

## BACKGROUND

- Prostate cancer (PCa) therapies, including radiation therapy (RT) and radical prostatectomy (RP), are associated with complications like erectile dysfunction (ED) and/or urinary incontinence (UI), which may require surgical care.
- The association between patient socioeconomic status and the receipt of surgical interventions for these complications has been underreported in literature.

## OBJECTIVE

To determine how median household income (MHI) is associated with the receipt of UI and/or ED surgical treatment in PCa survivors.

## METHODS

- A retrospective cohort study was performed using PCa patients who underwent RP and/or RT, and who subsequently developed UI and/or ED between 2015 and 2021.
- Patients were identified from the Medicare Standard Analytical Files (SAF) and grouped into 4 cohorts (**Figures 1-2**): RT-ED (n=8,358), RP-ED (n=11,567), RT-UI (n=5,329), and RP-UI (n=12,100).
- County-level median household income (MHI) estimates were extracted from the United States Census Bureau SAIPE dataset, and cross-referenced with SAF patient county codes to classify patients into income quartiles: Q1 (<\$47,903), Q2 (\$47,903 – \$55,310), Q3 (\$55,311 – \$64,309), and Q4 (>\$64,309).
- Rate of surgical care (penile prosthesis for ED, artificial sphincter or male sling for UI) per 100 person-years was calculated and compared across income quartiles.

## RESULTS

- The surgical care rate was highest within the lowest (Q1) income quartile in all cohorts except RT-UI, where it was highest among Q2 patients (**Table 1**). A log rank test revealed a statistically significant difference in surgical care rates within the RP-ED cohort.
- Median time from index treatment to post-treatment complication diagnosis was lowest in the Q1 patients within the RT cohorts and in the Q2 patients within the RP cohorts.
- Similarly, median time to surgical care from complication diagnosis was lowest among Q1 patients in all cohorts, except in the RP-ED cohort, where it was lowest among Q4 patients.

Figure 1. Eligible Patient Flowchart - ED

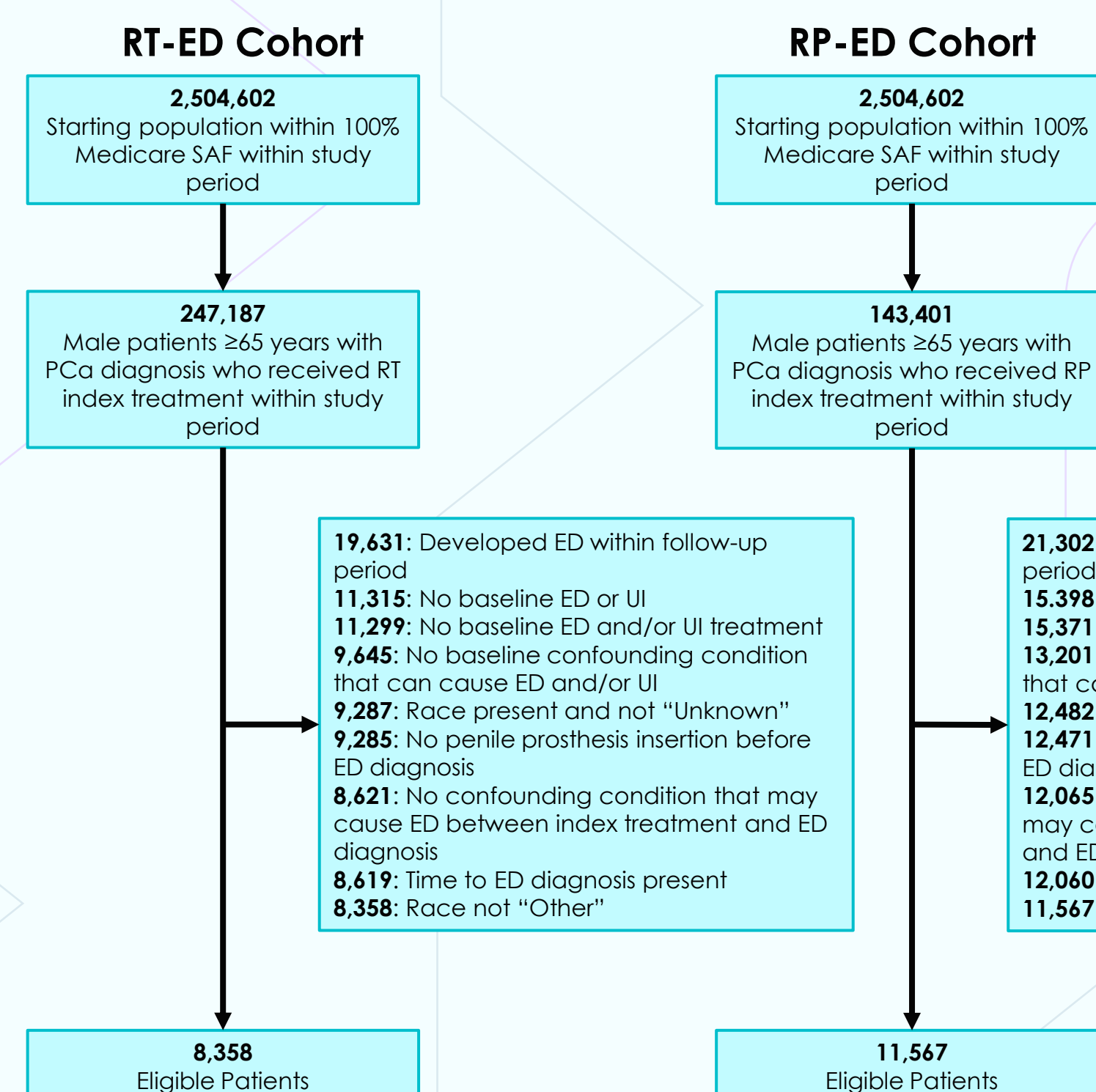


Figure 2. Eligible Patient Flowchart - UI

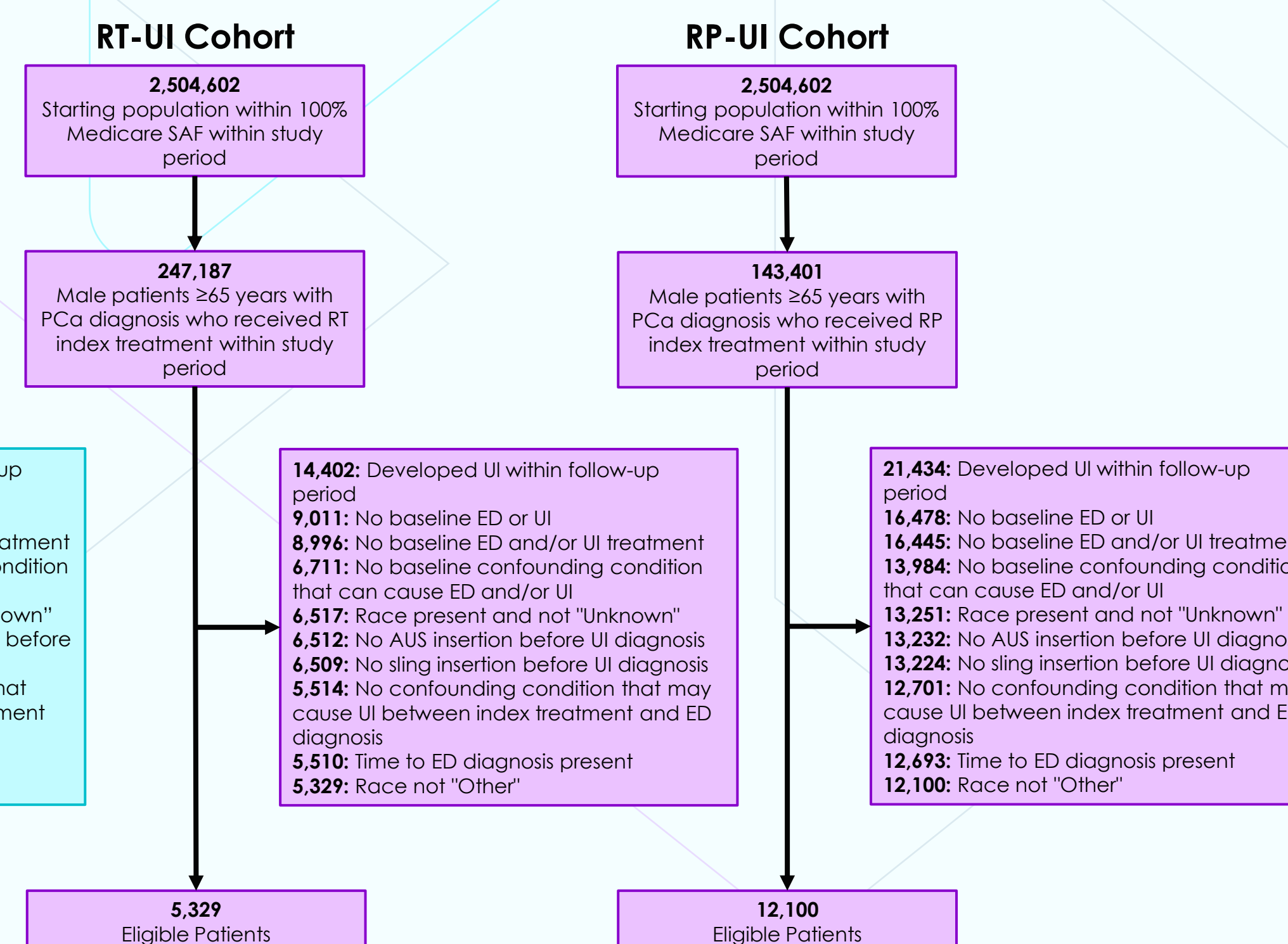


Table 1. Effect of MHI on Surgical Care for Post-Prostate Cancer Treatment Complications

	Cohorts			
	RT-ED	RP-ED	RT-UI	RP-UI
Sample size	8,358	11,567	5,329	12,100
Rate of surgical care per 100 person-years (95% confidence interval)				
Overall	1.54 (1.37-1.73)	3.07 (2.87-3.28)	3.61 (3.25-4.01)	6.98 (6.67-7.30)
Q1 (<\$47,903)	2.01 (1.45-2.80)	4.19 (3.38-5.21)	3.09 (2.17-4.41)	7.59 (6.52-8.85)
Q2 (\$47,903-\$55,310)	1.74 (1.34-2.25)	2.58 (2.16-3.09)	4.13 (3.26-5.24)	6.50 (5.80-7.29)
Q3 (\$55,311-\$64,309)	1.50 (1.17-1.93)	3.08 (2.69-3.53)	3.65 (2.92-4.56)	7.10 (6.49-7.78)
Q4 (>\$64,309)	1.40 (1.18-1.66)	3.05 (2.78-3.35)	3.52 (3.03-4.09)	6.95 (6.53-7.41)
p-value	0.16936	0.015305*	0.47283	0.62415

\*Statistically significant at  $p \leq 0.05$ 

## CONCLUSIONS

- Lower MHI was associated with higher rates of, and shorter time to receipt of, surgical care for post-PCa treatment complications.
- Patients with a higher MHI may be able to access non-invasive treatment options, such as vacuum erection devices, vasoactive intracorporeal injections, and intraurethral suppositories, which are not covered by Medicare and may therefore be inaccessible to patients with lower financial means.
- Similarly, these results could reflect the impact of increased access to UI and ED surgical care afforded by Medicare.

## LIMITATIONS

- The use of geographical MHI figures as a proxy for patient income level may not accurately reflect individual income status for each patient included in the study.
- This study was limited to Medicare patients, thereby excluding younger (<65 years) PCa patients.
- Claims data is subject to inherent limitations such as coding errors and inaccuracies.

## DISCLOSURES

This study was funded by Boston Scientific, Marlborough, MA. Sirikan Rojanasarot and Alysha McGovern are full-time employees of Boston Scientific. Arthur Burnett is a consultant and advisor to Boston Scientific. Oluwafolajimi Adesanya has no conflicts of interest to disclose.