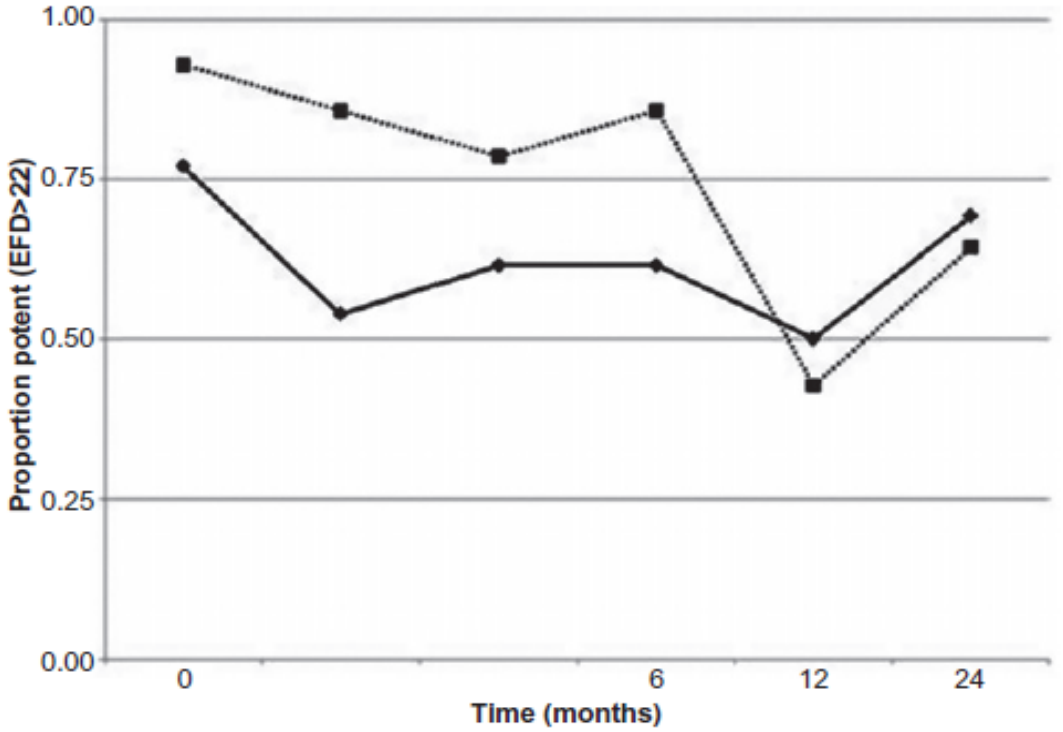


Fig. 2. Proportion of patients with 'good erectile function'. —●—, Placebo; ···■···, Sildenafil.

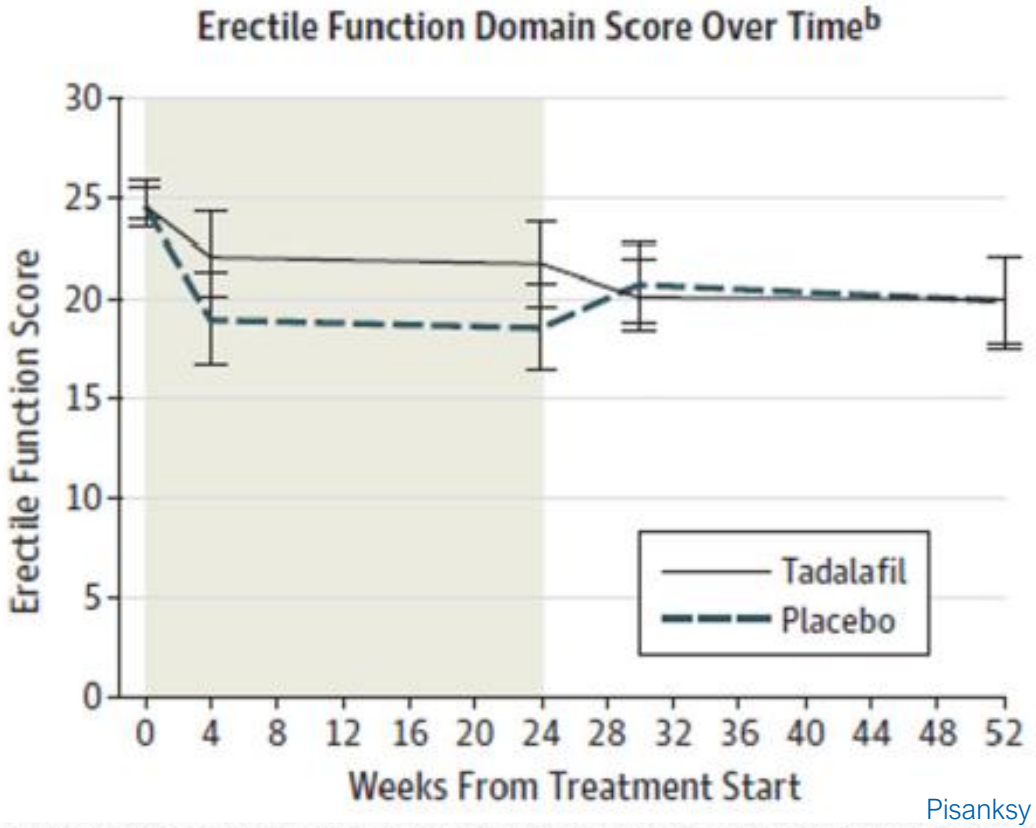
Table 3. Proportion of 'good' erectile function across intervention groups and time

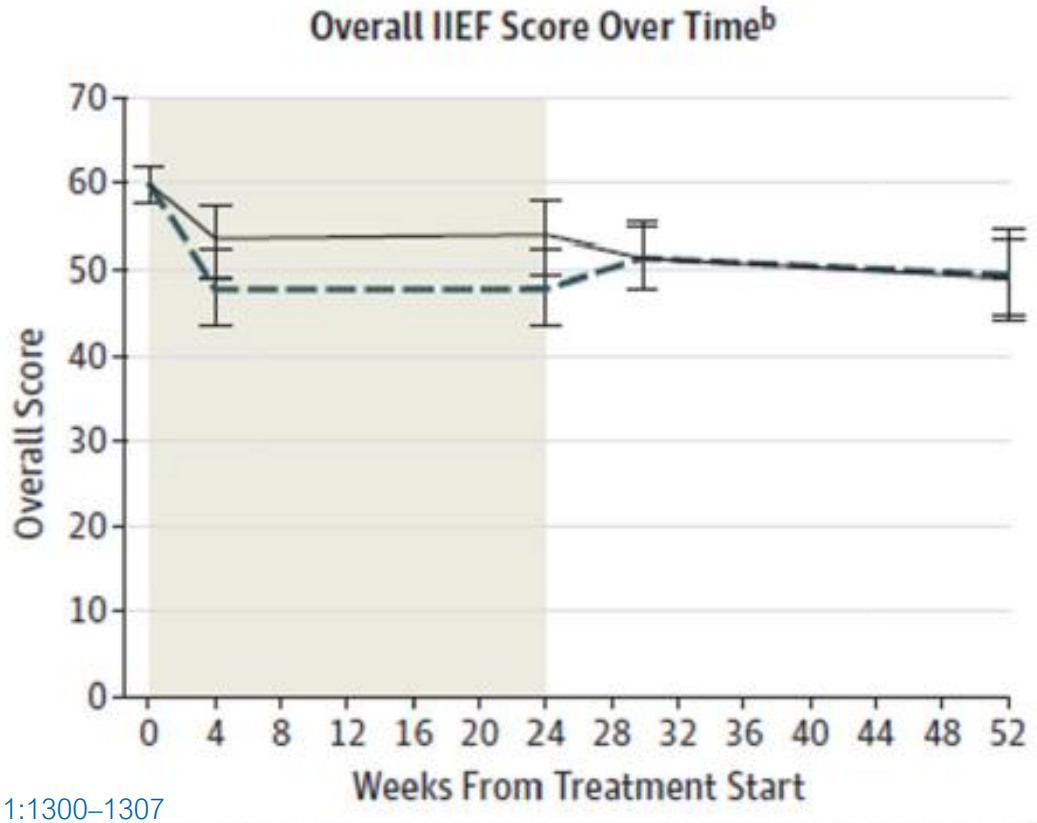
	Sildenafil citrate (n = 14) (%)	Placebo (n = 13) (%)	P-value
EFD measure			
Baseline	92.9	76.9	0.32
4 weeks	85.7	53.8	0.10
12 weeks	78.6	61.5	0.41
24 weeks	85.7	61.5	0.20
1 year	42.9	50.0	0.99
2 years	64.3	69.2	0.99

Ilic D et al. J Med Imaging Radiat Oncol 2013;57:81–88

Tadalafil for prevention of erectile dysfunction after radiotherapy for prostate cancer

n=221
Brachytherapy, external-beam radiotherapy No ADT
Daily 5mg tadalafil, placebo controlled
6 months treatment
Evaluation 12 months





Pisanksy TM et al. JAMA 2014;311:1300–1307

Prophylactic sildenafil in men treated with radiotherapy for prostate cancer

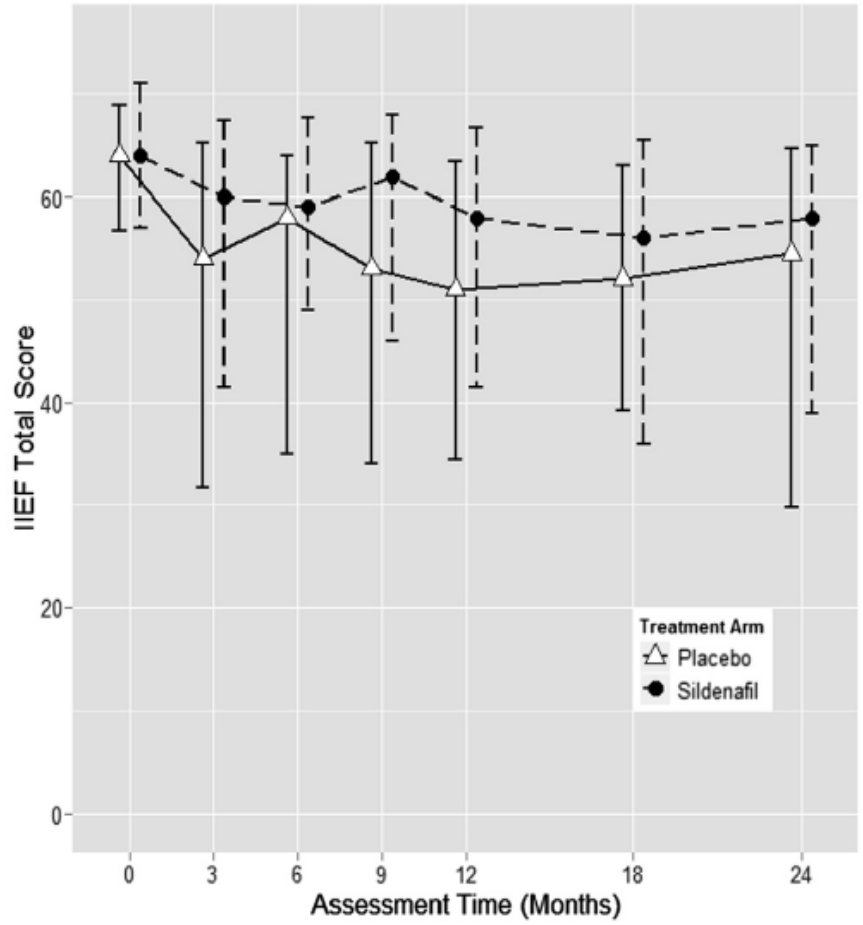


Figure 1. Median IIEF scores and IQR by assigned arms during 2-year study period in patients without ADT.

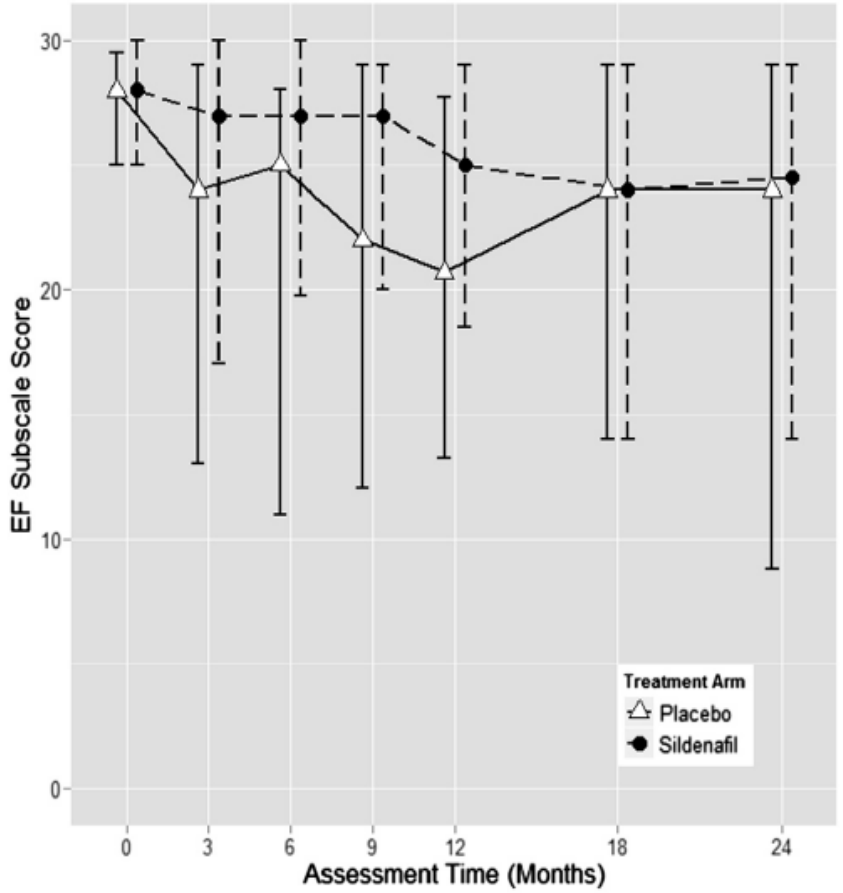
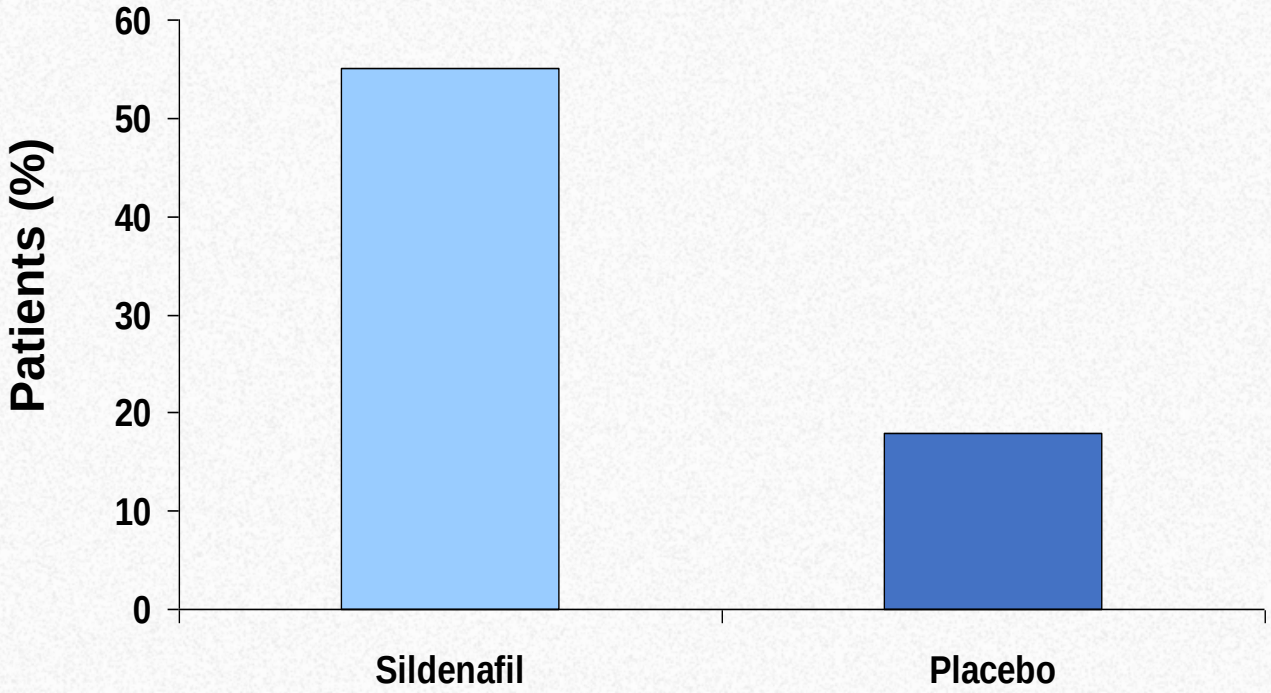


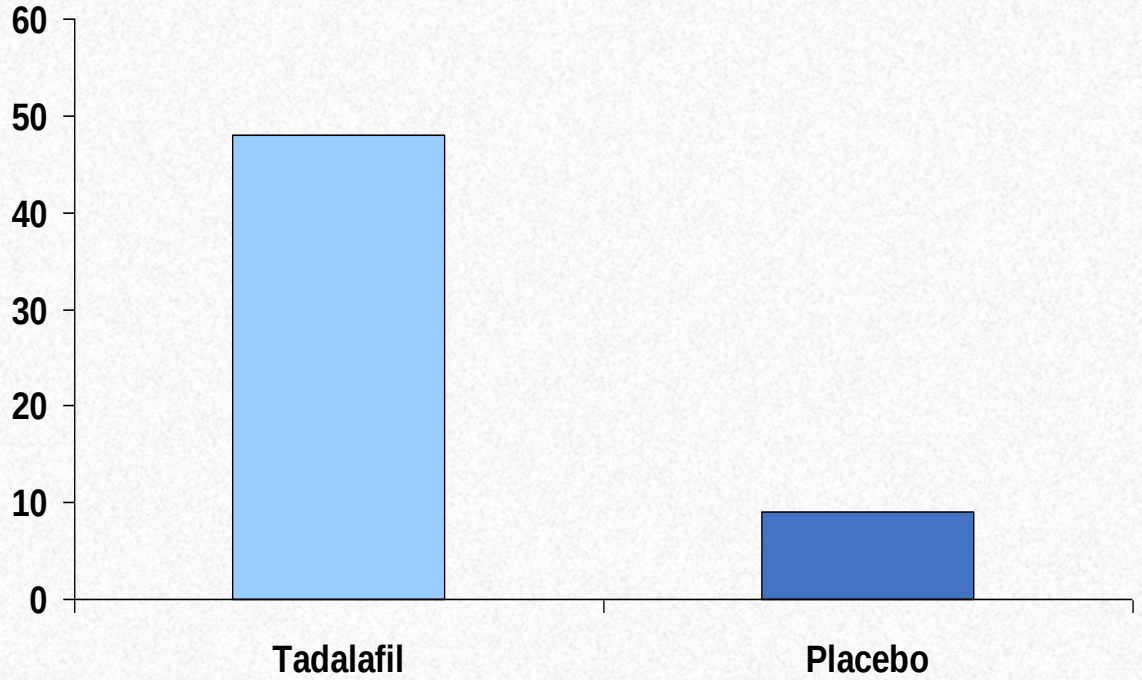
Figure 2. Median EF and IQR by assigned arms during 2-year study period in patients without ADT.

n= 202
Brachytherapy, external-beam radiotherapy, or both, ADT
Daily 50mg sildenafil, placebo controlled
6 months treatment
Evaluation 12-24 months

Zelefsky MJ et al. J Urol 2014;192:868-874

Sildenafil and Tadalafil after Radiotherapy for Prostate Cancer - Successful intercourse attempts





Incrocci et al. Int J Radiat Oncol Biol Phys 2001;51:1190-95

Incrocci et al. Int J Radiat Oncol Biol Phys 2006;66:439-44

Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel

Statement 6

- Patients and partners should be counseled that after prostate cancer therapies, most patients do not return to their pre-treatment erectile function levels (Strong Recommendation; Evidence Strength Grade B).

Wittmann D, Mehta A, McCaughan E, Faraday M, Duby A, Matthew A, Incrocci L, Burnett A, Nelson CJ, Elliott S, Koontz BF, Bober SL, McLeod D, Capogrosso P, Yap T, Higano C, Loeb S, Capellari E, Glodé M, Goltz H, Howell D, Kirby M, Bennett N, Trost L, Odiyo Ouma P, Wang R, Salter C, Skolarus TA, McPhail J, McPhail S, Brandon J, Northouse LL, Paich K, Pollack CE, Shifferd J, Erickson K, Mulhall JP. Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel. J Sex Med 2022;19:1655–1669

Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel

Statement 13

- Patients and partners should be counseled regarding the diverse impacts of androgen deprivation therapy (ADT) (as a primary or as an adjuvant therapy) on sexual desire, erectile function, penile girth and length, ejaculatory function, orgasmic function and couples' intimacy (Strong Recommendation; Evidence Strength Grade C).

Wittmann D, Mehta A, McCaughan E, Faraday M, Duby A, Matthew A, Incrocci L, Burnett A, Nelson CJ, Elliott S, Koontz BF, Bober SL, McLeod D, Capogrosso P, Yap T, Higano C, Loeb S, Capellari E, Glodé M, Goltz H, Howell D, Kirby M, Bennett N, Trost L, Odiyo Ouma P, Wang R, Salter C, Skolarus TA, McPhail J, McPhail S, Brandon J, Northouse LL, Paich K, Pollack CE, Shifferd J, Erickson K, Mulhall JP. Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel. J Sex Med 2022;19:1655–1669

Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel

Statement 14

- Patients and partners should be counseled that patients treated with combined ADT and radiotherapy are at risk for the cumulative sexual side effects associated with both ADT and radiotherapy (Strong Recommendation, Evidence Strength Grade C).

Wittmann D, Mehta A, McCaughan E, Faraday M, Duby A, Matthew A, Incrocci L, Burnett A, Nelson CJ, Elliott S, Koontz BF, Bober SL, McLeod D, Capogrosso P, Yap T, Higano C, Loeb S, Capellari E, Glodé M, Goltz H, Howell D, Kirby M, Bennett N, Trost L, Odiyo Ouma P, Wang R, Salter C, Skolarus TA, McPhail J, McPhail S, Brandon J, Northouse LL, Paich K, Pollack CE, Shifferd J, Erickson K, Mulhall JP. Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel. J Sex Med 2022;19:1655–1669

Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel

Statement 33

- Clinicians should counsel patients that there is insufficient evidence to determine the benefit of PDE5i use after radiation therapy as a strategy for penile rehabilitation (Conditional Recommendation, Evidence Strength C).

Wittmann D, Mehta A, McCaughan E, Faraday M, Duby A, Matthew A, Incrocci L, Burnett A, Nelson CJ, Elliott S, Koontz BF, Bober SL, McLeod D, Capogrosso P, Yap T, Higano C, Loeb S, Capellari E, Glodé M, Goltz H, Howell D, Kirby M, Bennett N, Trost L, Odiyo Ouma P, Wang R, Salter C, Skolarus TA, McPhail J, McPhail S, Brandon J, Northouse LL, Paich K, Pollack CE, Shifferd J, Erickson K, Mulhall JP. Guidelines for Sexual Health Care for Prostate Cancer Patients: Recommendations of an International Panel. J Sex Med 2022;19:1655–1669

Psychosexual Counseling Strategies

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Consultant in Sexual Medicine
Certified PsychoSexologist
AUBMC - Beirut, Lebanon

Disclosure

- No Conflict of Interests relevant to this presentation

Case #3

- Allen and Judy come into your office having seen both a urologist and a radiation oncologist.
- They are trying to deal with information overload and have not decided on a type of treatment for his localized low stage Pca.

Case #3

- Allen likes the idea of getting the cancer out, while Judy is scared of the surgery and likes radiation.
- How do you get the couple to open up?

How do you get Allen and Judy to open up?

Facilitating Open Communication

- Clinicians should engage both partners in discussions about treatment preferences and concerns.
- Use open-ended questions to explore their emotional responses, fears, and expectations.
- Normalize their concerns by validating both perspectives (Allen's preference for surgery and Judy's fear of it).

📌 Key Recommendation:

Clinicians should use shared decision-making techniques to help couples express their concerns, validate their emotions, and reach an informed treatment decision together.

1Movsas TZ, Yechieli R, Movsas B, et al. Partner's perspective on long-term sexual dysfunction after prostate cancer treatment. Am J Clin Oncol Cancer Clin Trials 2016;39:276–279. 2Wittmann D, He C, Coelho M, et al. Patient preoperative expectations of urinary, bowel, hormonal and sexual functioning do not match actual outcomes 1 year after radical prostatectomy. J Urol 2011;186:494–499. 3 Symon Z, Daignault S, Symon R, et al. Measuring patients' expectations regarding health-related quality-of-life outcomes associated with prostate cancer surgery or radiotherapy. Urology 2006;68:1224–1229. 4Zhou ES, Bober SL, Nekhlyudov L, et al. Physical and emotional health information needs and preferences of long-term prostate cancer survivors. Patient Educ Counsel 2016;99:2049–2054.

Case #3

- While detailed explanations of the options (risks and benefits) were provided, how do you support the couple emotionally during the decision process and beyond?

How do you support the couple emotionally during the decision process and beyond?

Psychosocial Support for Couples

- Decision-making stress can impact intimacy—clinicians should acknowledge the emotional weight of the choice and offer guidance to reduce anxiety.
- Encourage couples counseling or psychoeducational support groups, as they help patients and partners navigate emotions and expectations.
- Address loss and grief related to sexual function early—framing changes in sexuality as a shared journey improves coping.

📌 **Key Recommendation:**

Clinicians should normalize grief as a response to sexual losses and encourage couples to discuss their intimacy concerns together.

1Wittmann D, Foley S, Balon R. A biopsychosocial approach to sexual recovery after prostate cancer surgery: The role of grief and mourning. J Sex Marital Ther 2011;37:130–144. 2Walker LM, Wassersug RJ, Robinson JW. Psychosocial perspectives on sexual recovery after prostate cancer treatment. Nature Rev Urol 2015;12:167–176. 3 Paich K, Dunn RL, Skolarus TA, et al. Preparing patients and partners for recovery from the side effects of prostate cancer surgery: A group approach. Urology 2016;88:36–42. 4 Symon Z, Daignault S, Symon R, et al. Measuring patients' expectations regarding health-related quality-of-life outcomes associated with prostate cancer surgery or radiotherapy. Urology 2006;68:1224–1229.

Case #3

- Are there specific educational tools you use?
- Are there books or websites that can assist couples in their journey?

Are there specific educational tools, books, or websites that can assist couples in their journey?

YES

- **Movember TrueNTH Sexual Recovery Program** (movember.com/sexualhealthguideline) offers **resources for couples** navigating prostate cancer's impact on intimacy.
  - ✓ True North Sex and Intimacy Guide truenorth.movember.com/sex-after-prostate-cancer
  - ✓ Patient Sexual Health Guidelines truenorth.movember.com/images/assets/SexualHealthGuidelines-Patient.pdf
- **MaleCare.org** provides online support communities for men and partners coping with prostate cancer-related sexual changes.
- **Books such as "Intimacy With Impotence**: **The Couple's Guide To Better Sex After Prostate Disease" by Ralph Alterowitz and his wife Barbara Alterowitz** help couples redefine intimacy post-treatment.

📌 **Key Recommendation:**
Clinicians should guide patients and partners to educational resources and online support groups to help navigate post-treatment sexual changes

Case #3

- How soon after their treatment is optimal to start exploring sexual issues?
- Are there “tricks” to get couples to re-engage with physical intimacy?

How soon after treatment should couples start exploring sexual issues?

- **Sexual function should be discussed at every follow-up visit**, even if the patient has not yet resumed sexual activity.
- **Emotional readiness varies**—couples should be encouraged to explore intimacy at their own pace.

📌 **Key Recommendation:**
Clinicians should proactively discuss sexual function **early in follow-up** and encourage gradual re-engagement in intimacy based on comfort levels.

[1]Wittmann D, Foley S, Balon R. A biopsychosocial approach to sexual recovery after prostate cancer surgery: The role of grief and mourning. J Sex Marital Ther 2011;37:130–144. [2]Walker LM, Wassersug RJ, Robinson JW. Psychosocial perspectives on sexual recovery after prostate cancer treatment. Nature Rev Urol 2015;12:167–176. [3] Paich K, Dunn RL, Skolarus TA, et al. Preparing patients and partners for recovery from the side effects of prostate cancer surgery: A group approach. Urology 2016;88:36–42. [4] Symon Z, Daignault S, Symon R, et al. Measuring patients' expectations regarding health-related quality-of-life outcomes associated with prostate cancer surgery or radiotherapy. Urology 2006;68:1224–1229.

Are there “tricks” to get couples to re-engage with physical intimacy?

- **Encourage non-penetrative intimacy** such as mutual touching, sensual massage, and guided relaxation.
- **Cognitive reframing techniques** help shift focus from performance anxiety to pleasurable sensations.
- **Use of lubricants, vibrators, and sexual aids** can help improve stimulation and pleasure.

📌 **Key Recommendation:**
Couples should be encouraged to redefine intimacy beyond penetrative sex, focusing on pleasure and connection rather than function.

1Paich K, Dunn RL, Skolarus TA, et al. Preparing patients and partners for recovery from the side effects of prostate cancer surgery: A group approach. Urology 2016;88:36–42. 2Walker LM, Wassersug RJ, Robinson JW. Psychosocial perspectives on sexual recovery after prostate cancer treatment. Nature Rev Urol 2015;12:167–176. 3 Wittmann D, Mehta A, Northouse LL, et al. TrueNTH sexual recovery study protocol: a multi-institutional collaborative approach to developing and testing a web-based intervention for couples coping with the side-effects of prostate cancer treatment in a randomized controlled trial. BMC Cancer 2017;17:1–13. 4Schover LR, Canada AL, Yuan Y, et al. A randomized trial of internet-based vs traditional sexual counseling for couples after localized prostate cancer treatment. Cancer 2012;118:500–509.

Case #3

- How do you explain how sex will change after treatment?
- Loss of ejaculation, change in shape of the penis, length loss, rigidity loss etc…

How do you explain how sex will change after treatment?

Honestly but with EMPATHY

- **Patients and partners should be counseled that after PCT, most patients do not return to their pre-treatment erectile function.**
- **Sexual changes** (ejaculation loss, penile shape changes, reduced rigidity) should be discussed early, with **realistic expectations** and adaptation strategies.
- Clinicians should refer patients, partners, and couples for whom education and support are insufficient for specialty **psychosexual treatment.**

📌**Key Recommendation:**

Patients and partners should be informed that sex after treatment may look different, but pleasure and intimacy are still possible with the right support and adjustments.

1Movsas TZ, Yechieli R, Movsas B, et al. Partner's perspective on long-term sexual dysfunction after prostate cancer treatment. Am J Clin Oncol Cancer Clin Trials 2016;39:276–279. 2Wittmann D, He C, Coelho M, et al. Patient preoperative expectations of urinary, bowel, hormonal and sexual functioning do not match actual outcomes 1 year after radical prostatectomy. J Urol 2011;186:494–499. 3 Symon Z, Daignault S, Symon R, et al. Measuring patients' expectations regarding health-related quality-of-life outcomes associated with prostate cancer surgery or radiotherapy. Urology 2006;68:1224–1229. 4Zhou ES, Bober SL, Nekhlyudov L, et al. Physical and emotional health information needs and preferences of long-term prostate cancer survivors. Patient Educ Counsel 2016;99:2049–2054. 5Wittmann D, Foley S, Balon R. A biopsychosocial approach to sexual recovery after prostate cancer surgery: The role of grief and mourning. J Sex Marital Ther 2011;37:130–144.

THANK YOU

Summary of the presentations

1) Use of the Guidelines
2) Patient educational tools
3) Evidenced based information
4) Honesty about outcomes

SUMMARY OF GUIDELINES STATEMENTS

Sexual Health Care for Prostate Cancer Patients

MOVEMBER®

Pre-treatment Education and Assessment

Patient and partner education about the impact of PCa therapies on sexuality, realistic expectations of outcomes rehabilitation strategies and emotional response.

STATEMENTS #1, 2, 3, 7

Patient and partner education about impact of PCa therapies on sexual function and mitigation strategies, fertility and preservation strategies.

STATEMENTS #4, 5, 6, 8-16, 21

Baseline patient reported outcomes (PRO) evaluation of patient and partner sexual function, sexual distress, couple coping.

STATEMENTS #20

Fertility Preservation, Prostate Cancer Therapy

Post-treatment Biopsychosocial Assessment

Routine recurring assessment of patient sexual side-effects, patient and partner response to sexual side-effects of PCa therapies, couple coping, relationship.

STATEMENTS #17-19

Recurring PRO evaluation of patient and partner sexual function, sexual distress, couple coping.

STATEMENTS #20

Biopsychosocial diagnosis

All care is respectful of cultural, racial ethnic differences, sexual orientation and gender identity.

STATEMENTS #22-25

Post-treatment Biopsychosocial Management

Penile rehabilitation treatments for ED.

STATEMENTS #28-36

Treatment for orgasmic dysfunction and climacturia.

STATEMENTS # 37 - 40

Testosterone supplementation

STATEMENTS # 41 - 42

Exercise

#43

Psychosexual support for patient and partner who are coping well or moderately well.

STATEMENTS # 22 - 24

Individual sex therapy for patient who is not coping well, experiencing loss of masculinity, sexual confidence.

STATEMENT # 26

Couple sex therapy for couples who are not coping well, experience anxiety or conflict re sexual adjustment, for whom psychosexual support is insufficient.

STATEMENT # 26

Referral to group or online/digital interventions as appropriate/available.

STATEMENT # 27

Questions?

Help us improve!

Share your feedback on this session by scanning the QR code for a quick survey.

THANK YOU