

Henry Ford Health System Henry Ford Health System Scholarly Commons

High Value Care

Medical Education Research Forum 2019

5-2019

Inpatient morbidity and cost of cytoreductive radical prostatectomy in the United States

Marcus Jamil

Henry Ford Health System, mjamil1@hfhs.org

Sohrab Arora

Henry Ford Health System, sarora3@hfhs.org

Akshay Sood

Henry Ford Health System, ASOOD1@hfhs.org

Deepansh Dalela

Henry Ford Health System, ddalela1@hfhs.org

Jacob Keeley

Henry Ford Health System, JKeeley2@hfhs.org

See next page for additional authors

Follow this and additional works at: <https://scholarlycommons.henryford.com/merf2019hvc>

Recommended Citation

Jamil, Marcus; Arora, Sohrab; Sood, Akshay; Dalela, Deepansh; Keeley, Jacob; Rakic, Nikola; Fotouhi, Audrey; Peabody, James O; Menon, Mani; and Abdollah, Firas, "Inpatient morbidity and cost of cytoreductive radical prostatectomy in the United States" (2019). *High Value Care*. 7.

<https://scholarlycommons.henryford.com/merf2019hvc/7>

This Poster is brought to you for free and open access by the Medical Education Research Forum 2019 at Henry Ford Health System Scholarly Commons. It has been accepted for inclusion in High Value Care by an authorized administrator of Henry Ford Health System Scholarly Commons. For more information, please contact acabrer4@hfhs.org.

Authors

Marcus Jamil, Sohrab Arora, Akshay Sood, Deepansh Dalela, Jacob Keeley, Nikola Rakic, Audrey Fotouhi, James O Peabody, Mani Menon, and Firas Abdollah



Inpatient morbidity and cost of cytoreductive radical prostatectomy in the United States

Sohrab Arora¹, Marcus Jamil¹, Akshay Sood¹, Deepansh Dalela¹, Jacob Keeley¹, Nikola Rakic², U Prokopiv, Audrey Fotouhi², James O. Peabody¹, Mani Menon¹, Firas Abdollah¹

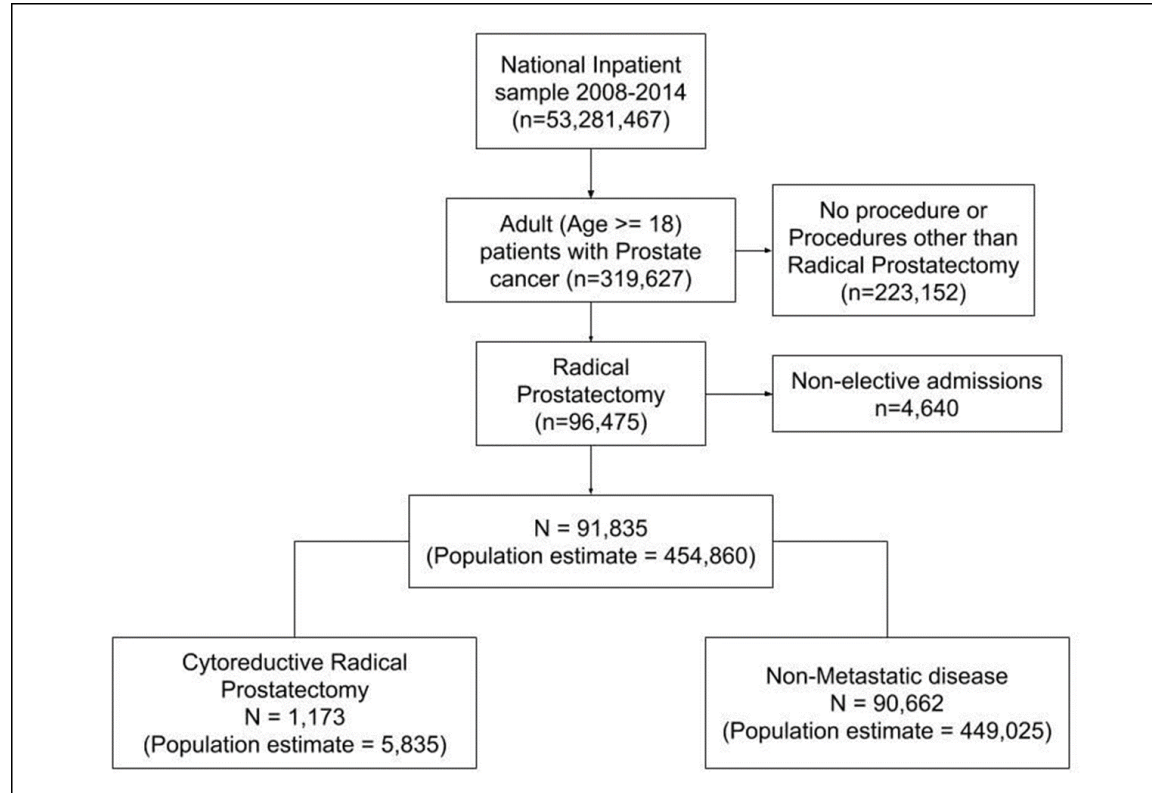
¹ Vattikuti Urology Institute, Henry Ford Hospital, Detroit, MI, USA, ² Wayne State University School of Medicine, Detroit, MI, USA

Introduction

- Metastatic prostate cancer is associated with significant morbidity and poor overall survival.
- Recent analysis of the National Cancer Database showed that local treatment in metastatic prostate cancer may be associated with better 3-year overall survival compared to no local treatment.
- Clinical trials are currently examining the role of primary radiation or radical prostatectomy (RP) in this setting.
- While the safety of RP in localized prostate cancer is proven, few studies have looked at perioperative complication rates and cost of cytoreductive RP at a national level.

Methods

- Database used: Healthcare Cost and Utilization Project National Inpatient Sample (NIS)



Methods

- **Patient cohort:** A total of 91,835 records met inclusion criteria (estimated 454,860 RPs per NIS survey weights). Of these 1,173 had cytoreductive RP (Estimated 5,835 cases).
- **Primary Outcome:** Inpatient complications
- **Secondary outcomes:** In-hospital mortality, individual complications, length of hospital stay, and total cost.
- HCUP cost-to-charge files were used to calculate **total cost**, which was inflation-adjusted to 2014 dollars
- **Covariates:** Age, race, Charlson Comorbidity score, insurance status, rural/semi-urban/urban location, income, hospital location (rural/urban), hospital teaching status, geographical location, and hospital volume

Key results

- Any inpatient complications occurred in 14.9% records; This number was higher in patients undergoing cytoreductive RP [19.1% vs. 14.9% in the nonmetastatic group; $p=0.008$].
- On multivariable analysis, presence of metastasis was an independent predictor for any complications (Odds ratio [Confidence interval] 1.329 [1.077-1.640] $p=0.008$).

Results

Inpatient Complications for Patients with Prostate Cancer Treated with RP

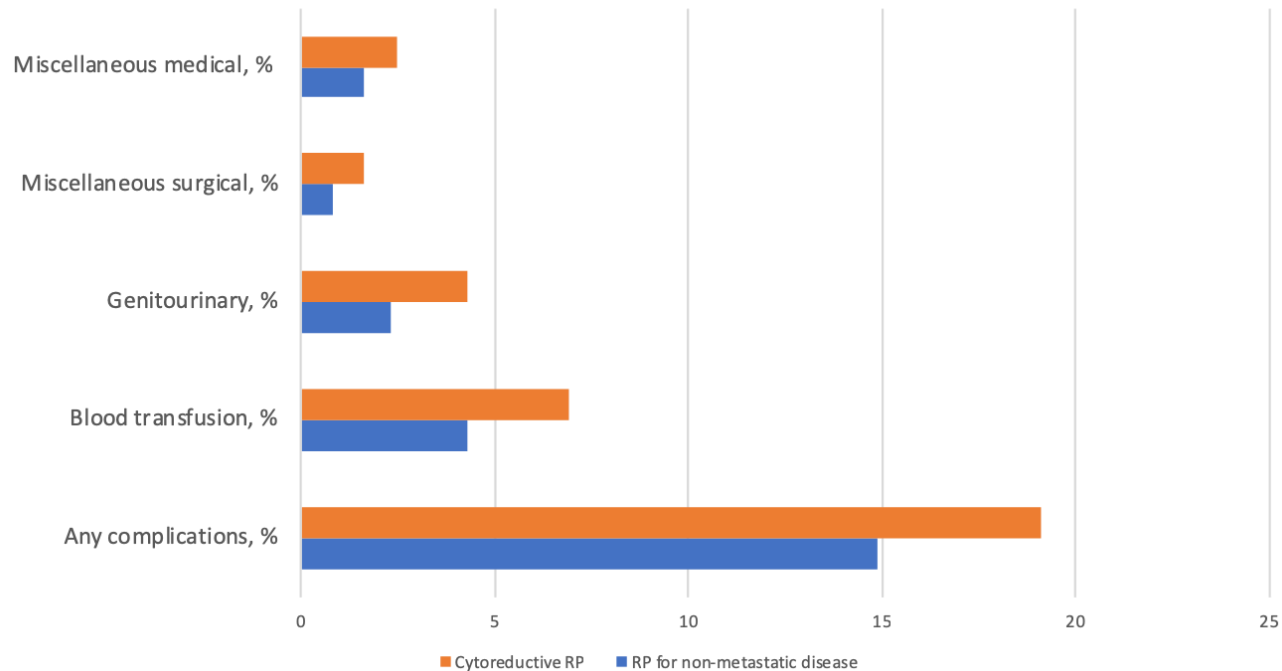


Figure 1: Inpatient complications of 91,835 patients with prostate cancer treated with radical prostatectomy (RP) within the NIS from 2008 to 2014, stratified by the presence of metastatic disease.

Figure 2: Length of hospital stay in days in cytoreductive RP as compared to RP in non-metastatic disease patients

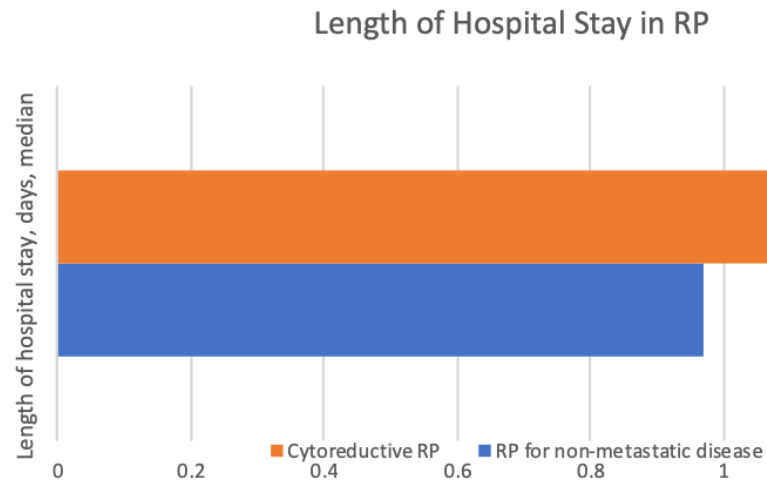
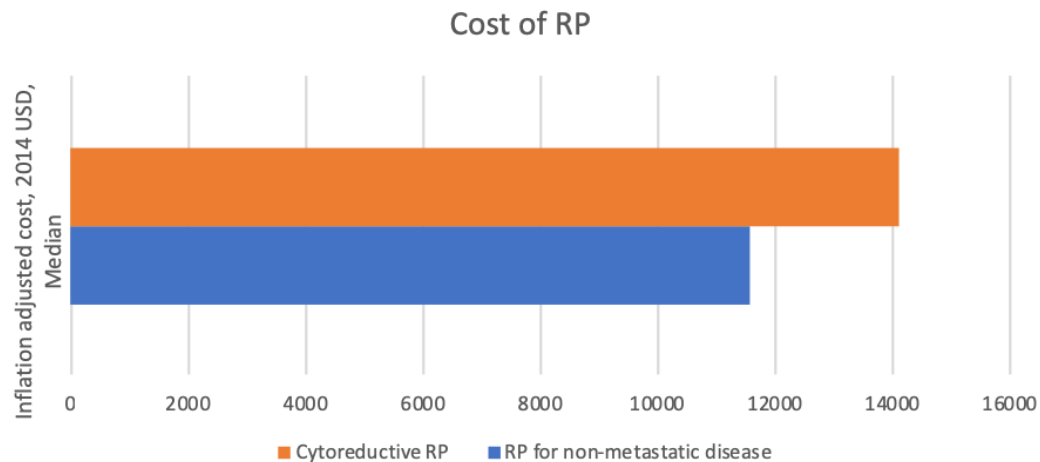


Figure 3: Inflation adjusted cost in USD cytoreductive RP as compared to RP in metastatic disease patients

RP: Radical prost

Conclusion

- cRP is associated with higher inpatient morbidity, longer hospital stay, and higher cost compared to RP for nonmetastatic disease.
- This information may be valuable for informed decision-making in practice and before recruiting patients in clinical trials on this subject.