The Effect of Prostate Cancer Center Proximity on Patient Outcomes and Treatment Type Selection

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ORIGINALITY

Can start from finding the faults in default

Adam Grant (Originals)

BACKGROUND

- Best overall prognoses of any cancer.

- **The earlier prostate cancer is detected, the better the chances of receiving successful treatment and remaining disease-free.**
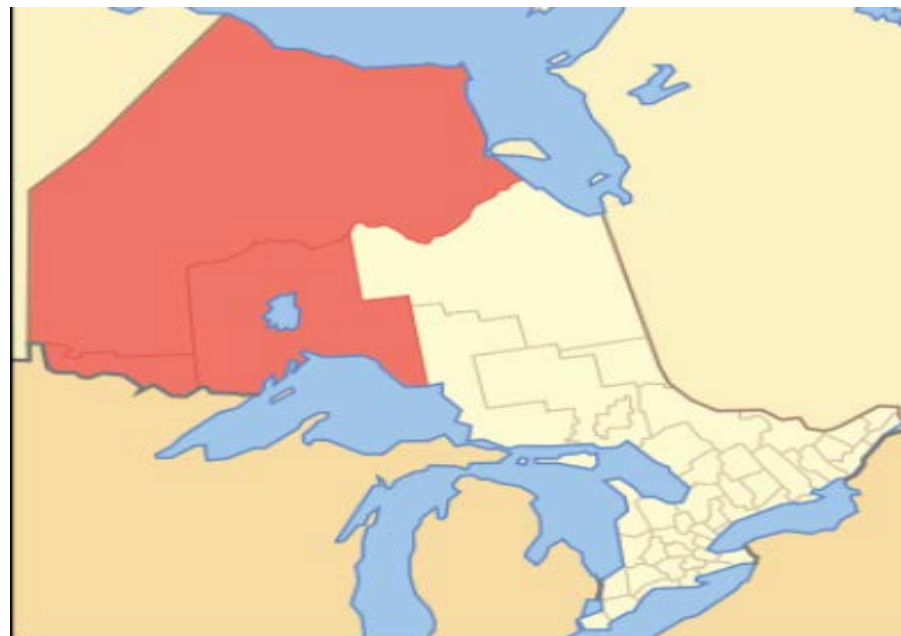
- **Difficult to achieve for patients who live far from major referral centers**

- **Travel and accommodation burden influences patient access to and utilization of health care → a delayed diagnosis/management of cancers.**

Northwestern Ontario

526,417 KM^2

Health Equity is our mission

AIM

To investigate the relationship between the proximity to treatment center and the presentation and treatment choice of patients with prostate cancer

METHODS

- **A retrospective cohort**

- **959 patients with prostate cancer**

- **2010-2017**

- **Groups: above and below 300Km distance from our center**

- **Outcome measures: Gleason score, PSA, clinical stage, pathological staging, and selected treatment modality**

Basic characteristics of patients

Characteristics	Total 959 (100%)	≤300 km 760 (79.2)	> 300 km 199 (20.8)	P-value
Age (Mean±SD)	79.1±17.1	79.3±18.4	78±10.1	0.425
Smoking				0.443
Current	103 (10.7)	86 (11.3)	17 (8.6)	
Never	163 (17.0)	126 (16.6)	37 (1806)	
Previous	319 (33.3)	258 (33.9)	61 (30.6)	
Unknown	374 (39.0)	290 (38.2)	84 (42.2)	
Family history of prostate cancer				0.028
No	420 (43.8)	346 (45.5)	74 (37.2)	
Yes	178 (18.5	144 (19)	34 (17.1)	
Unknown	361 (37.7)	270 (35.5)	91 (45.7)	
Had family Doctor?				0.820
No	109 (11.4)	84 (11.1)	25 (12.5)	
Yes	818 (85.3)	651 (86.6)	167 (84)	
Unknown	32 (3.3)	25 (3.3)	7 (3.5)	
Treatment options				0.001
Prostatectomy	344 (35.9)	298 (39.2)	46 (23.1)	
Radiotherapy	315 (32.9)	237 (31.2)	78 (39.2)	
Hormonal Tx	218 (22.7)	159 (21)	59 (29.6)	
Active Surveillance	82 (8.5)	66 (8.6)	16 (8.1)	

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Clinical differences between population based on distance

Characteristics	≤300 km	> 300 km	P-value
Median PSA (presentation) ng/dl	8.8 (0.4- 2704.0)	13 (2.3- 5901.0)	< 0.0001
Clinical staging n (%) T1c >T1c	 295 (75.4) 96 (24.6)	 43 (69.4) 19 (30.6)	0.30
Gleason score n (%) 6 >6	 144 (21.4) 528 (78.6)	 22 (13.6) 140 (86.4)	0.02
Diagnosis n (%) Localized Metastatic	 625 (84.7) 113 (15.3)	 153 (77.7) 44 (22.3)	0.02
Radical prostatectomy for localized Prostate cancer n (%) Yes No	 340 (54.4) 285 (45.6)	 107 (69.9) 46 (30.1)	< 0.001

Correlation between distance and PSA

Distance		
	Correlation coefficient (r)	P-Value
PSA at diagnosis	0.163	<0.001
Number of positive cores	0.075	0.059

- PSA was found to increase for every Km the patient is away from the urologist.

CONCLUSION

- Distance from urologists and cancer center plays a significant role in the presentation and treatment of prostate cancer.

- PSA was found to increase for every Km the patient is away from the urologist.

- Distance was a factor in the choice of radical prostatectomy compared to radiation likely secondary to the reduction in travelling.

- It is also important that this health care is physically and culturally accessible, however, these specialized healthcare accommodations are challenging to provide for patients who live far from major population centers.

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IMPLICATION

- Establishment of satellite cancer centers to increase access to care for men living in geographically remote areas.

- Furthermore, future cost-effectiveness and feasibility analyses of interventions to improve access to care for patients in geographically or culturally isolated communities are required to develop policies and strategies aligned with equitable healthcare services.

- Already started working on a prostate cancer screening program for remote area esp. Treaty #3 Anishinaabe Nation

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