

Poster Session 7: Oncology – Prostate (Part 2)

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MP 7.1

Radiomics-based prognostic model guided by artificial intelligence for predicting clinical outcomes in individuals with high-grade prostate cancer

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Introduction: We aimed to develop a radiomics-based prognostic model using machine learning to predict lymph node invasion (LNI), biochemical recurrence (BCR), metastasis-free survival (MFS), definitive androgen deprivation therapy (dADT)-free survival (FS), castration-resistant prostate cancer (CRPC)-FS, and prostate cancer-specific survival (PCSS) in individuals diagnosed with high-grade prostate cancer (PCa).

Methods: A total of 295 individuals with high-grade PCa (Gleason score ≥ 8) underwent preoperative positron emission tomography (PET) with 18F-fluorodeoxyglucose (FDG) combined with computed tomography (CT) imaging at our tertiary care health center in Québec City, Canada. Clinical data (CD), including age, prostate-specific antigen (PSA) level, Gleason score, and clinical stage, were used to build prognostic models to which handcrafted radiomics (HCR) or deep learning-based radiomics (DLR) were added to enhance performance. We trained the models using a subset of the cohort (250 individuals) and optimized them using a stratified five-fold cross-validation. The selected model was then validated using a test set of 45 individuals. Performance on the test set was evaluated using the area under the curve of the receiver operator characteristic (AUC-ROC) and the concordance index (C-index). A comparison with commonly used nomograms (MSKCC and CAPRA-S) was also made.

Results: Median followup was 64.7 (range 29.3–89.6) months. Median age was 66 (48–80) years. Median PSA was 7.4 (1.1–155.3). A total of 230 (88%) and 31 (12%) had clinical T1-T2 and T3a disease, respectively. The majority (63.7%) had Gleason 8. At RP, 86 (29%) individuals had LNI. At followup, 160 had BCR. In the training set, using CD with radiomics yielded better performance for prediction of LNI (AUC 72 \pm 5 vs. 70 \pm 7 [MSKCC] and 62 \pm 4 [CAPRA-S]) and BCR-FS (CI=65 \pm 6 vs. 64 \pm 3 [MSKCC] and 63 \pm 4 [CAPRA-S]). Nomograms outperformed our combined radiomics-CD model for prediction of other outcomes, although performances were like our CD-only model.

Conclusions: Integrating imaging data into prognostic tools through artificial intelligence enhances clinical predictions for LNI and BCR, enabling more accurate prognostication. With minimal training, we achieved better results than commonly used nomograms.

Acknowledgements: The authors would like to thank the Fonds de Recherche de Québec (FRQ), the Canadian Institutes of Health Research, and the CHU de Québec-Université Laval for their financial support.

MP 7.2

Mediating effects of self-efficacy and illness perceptions on mental health outcomes in men with localized prostate cancer: A secondary analysis of the PC-PEP randomized controlled trial

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Introduction: This secondary analysis investigates the mediation role of illness perceptions in the observed reduction of mental distress among prostate cancer (PCa) patients participating in the Prostate Cancer-Patient Empowerment Program (PC-PEP), an intervention already proven to alleviate psychologic distress compared to standard care.

Methods: A total of 128 men undergoing curative intent treatment for localized PCa at the QEII Health Sciences Centre in Halifax, Nova Scotia, were randomized to PC-PEP intervention (66) or control (62). Mental distress was measured using the Kessler Psychological Distress Scale (K10) and illness perceptions were measured with the Brief Illness Perception Scale (BIPQ), at baseline and six months. Using linear mixed effects models and prognostic covariates, the effect of the intervention on illness perceptions and the potential mediating effect on K10 was assessed. The approach used was Baron and Kenny (1986) but made use of linear mixed effects models at each step. Prognostic covariates included: treatment modality, age, comorbidity index, prescribed medication for mental health problem at baseline, relationship status, and time between randomization and treatment.

Results: Compared to standard of care, PC-PEP at six months did not result in improved overall illness perception (4.2, 95% CI 0.-0.59, 8.98, $p=0.85$) but did improve the perception of patient's personal control over their illness (-1.2, 95% CI 0.-2.2, -0.10, $p=0.032$) and emotional representation (how much the patient felt their illness affected them) (1.03, 95% CI 0.13, 1.9, $p=0.026$). Illness perception

MP 7.2. Table 1. Baseline sample characteristics of participants in intervention and control groups in the PC-PEP trial

	PC-PEP intervention (n=66)	Control group (n=62)
Age (years)	65 (6.84)	67 (7.23)
Race, white	60 (90.9)	61 (98.4)
Household income, \$30 000 and above	54 (81.8)	52 (83.9)
Education, university or higher	31(47.0)	37 (59.7)
Relationship status (currently in a relationship)	59 (89.4)	61 (98.4)
Employed (part-time or full-time)	22 (33.3)	23 (37.1)
Treatment		
Androgen deprivation therapy	27 (40.9)	21 (33.9)
Radical prostatectomy	29 (43.9)	33 (53.22)
Radiation therapy	30 (45.5)	29 (46.77)
Taking medication for anxiety, depression, or both	12 (18.2)	7 (11.3)
Illness perceptions overall score	29.1 (12.6)	30.3 (12.1)
Screening positive psychological distress and need for clinical treatment (K10 \geq 20)	9 (13.6)	11 (17.7)

Data presented as means with standard deviation (SD) or n (%). K10=Kessler's Psychological Distress Scale.

was a partial mediator of mental distress. No adverse events were reported.

Conclusions: PC-PEP led to improved perceptions of personal control and improved the patient's emotional response to PCa, which in turn partially explains the mechanism by which PC-PEP participants experienced improvement in mental health.

Acknowledgements: The authors gratefully acknowledge the Dalhousie Medical Research Foundation Soillse Prostate Cancer Quality of Life Lab team of staff, students, and trainees for facilitating this program and research assistance, the QEII Urology Department staff (Liette Connor, Getty Vasista, Barbara Ross, Jessica Davis, Emmi Champion), Jeff Zahavich - the study's exercise physiologist and Erika Burger - the study's physiotherapist. The team acknowledges the support of the Nova Scotia Cancer Program, Dr. Helmut Hollenhorst, and NSHA Collaborators Marianne Arab and Leslie Hill, as well as Research Nova Scotia and the Dalhousie Medical Research Foundation's (DMRF) Soillse Prostate Cancer Quality of Life Research fund, supported by Frank and Debbi Sobey, for funding this study. Lastly, we are indebted to all the patients who participated and made this research possible.

MP 7.3 Assessing the cost-effectiveness of a six-month Prostate Cancer Patient Empowerment Program: Results from a randomized clinical trial

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Introduction: Prostate cancer is Canada's most prevalent cancer in males, leading to adverse side effects and higher healthcare costs. Health promotion is key to improving health outcomes and managing these costs. The Prostate Cancer Patient Empowerment Program (PC-PEP), a home-based intervention, effectively reduces mental distress and enhances physical and urinary functions, improving quality of life. This study assesses PC-PEP's cost-effectiveness, hypothesizing that early implementation at diagnosis reduces healthcare spending and improves mental health.

Methods: In a six-month, crossover, randomized trial, participants were divided into PC-PEP or a waitlist control group (Table 1). PC-PEP included daily stress reduction, physical fitness, stress management, pelvic floor exercises, healthy habits, intimacy training, social support, and dietary recommendations. Cost-effectiveness was analyzed using Nova Scotia Medical Services Insurance data and self-reported data, omitting the incremental cost-effectiveness ratio should PC-PEP be a dominant economic model.

Results: PC-PEP was cost-effective, showing improved mental health and reduced healthcare costs. From baseline to six months, it saved \$363.92 per patient, preventing three cases of psychological distress needing clinical treatment. At 12 months, savings reached \$676.49 per patient and prevented three cases of psychological distress needing clinical treatment.

Conclusions: PC-PEP offers a cost-effective solution for prostate cancer patients, significantly saving healthcare costs and enhancing mental health. The program's early implementation post-diagnosis is particularly beneficial, supporting its adoption as a standard health promotion strategy for prostate cancer care.

Acknowledgements: The authors would like to thank the patients who took part in the trial, the QEII Urology Department staff (special thanks to Mrs. Liette Connor, Getty Vasista, Barbara Ross, Jessica Davis, and Emmi Champion), urology residents, and medical residents' volunteers who helped collect data, Jeff Zahavich, the study's physiologist, and Erika Burger, the study's physiotherapist. The Dalhousie Medical Research Foundation Soillse Prostate Cancer Quality of Life Lab trainees and staff are acknowledged by the team. The team would like to thank the Nova Scotia Cancer Program, Dr. Helmut Hollenhorst, and NSHA Collaborators Marianne Arab and Leslie Hill for their assistance. The team also thanks Research Nova Scotia for Establishment Grant #2215 (Principal Investigator: GI; and Co-Investigators: RM, CM, RR, and RDHR), as well as the Dalhousie Medical Research Foundation's (DMRF) Soillse Prostate Cancer Quality of Life Research fund, Frank and Debbi Sobey (GI), for their assistance. We would also like to acknowledge funding provided by the Kilpatrick Trust and QE II Foundation.

MP 7.3. Table 1. Demographic characteristics of 121 participants at baseline in the PC-PEP trial, comparing the intervention and wait-list control groups

	PC-PEP intervention (n=61)	Control group (n=60)
Age (years)	66 ± 6.67	67 ± 6.95
Body Mass Index	31 ± 6.87	29 ± 5.79
Household income at baseline above CAD \$30,000/past year	50, 82%	50, 83%
Race, percent white	55, 90%	59, 98%
Education, university, or higher	31, 51%	33, 55%
Employed (part-time or full-time)	20, 33%	22, 37%
Relationship status (currently in a relationship or married)	54, 89%	59, 98%
Screening positive psychological distress and need for clinical treatment (K10≥20)	8, 13%	10, 17%
Treatment type		
Androgen deprivation therapy	26, 47%	17, 28%
Radical prostatectomy	20, 33%	26, 43%
Radiation therapy	30, 49%	21, 35%
Range of comorbidities		
One comorbidity	44, 72%	46, 78%
More than one comorbidity	17, 28%	14, 23%
Current cigarette smoker	2, 3%	3, 5%
Taking medication for anxiety, depression, or both when entering the trial	10, 16%	13, 22%

K10 = Kessler's Psychological Distress Scale.

Data presented as n ± standard deviation or n (%) for categorical data.

MP 7.4

The instruments used to assess health literacy of prostate cancer in Indigenous and non-Indigenous population: A scoping review

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Introduction: Prostate cancer is a pressing global public health issue, ranking as the third leading cause of male cancer-related deaths in Canada. The economic burden is substantial, with patients enduring complex care and reduced quality of life. Indigenous populations face exacerbated healthcare access challenges, leading to delayed diagnosis and treatment. Recognizing the pivotal role of health literacy, particularly in the context of prostate cancer, is essential; however, existing health literacy assessment tools, especially in Indigenous populations, remain inadequately explored. This scoping review aims to explore the existing health literacy tools used in prostate cancer cohorts, assess their quality, and identify gaps in health literacy assessment in Indigenous populations.

Methods: A systematic search of Medline, Web of Science, Google Scholar, and CINAHL were performed and articles assessing health literacy in prostate cancer patients using a questionnaire were extracted.

Results: A total of 421 articles were screened, resulting in the inclusion of 16 studies. The most employed questionnaire was the Rapid Estimate of Adult Literacy in Medicine (REALM) and its variants R-REALM and SF-REALM. Other tools included were the HLQ, S-TOFHLA, SFHL, HELIA, and BHLS. None of these tools were specifically developed for assessing health literacy in prostate cancer, and none have been validated in Indigenous populations.

Conclusions: This review lists the measuring tools for prostate cancer-related health literacy. None of the tools has assessed all health literacy domains. None of the questionnaires have been validated in Indigenous populations, emphasizing the need to develop a comprehensive and culturally sensitive tool for assessing the health literacy of Indigenous and non-Indigenous patients with prostate cancer. This could lead to improvements in patient outcomes and decision-making, leading to better quality of care and disease prognosis.

MP7.5**Understanding variation in treatment intensification for de novo metastatic castration-sensitive prostate cancer: A population-based cohort study**

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Introduction: Treatment intensification using androgen receptor signaling inhibitors (ARSI) or chemotherapy is guideline-recommended for patients with metastatic castration-sensitive prostate cancer (mCSPC) based on improved survival and preserved quality of life; however, numerous studies across jurisdictions have shown relatively limited uptake, with most patients receiving androgen deprivation therapy (ADT) monotherapy. Therefore, we sought to understand patient, physician, and tumor characteristics associated with treatment intensification.

Methods: This population-based cohort study in Ontario, Canada, included older men (age ≥ 66 years) diagnosed with de novo mCSPC between January 2014 and November 2021 for whom the ADT-prescribing physician could be identified ($>99.5\%$ of all mCSPC patients). We used hierarchical regression modeling to assess the association (presented as odds ratio [OR]) between patient sociodemographic characteristics and comorbidities, tumor characteristics, and physician characteristics with receipt of intensified treatment for mCSPC, defined as receipt of an ARSI, docetaxel, or both within six months. We used Darlington's method to assess the relative importance of these predictors (presented as standardized regression coefficients [SRC]).

Results: Among 4450 eligible older men newly diagnosed with de novo mCSPC, 18.8% received treatment intensification, with rates increasing from 6.3% in 2014 to 31.9% by 2021. In multivariable modeling, patient age was the most influential variable, with older patients significantly less likely to receive treatment intensification (SRC -43.8, OR 0.91, 95% CI 0.90–0.92). Socioeconomic status (SRC -12.2, OR 0.54, 95% CI 0.33–0.88 for quintile 1 vs. 5) and a history of stroke (SRC -11.5, OR 0.28, 95% CI 0.09–0.86), but no other patient factors, including comorbidity, were significantly associated with intensification. Patients prescribed ADT for mCSPC by radiation oncologists were less likely to receive intensification (SRC -16.5, OR 0.47, 95% CI 0.23–0.95) compared to other providers without significant differences between patients treated by urologists, medical oncologists, or other physicians. No other physician-level characteristic (age, sex, years in practice, or annual volume of prostate cancer patients) was associated with treatment intensification. More contemporary year of diagnosis was also strongly predictive (mean SRC 31.2) of intensification. We noted significant geographic variation (mean SRC 10.2, $p < 0.0001$) that could not be explained by rurality ($p = 0.08$) and persisted after adjustment for socioeconomic status and patient characteristics.

Conclusions: Patient, disease, and physician characteristics contribute to variation in treatment intensification for mCSPC. These data may allow focused intervention to improve guideline-concordant care for patients with mCSPC.

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MP 7.6**Stratifying prostate cancer patients through circulating genes related to prostate cell subtypes, drug targets, and therapeutic resistance**

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Introduction: Patient stratification is an obstacle for optimal treatment of prostate cancer (PCa). Targeting the androgen receptor (AR) kills luminal-like cells, a subset of which develop resistance, but can lead to emergence of AR-negative neuroendocrine (NE) or stemness phenotypes. We previously reported on the clinical relevance of cell subtype genes in blood RNA of advanced PCa patients. Here, we studied an expanded gene panel as predictive biomarkers useful for stratification at diagnosis and in advanced stages.

Methods: Genes of prostate cell subtypes, drug targets, and therapeutic resistance were chosen based on literature review, clinical trials, and PCa transcriptomics. Whole blood RNA was extracted from 26 healthy controls, 16 patients prior to surgery, and 36 samples from 25 metastatic cases. Genes were tested by RT-qPCR. Overexpression was defined as the 99.5% confidence interval of expression in controls.

Results: We built a 64-gene panel showing overexpression in advanced PCa but low or no expression in normal blood. Patients' age and proportions of white blood cells did not correlate with gene expression in blood. Cases with intraductal carcinoma showed more circulating genes overexpressed pre-surgery, including NE and stem genes. Patients with intermediate/high-risk CAPRA-S score showed more NE genes. In metastatic patients, signatures of luminal, NE, stemness, and resistance to AR inhibitors or taxanes were associated with progression. PCa-specific luminal genes were associated with shorter overall survival; targetable NE genes with initial radiation therapy; and resistance genes with lines of treatment.

Conclusions: Phenotypic and functional changes in circulating genes correlate with pathologic features, treatments, and progression. They may be clinically meaningful to stratify patients and predict therapeutic response. Circulating genes encoding drug targets may justify clinical trials to offer personalized treatments and impact on lethal PCa.

MP 7.7**Effectiveness of the Prostate Cancer-Patient Empowerment Program (PC-PEP) in reducing stress: Insights from a phase 2 feasibility study**

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Introduction: Prostate cancer (PCa) survivors often face post-treatment challenges that impact their well-being and mental health. The Prostate Cancer Patient Empowerment Program (PC-PEP) addresses these challenges through a comprehensive intervention, including meditation/breathing exercises, physical activity, pelvic floor exercises, emotional connection strategies, and peer support. This study presents a secondary analysis of a phase 2 feasibility study assessing the impact of a 28-day PC-PEP intervention on PCa survivors' stress levels.

Methods: Thirty PCa patients in the Maritimes, Canada, underwent pre- and post-intervention assessments. These assessments measured brainwave activity (delta, theta, alpha, beta, and gamma waves) using the Muse™ headband, and heart rate variability (HRV) using the HeartMath® Inner Balance™, to indicate stress levels.

Results: The amplitudes of delta, theta, beta, and gamma brain waves were generally higher during the first half of the meditation assessment time, suggesting that the PC-PEP intervention improved patients' ability to relax on cue. There was a statistically significant time \times sensor scalp location \times sensor scalp assessment time interaction for alpha waves ($F [7.62, 205.73] = 2.09, p = 0.04$), indicating higher prefrontal lobe amplitudes compared to temporal lobe amplitudes from pre- to post-assessment. No significant differences in HRV were observed, except for a marginally significant achievement score ($F [1, 29] = 3.49, p = 0.07$), indicating increased HRV coherence post-intervention.

Conclusions: These findings suggest that the PC-PEP was effective in reducing physiological stress among participants. These results provide valuable insights for refining the duration and customization of future PC-PEP iterations to maximize participant benefits.

Acknowledgements: The authors gratefully acknowledge the participants in the study, Halifax Prostate Cancer Support Group; the Urology Department at QEII (Special thanks to Mrs. Liette Connor); Jeff Zahavich; Erika Burger; Emmi Champion;

MP 7.7. Table 1. Three-way (time x sensor scalp location x sensor scalp assessment time) repeated-measures ANOVA measuring delta, theta, alpha, beta, and gamma waves brain waves using MUSE® biofeedback among a sample of 30 PCa survivors from the Maritimes, Canada

Delta	Test statistic ^a	p	η ² _b	Power
Time	F (1, 27)=0.99	0.33	0.04	0.16
Sensor scalp location	F (2.11, 57.05)=19.28	<0.001	0.42	1
Sensor scalp assessment Time	F (4.38, 118.22)=11.20	<0.001	0.29	1
Time x sensor scalp location	F (2.15, 57.95)=0.37	0.71	0.01	0.11
Time x sensor scalp assessment time	F (4.67, 126.03)=4.06	0.002	0.13	0.94
Time x sensor scalp location x sensor scalp assessment time	F (8.55, 230.84)=1.25	0.27	0.04	0.59
Sensor scalp location x sensor scalp assessment time	F (9.90, 267.20)=0.56	0.84	0.02	0.29
Theta	Test statistic	p	η ²	Power
Time	F (1, 27)=1.94	0.18	0.07	0.27
Sensor scalp location	F (1.97, 53.18)=81.79	<0.001	0.75	1
Sensor scalp assessment time	F (4.27, 115.15)=6.74	<0.001	0.20	0.99
Time x sensor scalp location	F (2.03, 54.80)=0.57	0.57	0.02	0.14
Time x sensor scalp assessment time	F (4.67, 126.15)=4.14	0.002	0.13	0.94
Time x sensor scalp location x Sensor Scalp Assessment Time	F (7.35, 198.44)=1.03	0.42	0.04	0.45
Sensor scalp location x sensor scalp assessment time	F (8.86, 239.08)=1.42	0.18	0.05	0.67
Alpha	Test statistic	p	η ² _b	Power
Time	F (1, 27)=1.68	0.21	0.06	0.24
Sensor scalp location	F (2.07, 55.87)=225.15	<0.001	0.89	1
Sensor scalp assessment time	F (3.41, 92.17)=0.90	0.45	0.03	0.26
Time x sensor scalp location	F (2.04, 55.11)=0.62	0.55	0.02	0.15
Time x sensor scalp assessment time	F (4.69, 126.60)=2.44	0.04	0.08	0.74
Time x sensor scalp location x sensor scalp assessment time	F (7.62, 205.73)=2.09	0.04	0.07	0.82
Sensor scalp location x sensor scalp assessment time	F (7.65, 206.52)=2.60	0.01	0.09	0.91

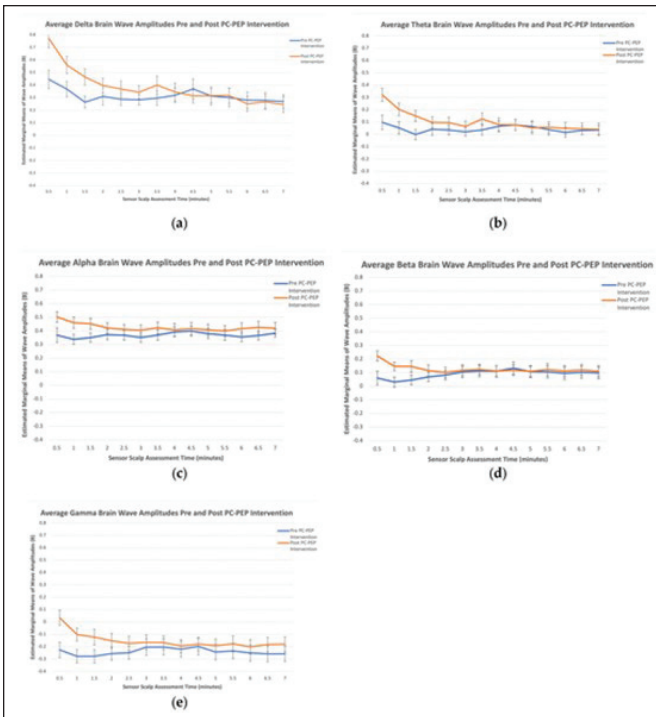
^aUsing the Greenhouse-Geisser adjustment to the degrees of freedom.

MP 7.7. Table 1 (cont'd). Three-way (time x sensor scalp location x sensor scalp assessment time) repeated-measures ANOVA measuring delta, theta, alpha, beta, and gamma waves brain waves using MUSE® biofeedback among a sample of 30 PCa survivors from the Maritimes, Canada

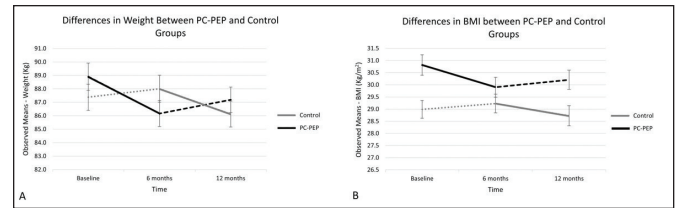
Beta	Test statistic	p	η ² _b	Power
Time	F (1, 27)=0.65	0.43	0.02	0.12
Sensor scalp location	F (1.86, 50.11)=39.72	<0.001	0.60	1
Sensor scalp assessment time	F (2.81, 75.97)=0.85	0.47	0.03	0.22
Time x sensor scalp location	F (1.94, 52.40)=0.64	0.53	0.02	0.15
Time x sensor scalp assessment Time	F (4.83, 130.32)=4.48	<0.001	0.14	0.96
Time x sensor scalp location x sensor scalp assessment time	F (7.22, 194.92)=1.77	0.09	0.06	0.72
Sensor scalp location x sensor scalp assessment time	F (5.20, 140.30)=1.33	0.25	0.05	0.47
Gamma	Test statistic	p	η ²	Power
Time	F (1, 27)=1.82	0.19	0.06	0.26
Sensor scalp location	F (1.95, 52.65)=4.49	0.02	0.14	0.74
Sensor scalp assessment time	F (2.88, 77.72)=2.50	0.07	0.09	0.59
Time x sensor scalp location	F (1.70, 46.02) 0.80	0.44	0.03	0.17
Time x sensor scalp assessment time	F (3.43, 92.72)=3.62	0.01	0.12	0.82
Time x sensor scalp location x sensor scalp assessment time	F (6.82, 184.26)=0.99	0.44	0.04	0.41
Sensor scalp location x sensor scalp assessment time	F (5.30, 143)=2.37	0.04	0.08	0.76

^aUsing the Greenhouse-Geisser adjustment to the degrees of freedom.

Prostate Cancer Canada for their help in disseminating the recruitment poster for PC-PEP to support groups; Helen Wong, Research Coordinator; students; and medical resident volunteers. This research was funded by Research Nova Scotia through an Establishment Grant to G.I. and Dalhousie Medical Research Foundation, through the Soillse Research Fund (G.I.), as well as by the Mach-Gaensslen Foundation of Canada (L.B.). The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript. A manuscript was previously published: Burge L, Ilie G, MacDonald C, et al. Changes in stress reduction following a 28-day Prostate Cancer Patient Empowerment Program (PC-PEP) among prostate cancer survivors. *Curr Oncol* 2023;30:7936-49. <https://doi.org/10.3390/currenol30090577>



MP 7.7. Figure 1. Estimated marginal means of brain wave amplitudes at pre- and post-28-day PC-PEP intervention in a sample of 30 PCa survivors from the Maritimes, Canada. (a) Delta brain wave amplitudes across sensor scalp assessment time; (b) theta brain wave amplitudes across sensor scalp assessment time; (c) alpha brain wave amplitudes across sensor scalp assessment time; (d) beta brain wave amplitudes across sensor scalp assessment time; (e) gamma brain wave amplitudes across sensor scalp assessment time.



MP 7.8. Figure 1. (A) Observed weight and (B) BMI for patients in the early vs. late intervention groups at baseline, 6 months, and 12 months.

“late” PC-PEP groups demonstrated high exercise and dietary recommendation compliance, with no attrition or adverse events reported. **Conclusions:** PC-PEP led to significant weight loss in men undergoing curative prostate cancer treatment compared to standard of care. Surgical patients benefited most from early intervention with increased weight loss, which may improve surgical and oncologic outcomes.

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MP 7.9
The effect of novel patient-centered prostate biopsy pathology reports on patient experience, comprehension, and anxiety: A randomized controlled trial

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Introduction: In efforts to enhance patient-centered communication in health-care, institutions are delivering medical results through portals. Within prostate cancer care, decisions rely heavily on prostate biopsy results. Yet, the standard pathology report (SPR) uses complex medical terminology that is challenging for patients to comprehend. We developed patient-centered pathology reports (PAPR) specifically for prostate biopsy through iterative collaboration with surgeons, radiation oncologists, pathologists, health educators, healthcare design engineers, patients, and plain language specialists (Figure 1). This study seeks to evaluate the impact of these tailored prostate biopsy PAPRs on patient experience, comprehension, pre-visit anxiety, and shared decision-making.

Methods: Sixty-three patients undergoing prostate biopsy were randomly assigned in a 1:1 ratio to receive either the standard pathology report alone (SPR) or the combination of SPR and PAPR (SPR+PAPR). PAPRs were provided to patients within 48 hours of SPR reporting. Individualized PAPRs were created on the design software FIGMA. Prior to followup encounters, all participants completed a questionnaire designed by the study investigators, as well as a validated anxiety questionnaire (STAI-5). Post-encounters, patients filled out a validated questionnaire assessing shared decision-making (SDM-Q-9). Statistical

MP 7.8
Effectiveness of a home-based empowerment program (PC-PEP) in promoting weight loss among men undergoing prostate cancer treatment: A secondary analysis of a clinical trial

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Introduction: PC-PEP, a six-month, daily, home-based empowerment program for men with prostate cancer, has been shown to improve mental health and urinary function. Through secondary analysis of a PC-PEP clinical trial, the impact on weight loss was explored based on the timing of intervention for men undergoing curative prostate cancer treatment.

Methods: A randomized clinical trial of 128 men undergoing curative prostate cancer treatment was performed with 66 patients receiving “early” PC-PEP, while 62 patients received six-month standard-of-care treatment followed by six-month “late” PC-PEP. PC-PEP consisted of daily, video-based strength training exercises and dietary advice. Weight and height data were collected via online surveys (baseline, six months, 12 months), while compliance was recorded weekly.

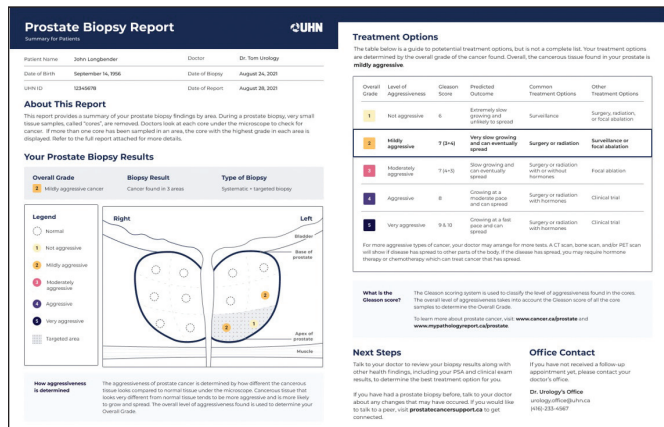
Results: At six months, “early” PC-PEP patients experienced significant weight loss (average: -2.7 kg, p<0.01) compared to the “late” control group. At 12 months, both groups reported significant weight loss, with no differences between the “early” (-2.3 kg, p=0.005) and “late” groups (-0.7 kg, p=0.009), supporting that both early and late delivery of PC-PEP leads to weight loss (Figure 1). Patients undergoing radical prostatectomy experienced significantly greater weight loss (-2.5 kg, p=0.007) compared to patients undergoing radiation treatment. “Early” surgical patients demonstrated an average weight loss of 1.4 kg prior to surgery compared to a weight gain of 0.3 kg in the control group. Both “early” and

analyses employed the Mann-Whitney U test for continuous variable distributions, and Fisher's exact test or Chi-squared test for categorical variable differences.

Results: Most patients were aged between 60–69 years, had completed undergraduate education, and were undergoing their initial prostate biopsy. Baseline demographic characteristics exhibited no significant differences between the two groups. Patients receiving SPR+PAPR, compared to those receiving only SPR, reported higher agreement that their reports were patient-friendly (75% vs. 18%, $p=0.01$), empowered them to feel more in control (71% vs. 12%, $p=0.01$), reduced anxiety related to their prostate health (86% vs. 9%, $p<0.001$), and were beneficial in communicating results to family and friends (82% vs. 45%, $p=0.01$). The SPR+PAPR group demonstrated improved comprehension of their condition (mean of 3.9 vs. 3.2 correct answers, $p=0.02$) and a better awareness of available treatment options (61% vs. 16%, $p<0.001$). Mean STAIS-5 and SDM-Q-9 scores were comparable between groups, however, a higher percentage of patients receiving PAPRs agreed that their doctor and they reached an agreement on how to proceed (100% vs. 73%, $p=0.02$).

Conclusions: For men undergoing prostate biopsy, individualized patient-centric pathology reports can enhance both knowledge and overall experience.

Acknowledgements: Preliminary results from this study have been accepted for presentation at the European Association of Urology Annual Meeting 2024.



MP 7.9. Figure 1. Patient-centered prostate biopsy pathology report.

MP 7.10 Effect of smoking on prostate cancer survivors' function and quality of life: An analysis of the CEASAR study

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Introduction: Tobacco smoking negatively impacts cancer treatment and prognosis; however, there is limited evidence of its effect on cancer survivors' quality of life (QoL) and function. As the natural history of localized prostate cancer (PCa) is protracted, there is a need to identify modifiable risk factors that can influence survivorship, such as tobacco smoking after a diagnosis of PCa.

Methods: We used up to 10-year data from the Comparative Effectiveness Analysis of Surgery and Radiation (CEASAR) study, a prospective, population-based, observational study of men diagnosed with localized PCa in 2011–2012. We excluded patients who did not complete the smoking-related and baseline questions and those who did not complete at least one post-baseline survey. Survivors were categorized as never, former, and current smokers during survivorship. Multivariable linear regression models adjusting for baseline QoL and function, treatment type, patient characteristics, and disease characteristics were used to assess the association between smoking history and five-year and 10-year scores on the 26-Item Expanded Prostate Index Composite (EPIC-26; PCa-specific

domains: sexual, urinary incontinence, urinary irritative, bowel, and hormonal) and five-year scores on the Medical Outcomes Study 36-Item Short Form Survey (SF-36; general-health domains: physical, emotional, and energy and fatigue).

Results: We included 2426 patients, of whom 142 (6%) were current smokers, 1039 (43%) were former smokers and 1245 (51%) were never smokers. At baseline, smokers were more likely to be Black, have an income less than \$30 000 annually, and have less formal education (all $p<0.01$). After accounting for relevant sociodemographic, clinical, and tumor characteristics, there was no independent statistically or clinically significant association between smoking history, with disease-specific functional outcomes (EPIC-26) at five years or 10 years (all $p>0.05$); however, in adjusted analyses assessing general health domains (SF-36), compared to never-smokers, current smokers had worse physical function (-10.96, 95% CI -16.37 to -5.55, $p<0.01$), emotional well-being (-4.44, 95% CI -7.73 to -1.14, $p<0.01$), and energy and fatigue (-5.45, 95% CI -8.97 to -1.92, $p<0.01$) at five years of followup. Compared to never-smokers, former smokers had worse physical function (-3.38, 95% CI -5.24 to -1.52, $p<0.01$). While smoking status was associated with baseline physical function, the association remained statistically significant and clinically relevant after adjusting for baseline function. No interaction between smoking history and treatment was detected ($p>0.05$).

Conclusions: PCa survivors who continue to smoke experience worse physical functioning though there is no significant independent effect on prostate-cancer-specific functional domains. The association between smoking during survivorship and physical function is not fully accounted for by baseline function, suggesting a potentially modifiable outcome with smoking cessation.

MP 7.11 The comprehensive 6-month Prostate Cancer-Patient Empowerment Program improves urinary function among men with prostate cancer: Preliminary results of a phase 4, pan-Canadian and international implementation trial

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Introduction: The Prostate Cancer-Patient Empowerment Program (PC-PEP) was found to be effective in improving urinary symptoms for patients undergoing primary treatment for localized prostate cancer. This implementation trial seeks to determine the effects of the PC-PEP intervention in patients who are at various stages in their prostate cancer management.

Methods: A total of 186 men with a variety of treatments for localized and metastatic treatment for prostate cancer were enrolled in the PC-PEP program, an online, comprehensive patient resource comprising physical, mental, and social support. Over six months, daily emails or texts reminded men to follow the program's PFMT videos three times per day. Videos included relaxation, quick-twitch, and endurance exercises. Patients then completed weekly online compliance surveys. All participants completed the International Prostate Symptom Score (IPSS) questionnaire at baseline and six months.

Results: Demographic characteristics are presented in Table 1. On average, the PC-PEP group reported performing PFMT 3.5 times per day (three times a day was prescribed). Overall, at six months, men who received the PC-PEP intervention had significantly improved IPSS sum score when compared to baseline (mean IPSS difference 1.56, 95% CI 0.52–2.60, $p=0.003$). At six months, urinary function was better than baseline among the 107 patients who had received radical prostatectomy (mean IPSS difference 1.94, 95% CI 0.40–3.50, $p=0.014$), and the 73 patients who were treated with radiation (either beam or brachy), mean IPSS difference 1.7 (95% CI 0.31–3.09, $p=0.017$). Men on active surveillance or hormone therapy only showed comparable urinary function from pre- to post-intervention ($p=0.19$ and $p=0.11$, respectively). Among the patients who reported not having received any treatment yet at baseline, the men who received RP or RT during the six months of the intervention reported no improved urinary function ($p=0.95$ or $p=0.27$, respectively). Patients who received salvage radiation had better urinary function from baseline to six months and mean IPSS difference of 4.46 (95% CI 1.80–7.13, $p<0.002$).

Conclusions: PC-PEP, a comprehensive, six-month, home-based empowerment program, appears to significantly improve lower urinary tract symptoms in this cohort of prostate cancer patients who are in various stages of disease treatment.

In particular, patients who underwent salvage radiotherapy may derive the most benefit. These findings add to our previous RCT phase 3 results showing that PC-PEP significantly improves urinary function among men with curative disease.

MP 7.11. Table 1. Sample characteristics at pre- and post-PC-PEP among 186 Canadian patients diagnosed with prostate cancer

	Baseline (pre-intervention) (n=186)
Age (years)	186, 66 (7) [48–85]
Household income, >\$100 000 CAD/past year	91, 49%
Race, White	169, 91 %
Education, university bachelor’s degree or above	106, 57%
Employed (part of full time)	69, 37%
Relationship status (currently in a relationship)	167, 90%
IPSS sum scores, baseline	186, 11.88 (7.81) [1–36]
IPSS sum scores, 6 months	186, 10.32 (6.65) [1–34]
Stage of cancer at diagnosis	
I	22, 12%
II	27, 15%
III	19, 10%
IV	15, 8%
Don’t know	103, 55%
Treatment(s) received at time of enrolment	
Radical prostatectomy	41, 22%
Radiation therapy	27, 14.6%
Radiation therapy (salvage)	6, 3%
Active surveillance	15, 8.1%
No treatment received yet	97, 52.3%
Total comorbidities	186, 2.5 (1.6) [1–10]
Current cigarette smoker	11, 6%
Metastatic	12, 6.5%

Summary statistics are presented as n, mean, standard deviation is presented in round brackets and range is presented in squared brackets, and n (%) for categorical data.

MP 7.12

Stereotactic radiation in oligoprogressive metastatic prostate cancer

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Introduction: In the setting of metastatic prostate cancer, a next-line systemic agent is usually advocated upon disease progression; however, in some cases, stereotactic radiation can potentially delay the change of systemic therapy. This study aimed to evaluate the practice patterns and outcomes in patients with metastatic prostate cancer receiving stereotactic ablative radiation (SABR) for oligoprogressive disease (oMPC) in the province of British Columbia.

Methods: Patients with metastatic prostate cancer receiving stereotactic ablative radiotherapy (SABR) for oligoprogressive disease (defined as radiographic progression at 1–5 metastatic sites) were included in this population-based analysis. Patients were identified using the provincial SABR protocol database and provincial SABR database for patients treated on-trial, as well as the radiation therapy data warehouse for patients treated off-trial.

Results: Thirty patients were analyzed, including 11 treated with SABR in the metastatic castration-sensitive prostate cancer (mCSPC) setting (six patients received treatment intensification in mCSPC, beyond androgen deprivation therapy [ADT]) and 19 treated in metastatic castration-resistant prostate cancer (mCRPC) setting. The most widely used systemic agent in mCRPC was enzalutamide (46.7%), followed by abiraterone (30%), docetaxel (26.7%), and radium-223 (Ra223) (20%). Two patients received SABR for oligoprogression at two sites, with the remaining patients receiving SABR for single-site oligoprogression. Six patients received two consecutive rounds of SABR to remain on the same line of therapy. Two patients received a second round of SABR in a different systemic therapy setting. The most common site where SABR was used was the vertebra (50%), followed by non-vertebral bones (25%) and lymph nodes (12.5%). The median time between SABR and initiation of a new systemic therapy agent was 378 (mean 637, CI 413–861) days. Analyzing the total systemic therapy duration for the line of therapy that SABR was employed for mCRPC setting patients (total 19 patients), the median duration was 850 (mean 974, CI 662–1286) days. Enzalutamide was the most frequently used agent (13/19 patients) when SABR was employed.

Conclusions: This population-based analysis suggests that SABR is a feasible treatment modality in mCRPC, and may help to extend the duration on a line of systemic therapy.

Acknowledgements: Accepted as a poster at BC Cancer Summit 2023.

MP 7.13

Statin use and oncologic outcomes in a propensity-matched secondary analysis of the ARAMIS trial

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Introduction: Statin medications have garnered attention for their potential to inhibit prostate cancer (PCa) initiation and progression. While observational studies suggest positive associations between statin use and favorable PCa outcomes, data from randomized controlled trials remain inconclusive, particularly in advanced settings like non-metastatic castration-resistant prostate cancer (nmCRPC). Our study explored the relationship between statin use and survival outcomes in the context of the phase III ARAMIS trial.

Methods: We reviewed all 1509 patients in the ARAMIS trial. Statin use was identified at baseline and we used a propensity score-matching model to match two non-statin users to one statin user using the nearest neighbor matching algorithm with a caliper width of 0.2 times the standard deviation of the propensity scores. To ensure the cohort was well-matched, we plotted the propensity score distribution between the statin and non-statin users. Kaplan-Meier curves were plotted for the primary endpoint (metastasis-free survival [MFS]) and secondary endpoints. A multivariate Cox proportional hazards model was fitted for each

outcome using the propensity-matched cohort and incorporating statin use and all covariates to control for potential confounders.

Results: Of the 1509 patients in ARAMIS, 334 (22.1%) were statin users at baseline. We matched 869 patients: 309 statin users and 560 non-users. The characteristics of the matched cohort appeared well-balanced. Among non-users, 376 (67.1%) and 184 (32.8%) were in the ARAMIS darolutamide and placebo arms, respectively. Among statin users, 183 (59.2%) and 126 (40.7%) were in the ARAMIS darolutamide and placebo arms, respectively. Overall, we found no significant difference in MFS between statin users and non-users (HR 1.07, 95% CI 0.82–1.39, $p=0.609$); however, we found significant interaction between statin use and ARAMIS trial arm. Specifically, statin use had a stronger association with MFS in the placebo arm ($p=0.047$); however, this is likely coincidental and due to the statin-placebo patients having higher nodal positivity than the non-statin-placebo patients (14.3% vs. 7.4%). Statin use was similarly not associated with the secondary outcomes PSA progression-free survival ($p=0.13$), time-to-pain progression ($p=0.81$), or overall survival ($p=0.4$).

Conclusions: In our secondary analysis of the ARAMIS trial, statin use was not associated with MFS, nor any secondary outcomes. The unexpected decline in MFS was observed in statin users on placebo, potentially linked to a higher incidence of nodal metastases in this subgroup. These results suggest pursuing further statin synergies with amide-based androgen receptor axis target agents may not be fruitful.

MP 7.14

Predictive value of prostate-specific antigen density in PSMA PET staging for high-risk prostate cancer with negative conventional imaging

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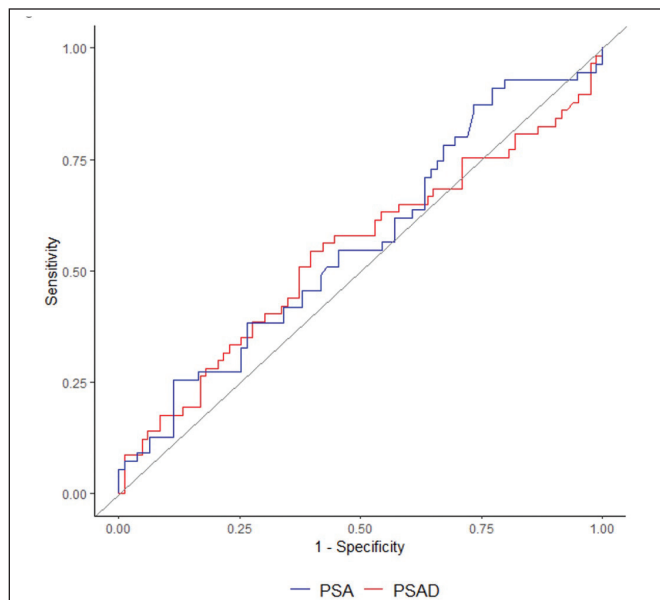
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Introduction: This study aimed to evaluate the predictive capability of prostate-specific antigen density (PSAD) in identifying metastatic disease on PSMA PET scans during the initial staging of men diagnosed with high-risk prostate cancer (PCa) but exhibiting negative findings on conventional imaging. Although PSAD has been shown to assist in identifying patients at a heightened risk of clinically significant PCa, as well as predicting extracapsular extension and lymph node metastasis in those with high-risk disease, its application in triaging high-risk PCa patients with negative conventional imaging for PSMA PET CT scans has remained unexplored.

Methods: A retrospective cohort study was done at the University Health Network in Toronto, Canada. All consecutive men who underwent 18F-DCFPyl PSMA PET/CT for primary staging between January 2018 and December 2022 were included. Student's t-tests or Mann-Whitney U tests were used for comparison of continuous variables by PSMA PET positivity status. Receiver operating characteristic curve analysis to compare PSA and PSAD performance and Chi-squared automatic interaction detector methodologies were used to identify predictors of metastatic disease on PSMA PET scan.

Results: One hundred and forty consecutive men diagnosed with high-risk PCa and displaying negative findings in conventional imaging were included in this study. Their median age was 68 (IQR 63–74) years. The median PSA and PSAD were recorded as 13.9 (IQR 6.9–29.5) and 0.36 ng/ml² (IQR 0.19–0.83), respectively. PSMA PET exhibited positivity in 40% of these men. The AUC for predicting metastatic disease on PSMA PET was 0.56 for PSA and 0.55 for PSAD ($p=0.57$) (Figure 1). Notably, the optimal Youden's index for PSAD was 0.4 ng/ml², providing 54% sensitivity and 60% specificity in detecting metastatic disease on PSMA PET. Patients with metastatic disease on PSMA PET were more likely to have higher Gleason grade group (GG) scores (53 vs. 20% GG5, $p<0.001$), extra-prostatic extension (19 vs. 6%, $p=0.03$), and perineural invasion (65 vs. 45%, $p=0.03$) on biopsy.

Conclusions: PSA density lacks reliable predictive ability to identify patients with high-risk PCa and negative conventional imaging who harbor metastatic disease detectable on PSMA PET. Consequently, the use of PSAD as the sole determinant for selecting patients for PSMA PET staging in this setting is not recommended.



MP 7.14. Figure 1.

MP 7.15

External validation of magnetic resonance imaging- and non-magnetic resonance imaging-based prostate cancer risk calculators in a community setting

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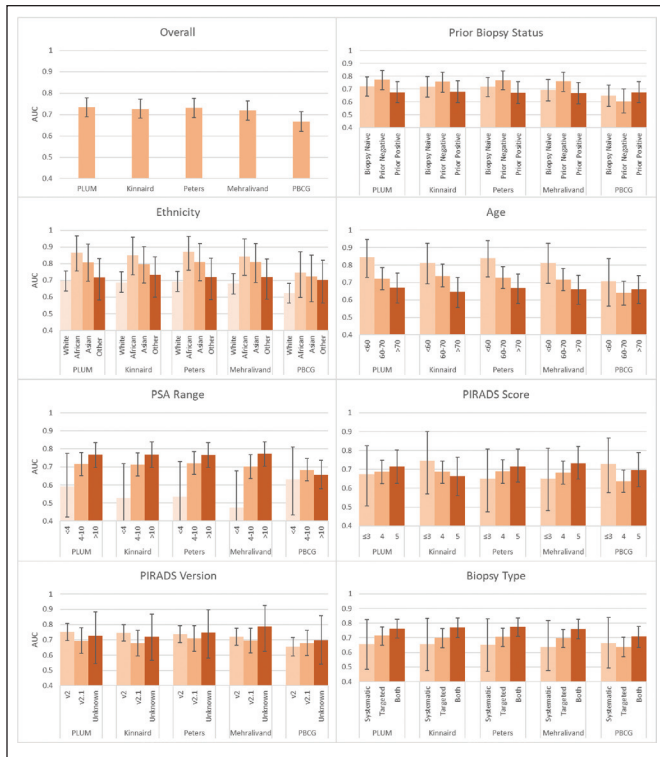
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Introduction: Prostate cancer risk calculators (RCs) predict the likelihood of a patient having clinically significant prostate cancer (csPCa); however, their clinical utility may be limited outside of the reference population in which they were created. This study aimed to externally validate the Prostate Biopsy Collaborative Group (PBCG), Prospective Loyola University mpMRI (PLUM), Kinnaird, Peters, and Mehralivand RCs in a community setting. Furthermore, we compared RC performance among different patient subgroups.

Methods: A retrospective chart review was performed on 489 patients who underwent pre-biopsy prostate MRI and prostate biopsy at a community hospital network from 2017–2023. Risk predictions of csPCa for each RC were calculated and model performance was assessed using area under the receiver operator curve (AUC) and calibration.

Results: A total of 229/489 (47%) patients had csPCa. Performance among the MRI-based RCs were similar, with the PLUM, Kinnaird, Peters, and Mehralivand RCs achieving an AUC of 0.73 (95% CI 0.69–0.78), 0.73 (95% CI 0.68–0.77), 0.73 (95% CI 0.69–0.78), and 0.72 (95% CI 0.67–0.76), respectively. The PBCG RC had an AUC of 0.67 (95% CI 0.62–0.71). Subgroup analysis revealed trends of better RC performance among younger patients and those with a higher PSA. The full subgroup-specific analysis is shown in Figure 1. On calibration, the Mehralivand RC had a tendency to overpredict csPCa, while the PBCG RC had a slight tendency to underpredict csPCa.

Conclusions: Overall, this study demonstrated the clinical efficacy of several published MRI-based RCs when applied in a community setting. It also revealed potential variations in the predictive accuracy of these models across different patient subgroups. Furthermore, this study highlighted the superior performance of these MRI-based RCs over the well-established PBCG RC in cases where MRI data is available.



MP 7.15. Figure 1. Performance of different published prostate cancer risk calculators on 489 patients who received pre-biopsy MRI. Performance was assessed through area under the receiver operating curve.

MP 7.16

Estimating the treatment specific bladder-outlet procedural load after prostate cancer treatment: A population-based analysis

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Introduction: There is a paucity of literature regarding the proportion of patients after prostate cancer treatment that will require a bladder outlet (BO) procedure in the long-term. Our objective was to assess the long-term incidence of BO procedures after various treatment modalities for prostate cancer.

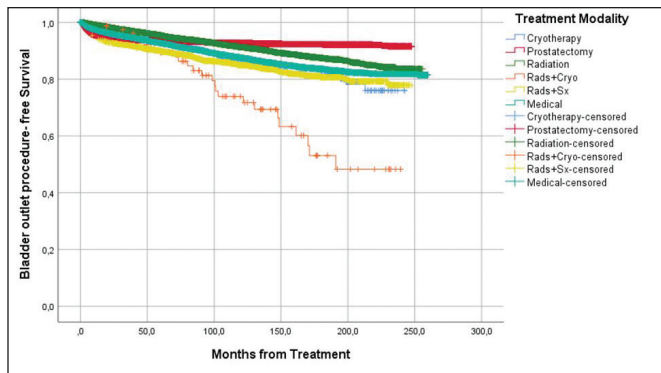
Methods: All men with a diagnosis of prostate cancer from 2002–2021 from The Alberta Cancer Registry were included. Discharge Abstract Data (DAD) and National Ambulatory Care Reporting System (NACRS) were searched for different treatment modalities and urologic procedures. Patients were allocated into six groups: radical prostatectomy (RP), radiotherapy (RT), cryotherapy (Cryo), medical treatment/observation (MT/O), RP+RT or RT+Cryo. BO procedure was defined as any invasive procedure performed at the bladder neck, prostate (including TURP), or urethra (including dilation) after 30 days of treatment (purely diagnostic procedures were excluded). We compared the incidence of interventions among different treatment modalities.

Results: A total of 47 387 patients with prostate cancer were identified at a median age of 66 years; 3821 patients required a BO intervention at a median followup of 75 months. Table 1 shows the cumulative incidence during the observation period. On Kaplan-Meier analysis (Figure 1), the need for BO intervention was different between groups ($p < 0.001$). On multivariable Cox regression analysis including stage ($p < 0.001$), all treatment modalities were associated with a higher risk of BO procedures compared to patients undergoing RP. Specially, RT+Cryo (HR 5.2, $p < 0.001$), RP+RT (HR 2.1, $p < 0.001$), and MT/O (HR 1.7, $p < 0.001$) posed the highest risk. The mean number of interventions needed was 1.8, which differed among groups ($p < 0.001$). While patients undergoing MT/O had 1.4 procedures, those that underwent combined therapy (RP+RT, RT+Cryo) had a mean of 2.5 procedures done.

Conclusions: The future risk of BO interventions should be considered when counseling patients considering treatment for prostate cancer. Patients undergoing RP have the lowest risk of BO procedures in the long-term, while combined therapies have the highest.

MP 7.16. Table 1. Cumulative incidence of bladder outlet procedures among different treatment modalities

	N	1 year	5 years	10 years	15 years	20 years
Cryotherapy (Cryo)	821	4%	7%	13%	17%	24%
Radical prostatectomy (RP)	10 838	5%	6%	7%	8%	9%
Radiotherapy (RT)	14 488	1%	5%	9%	12%	16%
RT+Cryo	80	0%	11%	26%	47%	52%
RP+RT	2035	5%	10%	15%	19%	23%
Medical/observation	19 124	3%	7%	12%	16%	18%
Global	47 386	3%	6%	10%	13%	15%



MP 7.16. Figure 1. Kaplan-Meier curve for bladder outlet procedure-free survival among different treatment modalities.

MP 7.17

Intraductal prostate cancer affinity for lymphatic-predominant metastases through 18F-DCFPyL-PSMA-PET/CT scans in pre-treatment prostate cancer patients

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Introduction: Intraductal prostate cancer (IDC) is linked to unfavorable oncologic outcomes, marked by distinctive cellular intrinsic pathway changes and intricate immunosuppressive microenvironments that could impact the way cancer spreads. The aim of this study was to determine whether the presence of IDC in prostate biopsy specimens obtained from patients before primary prostate cancer (PCa) treatment is associated with a lymph node metastatic propensity in PSMA-PET/CT.

Methods: Cross-sectional analysis of all prostate cancer undergoing a pre-treatment 18F-DCFPyL-PSMA-PET/CT between January 1, 2016, and August 2021 at The Princess Margaret Cancer Centre. Outcomes were the presence of any metastasis in the overall cohort, the presence of lymphatic vs. no metastases, and the presence of lymphatic vs. bone metastasis among patients that underwent PSMA-PET/CT as PCa primary staging. The associations between IDC presence on the prostate biopsy and the study outcomes were evaluated using univariable and multivariable logistic regression analyses.

Results: The cohort consisted of 120 patients. IDC and cribriform pattern (Crib) were observed in 55 (46%) and 48 (40%) prostate biopsies, respectively.

Overall, 52 patients (43%) had evidence of metastasis. The presence of IDC on biopsy was associated with increased odds of overall metastasis (OR 2.47, 95% CI 1.09–5.61, $p=0.03$). Of the 52 patients with evidence of metastasis, 41 (79%) had evidence of lymphatic metastasis. The presence of IDC on biopsy was associated with significantly increased odds of lymphatic metastasis vs. non-metastases (OR 3.03, 95% CI 1.24–7.40, $p=0.01$).

Conclusions: The identification of IDC morphology in prostate biopsy specimens has been observed to be significantly linked with lymph node metastasis on 18F-DCFPyL-PET/CT imaging in a PCa pre-treatment staging setting.

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Evaluating the pandemic's impact on oncologic results in radical prostatectomy cases: A two-year followup

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Introduction: The healthcare landscape was significantly altered by the COVID-19 pandemic, leading to patient apprehension about visiting hospitals due to infection risks. This uncertainty has raised questions about the impact on cancer diagnosis, treatment delays, and long-term prognosis. Approximately 41% of adults in the U.S. postponed medical care, resulting in fewer diagnostic procedures being performed. Existing research indicates that these delays may contribute to poorer oncologic outcomes, especially in cases related to urology. Our study sought to evaluate how the pandemic affected patients who underwent surgery during the lockdown period and to explore its potential implications for oncologic outcomes, filling an important gap in knowledge.

Methods: We analyzed data from 422 patients who underwent radical prostatectomy between 2016 and 2022, dividing them into pre-pandemic and pandemic cohorts based on March 16, 2020. The study included two groups: patients before the lockdown ($n=288$) and those during the lockdown ($n=134$). Perioperative variables, histopathologic findings, and oncologic outcomes, such as PSA levels and biochemical recurrence, were examined in the analysis.

Results: During the lockdown, our clinic experienced a noteworthy 24.26% surge in radical prostatectomies. The study comprised patients with an average followup period of 21 months. While there was a trend towards elevated PSA levels upon presentation (14.22 vs. 12.53 ng/dL, $p=0.216$), the difference was not statistically significant. Similarly, no significant disparities were observed in the ISUP grade of radical prostatectomy specimens ($p=0.669$); however, there was a notable increase in lymph node involvement during the COVID-19 period ($p=0.046$). Although not statistically significant, there was a tendency towards higher pT classification in prostatectomy specimens during the pandemic. Biochemical recurrence rates stood at 24.6% before the lockdown and 29.9% during the lockdown ($p=0.136$).

Conclusions: The COVID-19 pandemic had a significant impact on oncology patients, leading to delayed treatment initiation due to disruptions in the healthcare system. This study underscores the importance of recognizing that even relatively short delays of several months can influence long-term oncologic outcomes. Further multi-institutional studies with longer followup periods are needed to better understand the true impact of the pandemic on the oncologic population and, subsequently, the effects of delayed oncologic treatment.