

APPENDIX

Supplementary Table 1. List of codes to identify pharmacologic prostate cancer treatments		
Therapy	Definition	Drug identification number (DIN)
First-generation antiandrogens	Bicalutamide	02400731, 02325985, 02274337, 02374412, 02296063, 02360993, 02325233, 02382423, 02360098, 02184478, 02281139, 02357216, 02407531, 02302403, 02358557, 02336545, 02281163, 02275589, 02311038, 02371324, 02277700, 02276089, 02270226, 02428709
	Nilutamide	02221861, 02221888, 00863904, 01989650, 00863890, 01989642
	Flutamide	02230524, 00637726, 02059673, 02230875, 02238560, 02239045, 02239388, 02239082, 02233019, 02230104, 02230089
Next-generation antiandrogens	Abiraterone acetate	02371065, 02457113, 02492601, 02501503, 02521644, 02486393, 02477114, 02494132, 02503999, 02503980, 02502305, 02491400, 02491397
	Apalutamide	02478374
	Darolutamide	02496348
	Enzalutamide	02407329
Androgen deprivation therapy (ADT)	Degarelix	02337029, 02337037
	Goserelin	00857599, 02049325, 02225905
	Histrelin	02278383
	Leuprolide	00727695, 00884502, 00836273, 02239834, 02230248, 02239833, 02248239, 02248240
	Relugolix	02248999, 02268892
	Triptorelin	09857199, 02240000, 02243856, 09857200, 02412322
Chemotherapies	Docetaxel	02177080, 02177099, 02412225, 02177080, 02361957
	Cabazitaxel	02369524
	Mitoxantrone	02267535
	Cisplatin	02355183
	Carboplatin	02125439, 02126680
	Etoposide	00616192, 02080036

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Poly ADP-ribose inhibitors (PARP) inhibitors	Rucaparib, Olaparib	02475219, 02475200, 02454408
Estrogens	Diethylstilbestrol	02433400, 00695475
	Estramustine phosphate	02063794
	Polyestradiol phosphate	00741930
Immunotherapy	Pembrolizumab, Sipuleucel-T	02456869, 02441152
Radiopharmaceuticals	Radium-223	

Supplementary Table 2. List of procedure codes to identify prostate cancer treatments				
Procedure	OHIP fee code	ICD-10 code	CCI code	CPT code
Cryotherapy	Z732	–	1.QT.59.BA–AD 1.QT.59.HA–AD	–
Radical prostatectomy	S651	–	1.QT.91.^	–
Radiation therapy	X310, X311, X312, X313, A343, A340, A341, K013	–	1.QT.27.^	–
External beam radiation therapy (EBRT)	–	–	1.QT.27.JA	–
Interstitial prostate brachytherapy	–	–	1.QT.26.^	–
High-intensity focused ultrasound	–	–	1.QT.59.BA–AZ 1.QT.59.CA–AZ	–
Bilateral orchiectomy*	S589	–	1.QM.89.^, 1.QM.91.^	–
Orchiectomy in the right side	–	0VT90ZZ, 0VT94ZZ	–	54520, 54521, 54522, 54530, 54535, 54690 (plus CPT modifier "RT"–right side)
Orchiectomy in the left side	–	0VTB0ZZ, 0VTB4ZZ	–	54520, 54521, 54522, 54530, 54535, 54690 (plus CPT modifier "LT"–right side)

*Bilateral orchiectomy additionally defined as at least one claim indicating orchiectomy in the right side and at least one claim indicating orchiectomy in the left side.

Supplementary Table 3. Mutually exclusive treatment groups at any time following diagnosis by LPCa risk						
Cohort	Treatment	Label	Total	Intermediate risk	High– or very high risk	p
Overall cohort		Sample size	N=31 571	N=18 365	N=13 206	
	RP only	n (%)	14 007 (44.4%)	7725 (42.1%)	6282 (47.6%)	<0.0001
	Brachytherapy (BT) only	n (%)	918 (2.9%)	842 (4.6%)	76 (0.6%)	
	EBRT only	n (%)	10 364 (32.8%)	5853 (31.9%)	4511 (34.2%)	
	EBRT + BT	n (%)	2000 (6.3%)	1421 (7.7%)	579 (4.4%)	
	EBRT + BT salvage	n (%)	75 (0.2%)	50 (0.3%)	25 (0.2%)	
	No RP or RT treatment	n (%)	4207 (13.3%)	2474 (13.5%)	1733 (13.1%)	
Patients aged ≥66 years		Sample size	N=18 482	N=10 254	N=8228	
	RP only	n (%)	4711 (25.5%)	2264 (22.1%)	2447 (29.7%)	<0.0001
	Brachytherapy (BT) only	n (%)	478 (2.6%)	433 (4.2%)	45 (0.5%)	
	EBRT only	n (%)	8603 (46.5%)	4847 (47.3%)	3756 (45.6%)	
	EBRT + BT	n (%)	1199 (6.5%)	809 (7.9%)	390 (4.7%)	
	EBRT + BT salvage	n (%)	44 (0.2%)	30 (0.3%)	14 (0.2%)	
	No RP or RT treatment	n (%)	3447 (18.7%)	1871 (18.2%)	1576 (19.2%)	

Supplementary Table 4. Mutually exclusive treatment groups at any time following diagnosis in intermediate and high-risk localized prostate cancer by LHIN										
	Intermediate-risk					High/very high-risk				
LHIN	No active treatment	Surgery	EBRT	Brachytherapy	EBRT + brachytherapy	No active treatment	Surgery	EBRT	Brachytherapy	EBRT + brachytherapy
LHIN A	310 (13.0%)	989 (41.5%)	698 (29.3%)	130 (5.5%)	256 (10.7%)	202 (12.6%)	*748–752	527 (32.8%)	*1–5	*123–127
LHIN B	251 (11.4%)	*1026–1030	456 (20.7%)	78 (3.5%)	393 (17.8%)	226 (13.9%)	*810–814	405 (24.9%)	12 (0.7%)	172 (10.6%)
LHIN C	317 (14.2%)	*914–918	953 (42.7%)	*21–25	*23–27	220 (14.5%)	*631–635	640 (42.2%)	*1–5	*19–23
LHIN D	208 (11.8%)	723 (41.1%)	692 (39.3%)	72 (4.1%)	66 (3.7%)	147 (9.9%)	*672–676	600 (40.6%)	0 (0.0%)	55 (3.7%)
LHIN E	226 (13.9%)	*717–721	543 (33.3%)	69 (4.2%)	70 (4.3%)	152 (13.4%)	*643–647	322 (28.4%)	0 (0.0%)	13 (1.1%)
LHIN F	201 (13.7%)	*550–554	478 (32.7%)	100 (6.8%)	131 (9.0%)	125 (12.1%)	506 (49.1%)	344 (33.4%)	21 (2.0%)	35 (3.4%)
LHIN G	226 (16.2%)	545 (39.1%)	410 (29.4%)	74 (5.3%)	140 (10.0%)	117 (12.7%)	*467–471	280 (30.5%)	0 (0.0%)	52 (5.7%)
LHIN H	116 (11.2%)	*444–448	317 (30.6%)	65 (6.3%)	92 (8.9%)	72 (10.2%)	340 (48.0%)	251 (35.4%)	16 (2.3%)	30 (4.2%)
LHIN I	123 (13.2%)	*398–402	339 (36.4%)	26 (2.8%)	42 (4.5%)	82 (11.6%)	337 (47.8%)	272 (38.6%)	*1–5	*9–13
LHIN J	169 (19.6%)	*331–335	259 (30.1%)	76 (8.8%)	24 (2.8%)	119 (16.4%)	*318–322	274 (37.7%)	*1–5	*10–14
LHIN K	122 (15.0%)	*360–364	185 (22.8%)	34 (4.2%)	110 (13.6%)	91 (16.0%)	296 (52.1%)	143 (25.2%)	*1–5	*33–37
LHIN L	94 (14.5%)	*286–290	197 (30.4%)	32 (4.9%)	36 (5.6%)	95 (16.7%)	220 (38.7%)	225 (39.6%)	11 (1.9%)	17 (3.0%)

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LHIN M	84 (11.7%)	*310–314	198 (27.6%)	58 (8.1%)	67 (9.3%)	57 (12.6%)	*212–216	157 (34.8%)	*1–5	*16–20
LHIN N	27 (9.3%)	*109–113	128 (44.1%)	*1–5	*19–23	28 (16.7%)	*60–64	71 (42.3%)	0 (0.0%)	6 (3.6%)
p value between LHINs	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Supplementary Table 5. Median (IQR) days from prostate cancer diagnosis to treatment initiation by mutually exclusive treatment groups in intermediate and high- risk localized prostate cancer by LHIN								
LHIN	Intermediate-risk				High/very high-risk			
	Surgery	EBRT	Brachy	EBRT + Brachy	Surgery	EBRT	Brachy	EBRT + Brachy
LHIN A	100 (70–146)	105 (62–204)	126 (96–162)	112 (78–163)	90 (66–126)	164 (98–243)	*NA	140 (99–208)
LHIN B	89 (63–129)	107 (70–213)	126 (89–203)	102 (78–144)	83 (57–117)	170 (119–251)	143 (76–165)	152 (103–222)
LHIN C	132 (91–195)	112 (78–211)	172 (91–239)	127 (89–287)	118 (83–160)	155 (125–200)	*NA	147 (127–191)
LHIN D	119 (89–168)	92 (62–154)	128 (95–169)	131 (103–168)	112 (82–146)	99 (65–170)	0	121 (92–155)
LHIN E	123 (85–173)	95 (57–161)	147 (114–196)	109 (91–176)	113 (82–147)	127 (100–160)	0	113 (83–120)
LHIN F	112 (78–171)	111 (77–203)	139 (99–172)	126 (97–230)	97 (69–140)	132 (84–201)	124 (109–159)	134 (104–198)
LHIN G	105 (71–160)	107 (70–220)	152 (110–210)	122 (91–186)	99 (67–147)	154 (93–243)	0	158 (103–209)
LHIN H	104 (74–152)	101 (69–198)	146 (113–201)	126 (92–176)	97 (70–129)	134 (87–217)	150 (122–182)	137 (115–162)

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