



Neoadjuvant Androgen Deprivation Therapy before Robotic Radical Prostatectomy

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Background

- **Radical prostatectomy** – a standard management for localized prostate cancer
- **Neoadjuvant +/- adjuvant ADT** – part of standard radiotherapy management for intermediate or high-risk prostate cancer, its role in prostatectomy is less established
- **No demonstrated benefit on patient survival**
Concern on use of ADT increasing intraoperative difficulty
- Surgical treatment for prostatectomy is delayed in COVID-19
- **Short course of ADT is given** prior to surgery to decrease stress and fear about delay in definitive treatment
- This study uses these groups of patients to assess whether neoadjuvant ADT would affect **perioperative outcomes** of our patients

Objective

To compare the **operative outcomes** of men who received **neoadjuvant androgen deprivation therapy** (ADT) before radical prostatectomy against those who did not

Method

- **Patient Recruited: 265 men** with localized prostate cancer underwent robotic radical prostatectomy from 2018-2023
- | | |
|-----------------------------|------------------------|
| Received Neoadj. ADT (n=28) | NO Neoadj. ADT (n=237) |
|-----------------------------|------------------------|
- **Perioperative outcomes** of men with / without neoadj. ADT
 - **Primary outcome:**
 - **Operation time** of robotic radical prostatectomy
 - **Secondary outcomes:**
 - **Perioperative outcomes**
 - Blood loss, Bladder neck reconstruction, etc.
 - **Functional outcomes**
 - Incontinence rate at 3 months and 1 year
 - **Pathological outcomes**
 - Margin positive rate, Detectable PSA at 12 months

Result

- Mean duration of neoadj. ADT: 3.8 months
- Baseline characteristics of the two groups

	Neoadjuvant ADT (n=28)	No neoadjuvant ADT (n=237)
Age at diagnosis	67.8	67.2
PSA at diagnosis (ng/mL)	37.3	12.2
Primary Gleason Score	3.60	3.22
Secondary Gleason Score	4.07	3.54
Clinical T2b or above (%)	32.1	7.6
Clinical N positive (%)	3.6	0.4

- Operative outcomes

	Neoadj ADT (n=28)	No neoadj ADT (n=237)	P value
Operation time (mins)	173	190	p=0.215
Blood loss (mL)	298	360	p=0.556
Post operative stay (days)	3.29	3.76	p=0.417
Time to catheter removal (days)	8.68	9.96	p=0.185
Unplanned readmission within 30 days (%)	10.7	16.0	p=0.464
6-month Clavien III-V complication rate (%)	7.10	2.50	p=0.624
Blood transfusion requirement (%)	0	0.01	p=0.055
Bladder neck reconstruction (%)	21.4	28.7	p=0.455
Incontinence at 3 months (%)	75.0	57.8	p=0.065
Incontinence at 1 year (%)	25.0	21.1	p=0.714
Nerve sparing procedure (%)	3.57	48.9	p<0.001
Positive margin rate(%)	42.9	42.6	p=0.689
Detectable PSA at 12 months (%)	25.0	22.4	p=0.694

Conclusion

- Neoadjuvant ADT group had **more locally advanced disease**, but still showed **comparable operative outcomes**
- Neoadjuvant ADT before radical prostatectomy is a **safe and feasible option**, if surgical treatment is expected to be **delayed**