

# Patterns and Predictors of Attendance at a Comprehensive, Multi-Disciplinary Supportive Care Program for Men with Prostate Cancer and their Partners

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## Background

Men diagnosed with prostate cancer (PC) face treatment-related sequelae that affect their health and quality of life. The **Prostate Cancer Supportive Care (PCSC) Program** is a comprehensive program for men and their partners that aims to address the challenges of decision-making and coping faced by men with PC, their partners and families.

The PCSC Program includes group educational sessions, clinical services and a research program administered in a centralized location. Modules include:

- Introduction to PC and primary treatment options
- Sexual rehabilitation and intimacy
- Lifestyle management (nutrition and exercise)
- Management of the effects of androgen deprivation therapy
- Pelvic floor physiotherapy
- Psycho-oncology

The objectives of this analysis are to

- examine registration rates, and the timing/intensity of follow-up within the PCSC program; and
- explore clinical/sociodemographic factors associated with registration, participation and non-participation.

## Methods

**Subjects:** Men who sought care at the VPC Jan 2012-Dec 2016, including all those who registered with the PCSC program (“registrants”), and a random sample of men who sought PC-related care at the Vancouver Prostate Centre (VPC) but did not register with the program (“non-registrants”). Registrants were further classified as “participants” (attended at least one PCSC information session/clinic visit), or “non-participants” (did not attend).

**Measures and Analyses:** Using data abstracted from electronic medical records, we used multivariate logistic regression to quantify the effect of diagnostic, treatment and sociodemographic characteristics on PCSC program registration and participation. We produced a Kaplan-Meier estimator to assess the probability of program attendance over the disease trajectory for those who registered.

## Results

Figure 1: Study Sample

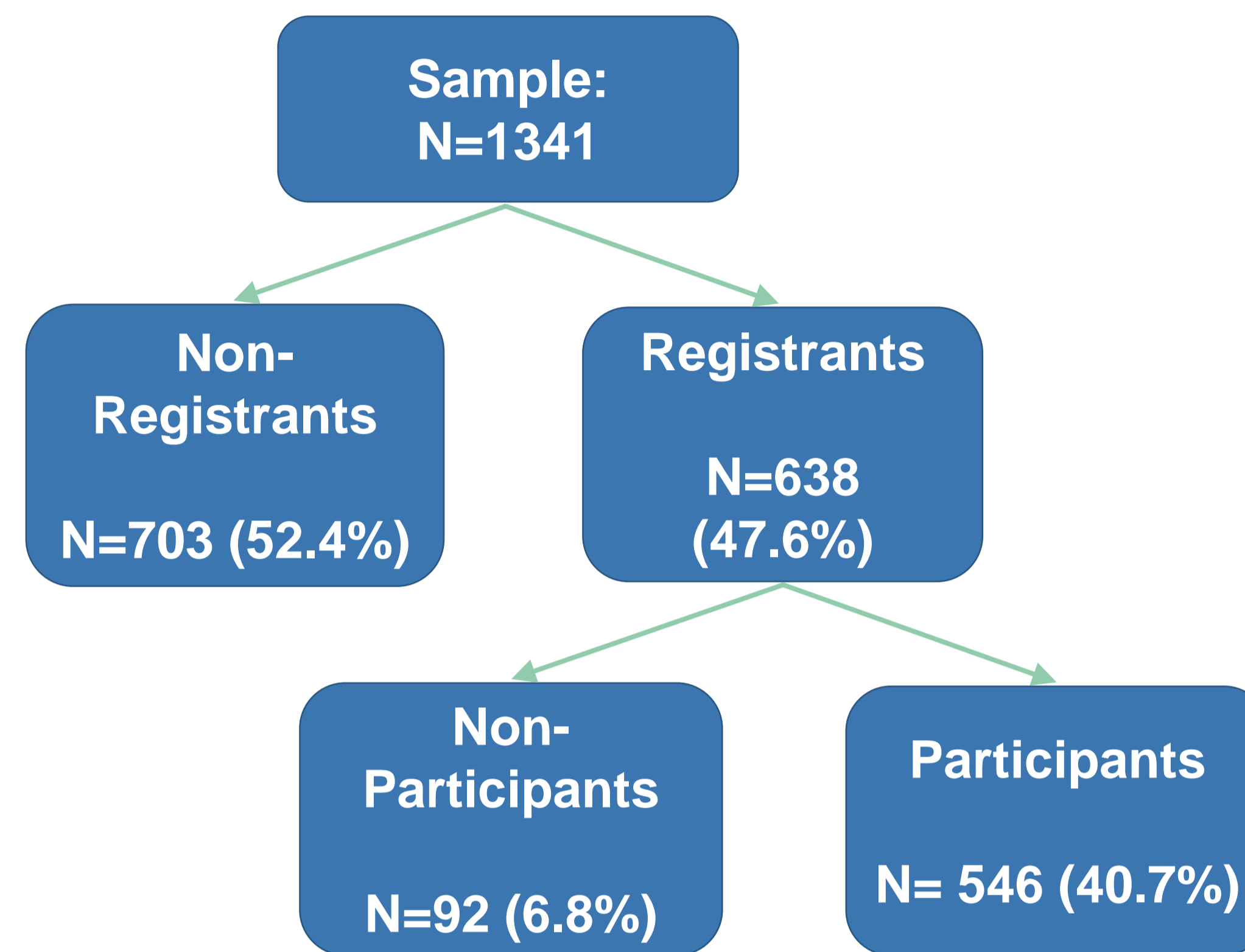


Table 1: Patient Characteristics

	Non-Registrants N=703	Registrants (N=638)	
		Participants (N= 546)	Non-Participants (N= 92)
Age (Mean (SD))*	69.0 (8.8)	66.6 (7.3)	66.5 (7.2)
Age at diagnosis*	66.9 (8.7)	63.8 (7.2)	64.4 (7.4)
Gleason Grade*			
<7	187 (26.7)	107 (19.6)	32 (34.8)
3+4	166 (23.7)	200 (36.6)	23 (25.0)
4+3	94 (13.4)	90 (16.5)	12 (13.0)
8	95 (13.6)	63 (11.5)	12 (13.0)
9-10	159 (22.6)	86 (15.8)	13 (14.2)
Primary Treatment			
Prostatectomy*			
Yes	354 (50.4)	392 (72.5)	48 (52.8)
No	349 (49.6)	149 (27.5)	43 (47.2)
EBRT and/or brachytherapy*			
Yes	96 (13.7)	53 (9.8)	5 (5.5)
No	607 (86.3)	487 (90.2)	86 (94.5)
ADT*			
Yes	149 (21.2)	14 (2.8)	3 (3.8)
No	553 (78.8)	479 (97.2)	77 (96.2)
Active surveillance*			
Yes	167 (23.8)	85 (15.7)	20 (22.0)
No	536 (76.2)	455 (84.3)	71 (78.0)
Median distance to clinic*	25.5 km (723.8)	15.2 km (356.9)	28.8 km (377.4)
Socioeconomic quintile*			
1	125 (17.8)	60 (12.0)	10 (15.9)
2	120 (17.1)	72 (14.4)	8 (12.7)
3	140 (20.0)	83 (16.6)	10 (15.9)
4	135 (19.3)	134 (26.8)	14 (22.2)
5	181 (25.8)	152 (30.2)	21 (33.3)

\*p <0.05

Unadjusted, non-registrants, non-participants and participants varied across all demographic and clinical characteristics measured (Table 1).

## Results, cont'd

Table 2: Binary Logistic Regression Model

	Model: Program Registration Odds Ratio (95%CI)	Model: Program Participation Odds Ratio (95% CI)
Age Group		
<60	1.447 (0.97-2.159)	1.101 (0.449-2.698)
60-<70	1.618 (1.212-2.16)	1.142 (0.577-2.262)
70+	Ref	Ref
Gleason score (average)		
<7	Ref	Ref
3+4	1.257 (0.809-1.953)	2.316 (0.956-5.611)
4+3	0.864 (0.517-1.446)	2.289 (0.774-6.767)
8	0.791 (0.456-1.373)	2.259 (0.668-7.639)
9-10	0.723 (0.417-1.252)	2.597 (0.751-8.978)
Primary Treatment		
Prostatectomy		
Yes	Ref	Ref
No	0.457 (0.317-0.659)	0.206 (0.1-0.426)*
EBRT and/or brachytherapy		
Yes	Ref	Ref
No	0.861 (0.497-1.491)	0.085 (0.01-0.713)*
ADT		
Yes	Ref	Ref
No	9.336 (4.609-18.913)	0.515 (0.054-4.932)
Active surveillance		
Yes	Ref	Ref
No	1.602 (0.981-2.618)	0.526 (0.198-1.402)
Distance to clinic		
<15km	3.335 (2.42-4.598)*	2.93 (1.397-6.144)*
15-<30km	3.441 (2.303-5.139)*	1.861 (0.8-4.329)
30-<45	3.693 (2.337-5.837)	2.624 (0.932-7.388)
>45 km	Ref	Ref
Income quintile		
1	0.608 (0.404-0.914)*	1.191 (0.456-3.113)
2	0.616 (0.411-0.923)*	0.824 (0.323-2.103)
3	0.592 (0.402-0.873)*	0.82 (0.343-1.964)
4	1.068 (0.747-1.527)	1.251 (0.557-2.812)
5	Ref	Ref

\*p <0.05

Compared to non-registrants, **registrants**

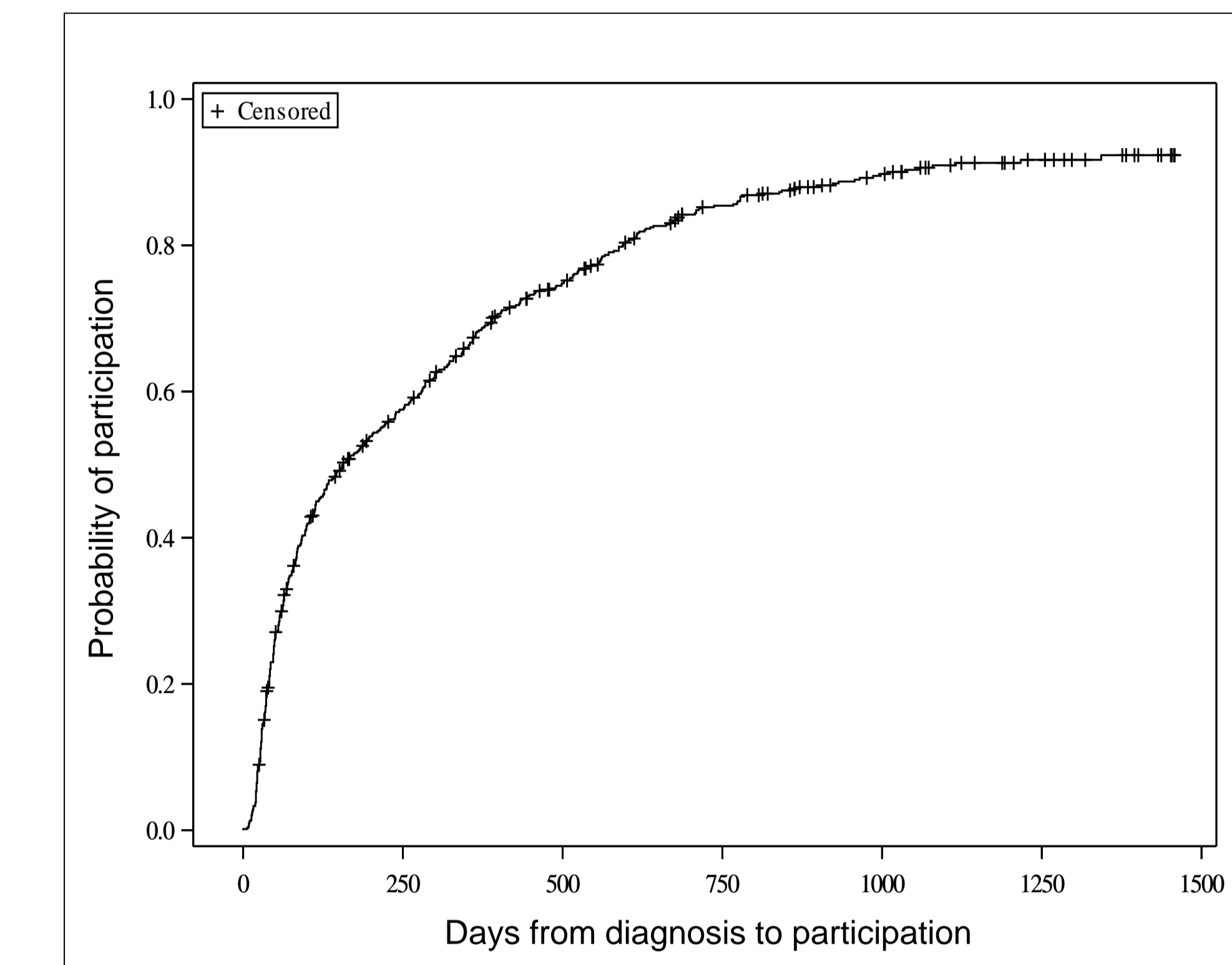
- Had higher odds of living <45 km from the clinic
- Had lower odds of being in the lower three income quintiles

Compared to non-participants, **participants**

- Had lower odds of having a radical prostatectomy
- Had lower odds of having any radiotherapy
- Had higher odds of living within 15km of the clinic

## Results, cont'd

Figure 2: Kaplan-Meier curve estimating probability of PCSC program participation



For three-, six, twelve-month and two-years following diagnosis, PCSC program attendance probabilities were 39.7% (SE=2.0), 52.1% (SE=2.0), 68.2% (SE=2.0), and 85.4% (SE=1.5) respectively.

Kaplan-Meier curves did not vary by any socio-demographic or clinical factors measured

## Summary and Conclusions

One in six men who register for supportive care do not end up using any despite the program being free of charge. The majority of men who participate do so within the first year following diagnosis. Men who live further from the clinic and those with lower incomes are less likely to register for the program; however, travel distance and income do not appear to affect odds of participation.

## Acknowledgements

Financial support for the PCSC Program and its activities is provided from a number of government and non-government organizations and philanthropic donations.



**Table 1: Patient Characteristics**

	Non-Registrants N=703	Registrants (N=638)	
		Participants (N= 546)	Non-Participants (N= 92)
Age (Mean (SD)) <sup>1*</sup>	69.0 (8.8)	66.6 (7.3)	66.5 (7.2)
Age at diagnosis (in years) <sup>2*</sup>	66.9 (8.7)	63.8 (7.2)	64.4 (7.4)
Gleason Grade <sup>3*</sup>			
<7	187 (26.7)	107 (19.6)	32 (34.8)
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Prostatectomy <sup>4</sup>			
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EBRT, brachytherapy or both <sup>5</sup>			
Yes	96 (13.7)	5 (5.5)	53 (9.8)
No	607 (86.3)	86 (94.5)	487 (90.2)
ADT (continuous or intermittent) <sup>6</sup>			
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<sup>1</sup>F= 15.2, p<0.0001

<sup>2</sup>F=17.4, p<0.0001

<sup>3</sup>Chi Square=841.1, p<0.0001 (N=2 missing)

<sup>4</sup>Chi Square=63.8, p<0.0001 (N=6 missing)

<sup>5</sup>Chi Square=7.9 p=0.02 (N=6 missing)

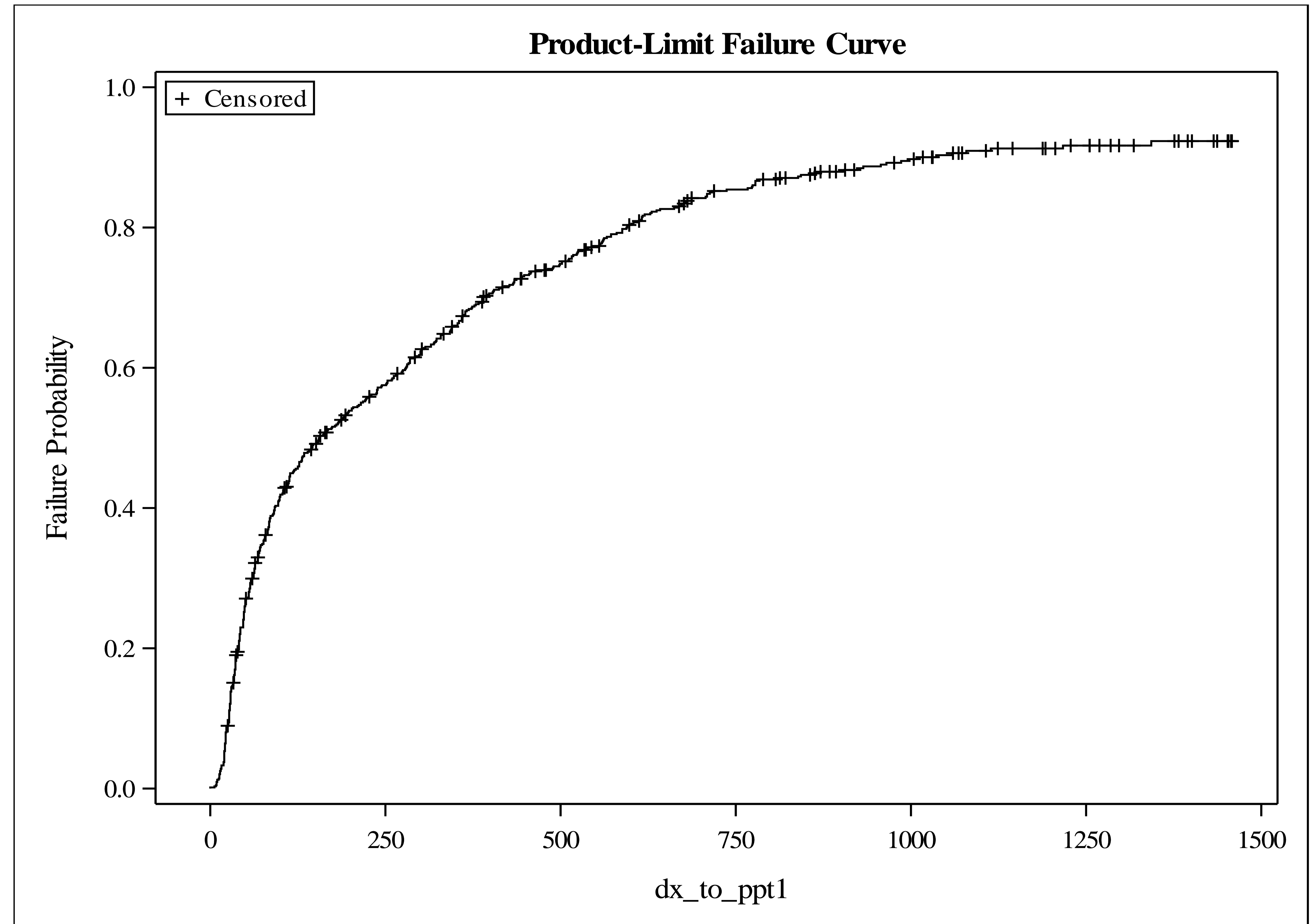
<sup>6</sup>Chi Square=12.2 p=0.002 (N=7 missing)

<sup>7</sup>Chi Square=92.9 p<0.0001 (N=6 missing)

<sup>8</sup>Chi Square = 20.0, p<0.0001 (N=76 missing)

<sup>9</sup>Chi Square=22.8, p=0.01 (N=76 missing)

**Figure 2: Kaplan-Meier curve estimating probability of PCSC program participation**



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