

Radical Prostatectomy Versus Stereotactic Radiotherapy for Clinically Localised Prostate Cancer: Results of the PACE-A Randomised Trial

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Original Article

Radical Prostatectomy Versus Stereotactic Radiotherapy for Clinically Localised Prostate Cancer: Results of the PACE-A Randomised Trial

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The Dilemma in Localised Prostate

- Multiple t/t options: surgery, RT (including SBRT), and active surveillance
- The ProtecT trial showed similar OS across these strategies, highlighting the importance of patient-led decision-making based on QoL/ side effect profiles
- Historically, RT has been associated with better urinary/sexual outcomes than prostatectomy but with higher bowel toxicity risk; however, this lacked confirmation in randomised settings with modern techniques
- **Objective of PACE-A:** To compare patient-reported HRQoL after SBRT vs prostatectomy in men with low- to intermediate-risk LPCa

PACE-A Trial - Overview

- **Study Design:** A phase 3, open-label, randomized controlled trial
- **Participants:** Men with low- to intermediate-risk localized prostate cancer randomized 1:1 to SBRT or prostatectomy. ADT was not permitted
- **Randomization:** 123 men (60 prostatectomy, 63 SBRT) from Aug 2012 to Feb 2022
- Median Follow-up: 60.7 months
- **Patient Profile:** Median age 65.5 years, median PSA 7.9 ng/ml; 94% had NCCN intermediate-risk disease
- **Treatments Received:** 50 underwent prostatectomy, 60 received SBRT

Methods - What Was Measured?

- **Co-primary Outcomes (at 2 years):**

- Number of absorbent urinary pads required daily (EPIC-26)
- Bowel domain score (EPIC-26)

- **Secondary Endpoints:**

- Clinician-reported toxicity
- Sexual functioning (IIEF-5, EPIC-26)
- Other Patient-Reported Outcomes (PROs) including IPSS, Vaizey faecal incontinence score

- **SBRT Details:** 36.25 Gy in 5 fractions to PTV, 40 Gy to CTV

- **Prostatectomy:** Predominantly robotic-assisted (84%)

Key Results - Urinary Function at 2 Years

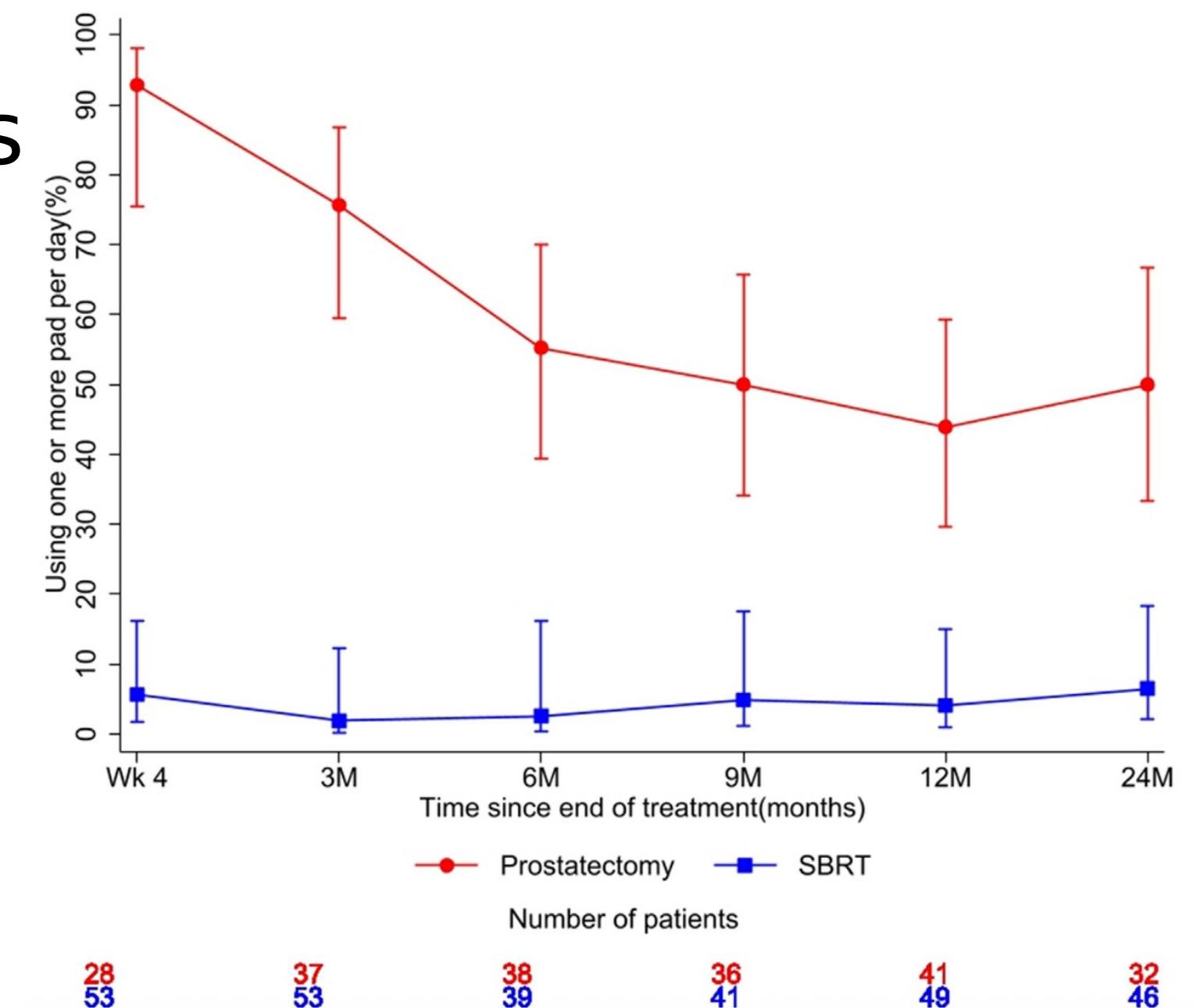
- **Urinary Pad Use:**

- Prostatectomy: 50% (16/32) used ≥ 1 pads daily vs 6.5% with SBRT ($p < 0.001$)

- **EPIC Urinary Incontinence Scores:** Worse for prostatectomy (median 77.3) vs. SBRT (median 100) ($p = 0.003$)

- **Urinary Irritative/Obstructive Scores:** Slightly worse for SBRT (median 93.8) vs. prostatectomy (median 100) ($p = 0.01$)

- **Overall Urinary Bother:** No significant difference in moderate/severe problems



Key Results - Bowel Function at 2

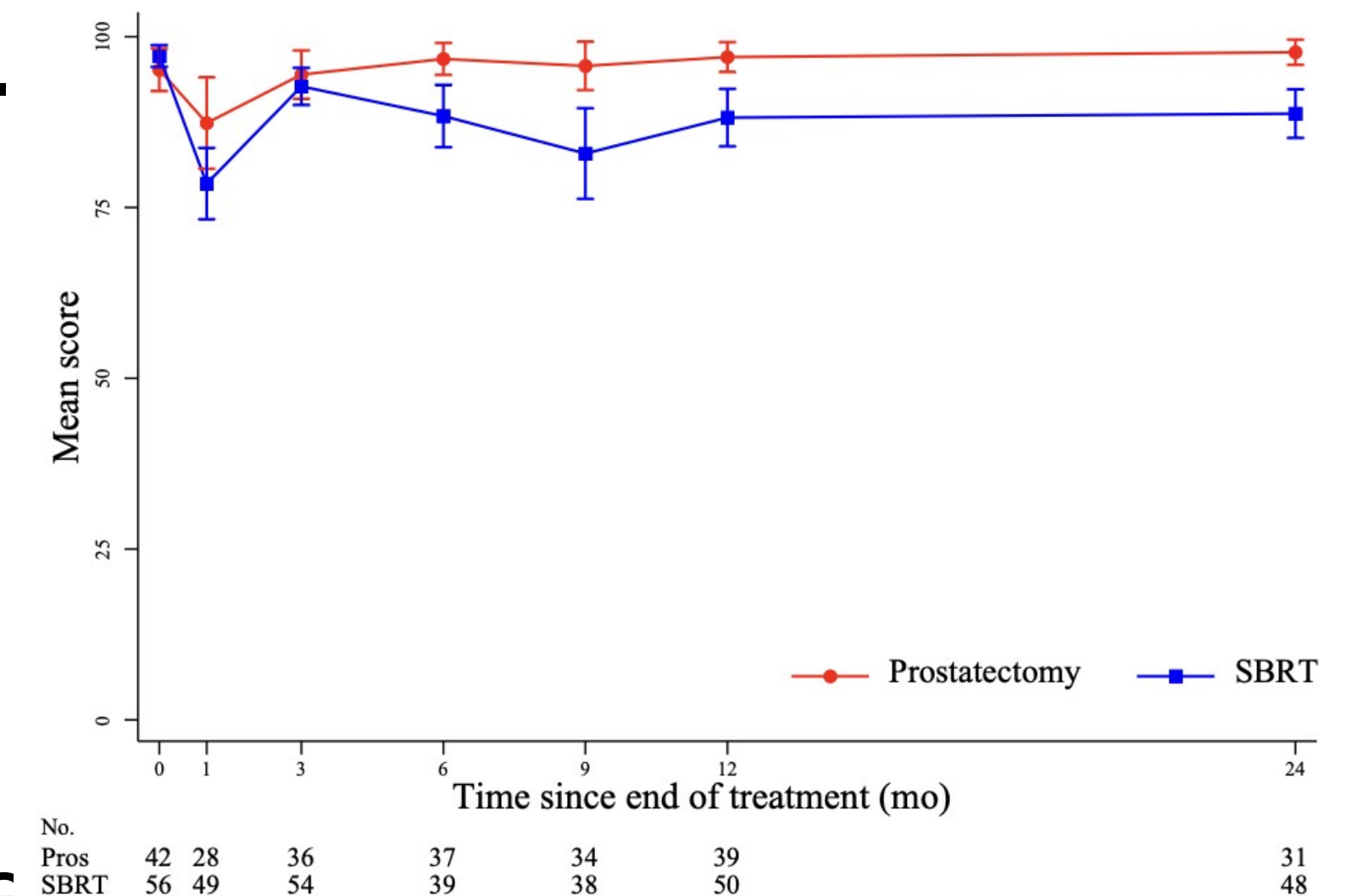
- **EPIC Bowel Domain Scores:**

- Prostatectomy: Better scores (median 100) vs. SBRT (median 87.5) ($p < 0.001$)

- **Clinically Important Worsening:** 45% in SBRT group had a reduction from baseline bowel scores $>$ MCID vs. 14% in prostatectomy ($p < 0.001$)

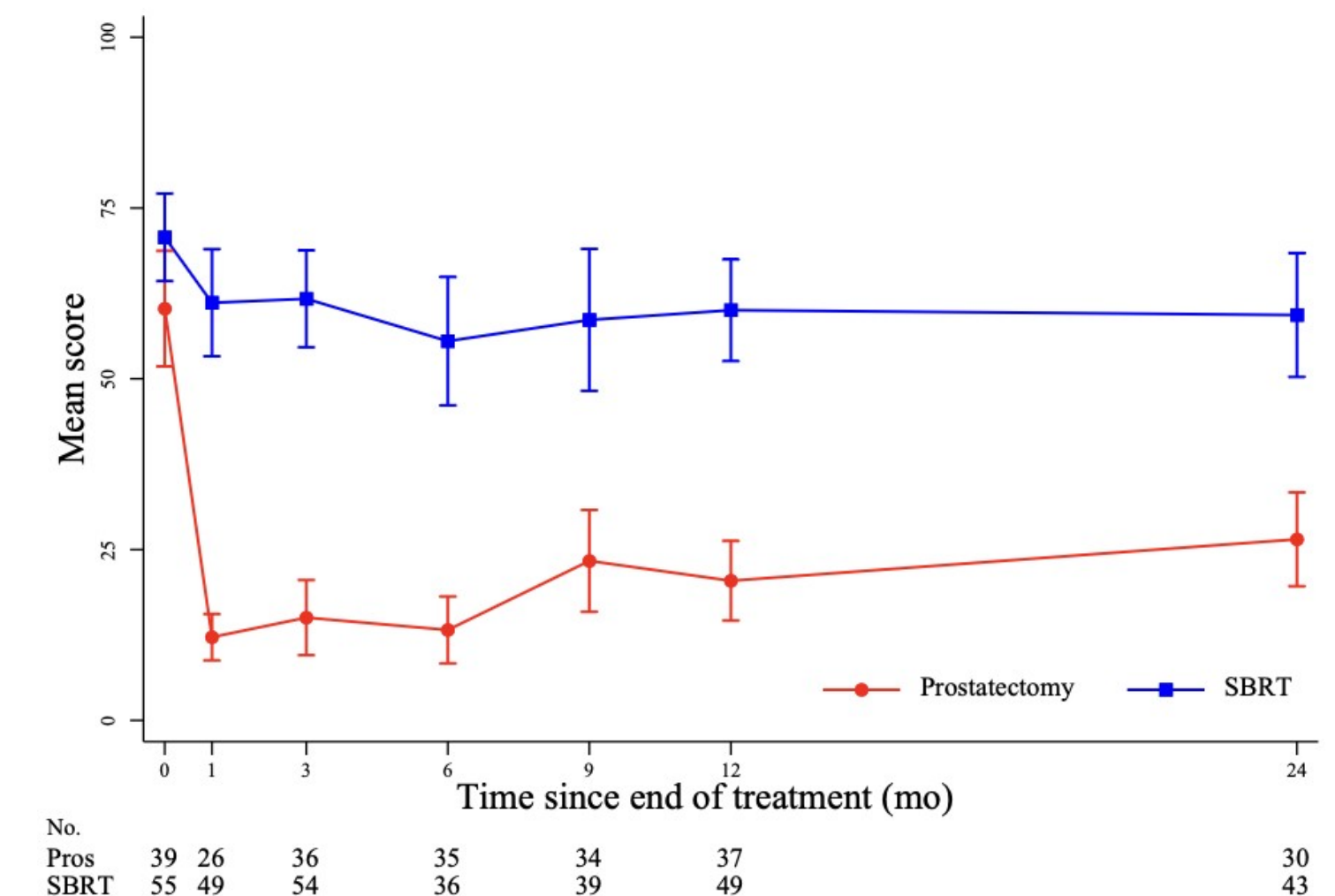
- **Overall Bowel Bother:** No significant difference in moderate/severe problems

- **Vaizey Incontinence Scores:** No significant difference



Key Results - Sexual Function at 2

- **EPIC Sexual Domain Scores:** Worse (median 18) with prostatectomy vs SBRT (median 62.5) ($p < 0.001$)
- **Clinically Important Worsening:** 75% in Sx group reported a reduction from baseline sexual scores $>$ MCID vs. 48% in SBRT
- **Overall Sexual Bother** (Moderate/Severe Problems): Prostatectomy: 33% (10/30) vs SBRT: 18% (8/45) ($p=0.1$)
- **IIEF-5 (Erectile Dysfunction):** Worse in prostatectomy ($p=0.002$).
- **Clinician-Reported Erectile Dysfunction (Grade ≥ 2):** Consistently worse in prostatectomy (63%) vs. SBRT (18%) at 4 months ($p<0.001$)



Limitations of the PACE-A Trial

- **Slow Recruitment & Sample Size:** Trial stopped before reaching target accrual, though the impact on co-primary endpoint was mitigated by a higher-than-expected event rate in the prostatectomy arm
- **Incomplete 2-year PRO Response Rates:** 68% for Sx and 82% for SBRT
 - Sensitivity analyses imputing 3-yr data for missing 2-yr data showed consistent results for co-primary endpoints.
- **Differential Dropout:** Some patients did not receive their allocated treatment, which may have introduced bias

Conclusions from PACE-A

- SBRT was associated with:
 - Less patient-reported urinary incontinence
 - Less patient-reported sexual dysfunction
 - Slightly more bowel bother compared to prostatectomy
- Overall serious bowel and incontinence symptoms were uncommon in both arms
- These randomized data are crucial for informing treatment decision-making for patients with localized, intermediate-risk prostate cancer, helping them choose treatments that align with individual QoL priorities

- **Focus on Patient-Centred Care:** choice isn't just about cancer control but about the quality of that survival
- **Nuances in Toxicity:**
 - High pad use in prostatectomy arm (50%) is a significant QoL factor - aligns with PIVOT and LAPPRO results.
 - SBRT: "slightly more bowel bother" needs careful discussion - while statistically significant, is it clinically relevant?
- **Future Research:** Longer-term outcomes/ Perirectal spacers/ Cost-effectiveness analysis
- **The Takeaway Message:** It's not about SBRT being "better" than surgery or vice-versa, but about which treatment better aligns with an individual patient's priorities

thank you