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POD 3.1

Disparities in prostate cancer screening, diagnoses, management, and outcomes between Indigenous and non-Indigenous men in a universal healthcare system

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Introduction: Indigenous Peoples have higher morbidity rates and lower life expectancies than non-Indigenous Canadians. We aimed to identify disparities between Indigenous and non-Indigenous men regarding prostate cancer (PCa) screening, diagnoses, management, and outcomes.

Methods: We studied an observational cohort of men diagnosed with PCa between June 2014 and October 2022. Men were prospectively enrolled in the province-wide Alberta Prostate Cancer Research Initiative. The primary outcomes were tumor characteristics (stage, grade, PSA) at diagnosis. Secondary outcomes were PSA testing rates, time from diagnosis to treatment, treatment modality, metastasis-free, cancer-specific, and overall survivals.

Results: We examined 1 444 974 men for whom aggregate PSA testing data were available. Men in Indigenous communities were less likely to have PSA testing performed than men outside of Indigenous communities (32 vs. 46 PSA tests per 100 men [aged 50–70] within one year, p<0.001). Among 6049 men diagnosed with PCa, Indigenous men had higher-risk disease characteristics: a higher proportion of Indigenous men had PSA 10 ng/ml (48% vs. 30%, p<0.01), TNM stage T2 (75% vs. 47%, p<0.01), and Gleason grade group ≥2 (79% vs. 64%, p<0.01) compared to non-Indigenous men. With a median followup of 40 (IQR 25–65) months, Indigenous men were at higher risk of developing PCa metastases (HR 2.2, 95% CI 1.2–3.9, p=0.01) than non-Indigenous men.

Conclusions: Despite receiving care in a universal healthcare system, Indigenous men were less likely to receive PSA testing and more likely to be diagnosed with aggressive tumors and develop prostate cancer metastases than non-Indigenous men.

Acknowledgements: Alberta Cancer Foundation, University Hospital Foundation, The Bird Dogs.

POD 3.2

Niraparib with abiraterone acetate and prednisone in patients with metastatic castration-resistant prostate cancer and altered homologous recombination repair genes: MAGNITUDE second interim analysis

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Introduction: In the MAGNITUDE study, niraparib with abiraterone acetate and prednisone (NIRA/AAP) significantly improved outcomes in patients (pts) with homologous recombination repair (HRR) gene-altered metastatic castration-resistant prostate cancer (mCRPC). Here, secondary interim analysis (IA2) is reported.

Methods: A total of 423 eligible pts with HRR gene-altered mCRPC (HRR+ cohort) were randomized 1:1 to receive NIRA/AAP (n=212) or placebo (PBO)/AAP (n=211). At the prespecified IA2, secondary endpoints (time to cytotoxic chemotherapy [TCC], time to symptomatic progression [TSP], and overall survival [OS]) were formally assessed and the primary rPFS endpoint was updated in HRR+ cohort, with sensitivity analysis performed for the subgroup of pts with BRCA alterations.

Results: rPFS results at IA2 (cutoff: June 17, 2022) were consistent with the HRR+ cohort primary analysis. In BRCA+ pts, NIRA/AAP extended median rPFS

POD 3.2. Table 1. MAGNITUDE endpoints at second interim analysis

Endpoints at IA2	All HRR+			BRCA+		
	Median (mos)		HR (95% CI) p	Median (mos)		HR (95% CI) p
	NIRA/AAP	PBO/AAP		NIRA/AAP	PBO/AAP	
rPFS	16.7	13.7	0.76 (0.60, 0.97) 0.0280*	19.5	10.9	0.55 (0.39, 0.78) 0.0007*
TSP	NR	30.6	0.60 (0.42, 0.84) 0.0029^	NR	23.6	0.54 (0.35, 0.85) 0.0071*
TCC	NR	NR	0.67 (0.47, 0.94) 0.0206	NR	27.3	0.56 (0.35, 0.90) 0.0152*
OS primary stratified analysis	–	–	1.01 (0.75, 1.36) 0.948	–	–	0.88 (0.58, 1.34) 0.5505*
OS multivariate analysis	–	–	0.82 (0.60, 1.10) 0.1821*	–	–	0.68 (0.45, 1.05) 0.0793*

*Nominal p-value. ^Statistically significant.

to 19.5 months (mos) vs. 10.9 mos with PBO/AAP. NIRA/AAP led to statistically significant benefit in TSP in the HRR+ cohort with consistent benefit in BRCA+ pts. Both HRR+ and BRCA+ pts showed continued consistent improvement of TCC with NIRA/AAP. Primary stratified and multivariate analyses showed a trend towards improved OS with NIRA/AAP in BRCA subgroup (Table 1). BRCA+ pts treated with NIRA/AAP experienced delayed time to worst pain intensity (HR 0.70, 95% CI 0.44, 1.12, nominal p=0.1338) and pain interference (HR 0.67, 95% CI 0.40, 1.12, nominal p=0.1275) compared to PBO/AAP. The safety profile at IA2 was consistent with primary analysis, with no new safety signals.
Conclusions: At the IA2 for the MAGNITUDE study, there remained a consistent benefit of NIRA/AAP vs AAP on primary endpoint of rPFS. There was a statistically significant and clinically meaningful benefit in TSP, a clinically meaningful benefit in TCC, and a trend to improved OS with NIRA/AAP. These data continue to support NIRA/AAP use in mCRPC with BRCA or select other HRR gene alterations.
Acknowledgements: Funding was provided by Janssen Pharmaceuticals. This abstract was originally presented at the American Society of Clinical Oncology-Genitourinary Cancers Symposium on February 16, 2023.

POD 3.3

Multiparametric MRI-targeted biopsy compared to systematic TRUS biopsy for biopsy-naive men at risk for prostate cancer: 2-year followup data and economic analysis

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Introduction: The PRECISE study, a prospective, randomized trial, demonstrated that MRI with only targeted biopsy was non-inferior (NI) to systematic transrectal ultrasound (TRUS) biopsies in the detection of ISUP GG ≥2 prostate cancer.[1] An unanswered question is the outcome in those patients who avoided a biopsy due to a negative MRI. We sought to address the outcome of patients in this trial who were unbiopsied or had a negative or GG1 targeted biopsy, compared to those whose systematic biopsy was negative or GG1, with respect to the rate of subsequent prostate cancer diagnosis based on a two-year MRI performed in all patients. In addition, we used administrative provincial data to compare the net costs of systematic biopsy vs. MRI and targeted biopsy.
Methods: The study was carried out at five Canadian academic health science centers. All men in the PRECISE trial were not diagnosed with clinically significant prostate cancer at baseline. The PRECISE trial accrued 453 biopsy-naive men with a clinical suspicion of prostate cancer, advised to have a prostate biopsy. All those not diagnosed with GG≥2 prostate cancer (unbiopsied due to a negative MRI, or a negative biopsy, or GG1 disease if biopsied) were entered in the followup study. All Ontario patients were entered in the economic analysis. Intervention was two-year MRI in all men (both MRI and systematic biopsy groups). Targeted biopsy was performed for Pi-RADS ≥3 or based on clinical suspicion. The main outcome measure was the proportion of men diagnosed with GG ≥2 cancer. Secondary outcomes included MRI outcome and the proportion diagnosed with GG1 PCa. (Registration: ClinicalTrials.gov Identifier: NCT02936258.)
Results: Seventy-three patients in the MRI arm and 69 patients in the systematic biopsy arm had a two-year evaluable MRI. In the MRI and systematic biopsy arm, 70% and 72% had a negative two-year MRI, respectively. Of the 16 patients in the systematic biopsy arm who had a two-year biopsy, eight were negative, two were GG1, and six were GG ≥2. In the MRI arm, eight were biopsied; four were negative and four were GG ≥2. At two years, in the systematic biopsy and MRI groups, respectively, 27% and 30% either were diagnosed with G7 disease, treated, died, or progressed. Fifteen percent from the TRUS biopsy group had a hospital visit after biopsy compared <6% from the MRI+ group. The mean per-person per-year (PPPY) costs for the TRUS and all MRI groups (MRI- and MRI+) were $7828 and $8525, respectively.
Conclusions: After two years of followup, including an MRI in all patients, there was no difference in the rate of clinically significant prostate cancer diagnosis between the MRI with only targeted biopsy and systematic biopsy groups, despite 40% of men in the MRI group avoiding biopsy. These patients will be followed for an additional six years to confirm this finding. Economic analysis using a linked databased demonstrated no significant difference in net cost between the two strategies.
Acknowledgements: This study was co-funded by the OICR and the CCS.
Reference:
1. Klotz L, Chin J, Black PC, et al. Comparison of multiparametric magnetic resonance imaging-targeted biopsy with systematic transrectal ultrasonography biopsy for biopsy-naive men at risk for prostate cancer: A phase 3 randomized clinical trial. *JAMA Oncol* 2021;7:534-42. https://doi.org/10.1001/jamaoncol.2020.7589

POD 3.4

The comprehensive Prostate Cancer-Patient Empowerment Program (PC-PEP) improves urinary function among men undergoing curative prostate cancer treatment: Secondary analysis of a randomized clinical trial

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Introduction: This secondary analysis examines the effects of the six-month home-based Prostate Cancer-Patient Empowerment Program (PC-PEP) on patient-reported urinary, bowel, sexual, and hormonal function among men scheduled for curative prostate cancer (PC) treatment.
Methods: A total of 128 men scheduled for PC surgery (n=62) or radiotherapy ± hormones (n=66) were randomized to PC-PEP (n=66) or standard of care (n=62). PC-PEP comprises regular strength training, dietary advice, and meditation, in addition to a baseline meeting with a pelvic floor muscle training (PFMT) nurse. 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. Men in the PC-PEP arm completed weekly online compliance surveys. All participants completed the International Prostate Symptom Score (IPSS) and Expanded Prostate Cancer Index Composite (EPIC) questionnaires at baseline and six months.
Results: The PC-PEP and control groups were similar in age, cancer stage, and baseline IPSS and EPIC scores (Table 1). On average, the PC-PEP group reported performing PFMT 21 minutes per day (Table 2). At six months, the PC-PEP group had marginally improved IPSS score when compared to the control group (p=0.059 calculated by multivariate analysis); however, the IPSS bother score was significantly improved in the PC-PEP group vs. control (p=0.004). Moreover, the EPIC urinary incontinence (p<0.001) and irritative/obstructive (p=0.008) scores favored the PC-PEP group, whereas EPIC bowel (p=0.32), sexual (p=0.36), and hormone function (p=0.6) showed no difference between the two groups (Figure 1, Table 3).
Conclusions: PC-PEP, a comprehensive, six-month, home-based empowerment program, appears to significantly improve lower urinary tract symptoms in men scheduled for curative PC treatment. These findings add to our previous results showing that PC-PEP significantly improves patient mental health.

POD 3.5

Clinical utility of ^{18}F-DCFPyL PET/CT in biochemical failure after radical prostatectomy and predictors of positivity

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Introduction: ^{18}F-DCFPyL PET/CT(^{18}F-PET) has emerged as a useful tool in biochemical failure (BCF) after radical prostatectomy (RP), although there is a substantial rate of negative studies. The clinical utility and predictors of positivity are reviewed herein.

POD 3.4. Table 1. Sample characteristics at baseline between the Prostate Cancer–Patient Empowerment Program (PC–PEP) intervention and control waitlist groups, among 128 prostate cancer patients undergoing curative-intent treatment in Nova Scotia, Canada

	Overall (n=128)	PC-PEP intervention (n=66)	Control (n=62)
IPSS sum scores	128, 9.01 (6.2) [1–29]	66, 8.6 (6.4) [1–29]	62, 9.3 (5.9) [1–27]
IPSS bother sum scores	128, 2.1 (1.5) [0–6]	66, 2.02 (1.5) [0–6]	62, 2.1 (1.5) [0–6]
EPIC urinary incontinence	128, 92.3 (14.2) [96–104]	66, 93 (14) [23–100]	62, 92 (14) [48–100]
EPIC urinary irritative/obstructive	128, 89 (12) [50–100]	66, 90 (12) [50–100]	62, 88 (12) [50–100]
EPIC bowel function	128, 95 (9.4) [46–100]	66, 95 (9) [58–100]	62, 94 (10) [46–100]
EPIC sexual function	128, 57.1 (28) [0–100]	66, 57 (28) [8–100]	62, 57 (28) [0–100)
EPIC hormonal function	128, 92 (9.4) [55–100]	66, 92 (9.9) [55–100]	62, 92 (9.03) [60–100]
Age (yr)	128, 66 (7) [50–82]	66, 65 (7) [50–78]	62, 67 (7) [51–82)
Household income at baseline, >30 000 CAD/past year	106, 83%	54, 82%	52, 84%
Race, White	121, 95%	60, 91 %	61, 98%
Education, university or above	68, 53%	31, 47%	37, 60%
Employed (part of full-time)	45, 35%	22, 33%	23, 37%
Relationship status (married/currently in a relationship)	120, 94%	59, 89%	61, 98%
Stage of cancer			
Risk category (RP+primary RT±HT)[a]			
Low	3, 2.3%	1, 1.5%	2, 3.2%
Intermediate	82, 71%	42, 75%	40, 67%
High	31, 26%	13, 23%	18, 30%
PSA (ng/ml)	12, 8 (6–10) [3–22]	10, 8 (6–9) [3–18]	2, 8 (6–13) [3–22]
Post-COVID[b] enrolment	101, 79%	51, 77%	50, 81%
Prescribed ADT	48, 38%	27, 41%	21, 34%
Treatment modality			
Radical prostatectomy	62, 49%	29, 44 %	33, 53%
Radiation therapy[c]	54, 42%	27, 41%	27, 44%
Radiation therapy (salvage)[c]	12, 9.4%	10, 15%	2, 3.2%
Charlson Comorbidity Index	128, 3 (2–3) [1–7]	66, 2 (2–3) [1–7]	62, 3 (2–3) [1–5]
Self-identified as cigarette smoker	8, 6.3%	5, 7.6%	3, 4.8%
Time between randomization and treatment (days)	128, 69 (33–100) [3–173]	66, 61 (34–99) [6–138]	62, 73 (29–101) [3–173]
Intake of prescribed medication for depression, anxiety, or both at the time of entering the trial	19, 15%	12, 18%	7, 11%
Absence of cancer recurrence at 6 months post-randomization	121, 95%	63, 96%	58, 94%

Note: There were no statistically significant differences between the two arms at baseline for any of the PROs, sociodemographic or medical covariates. aNational Comprehensive Cancer Network (NCCN). bThe COVID pandemic restrictions began in the Canadian Maritime Provinces: Nova Scotia, New Brunswick and Prince Edward Island on March 16, 2020. cThe Radiation therapy and salvage radiation groups were pooled together to allow for meaningful comparisons. Summary statistics are presented as n, mean (±standard deviation) and range for normally distributed data, n, median and IQR for non–normally distributed data, and n (%) for categorical data. Ranges are added in square brackets at the end.

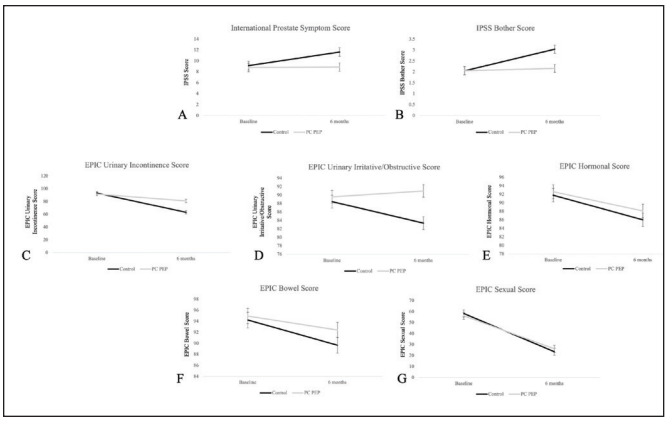
POD 3.4. Table 2. Repeated measures ANOVA evaluating participants' weekly pelvic floor compliance to PC-PEP (weeks 1–26) for the early and late PC-PEP groups (n=128)

Early PCiPEP group: Intervention received from start of the trial (time of scheduled treatment) to 6 months													
Week number	1–26M (SE)	1M (SE)	2M (SE)	3M (SE)	4M (SE)	5M (SE)	6M (SE)	7M (SE)	8M (SE)	9M (SE)	10M (SE)	11M (SE)	12M (SE)	13M (SE)	p
Pelvic floor exercises (Kegels) (suggested 7 days a week, 3 times a day, for 8 minutes/day)															
Nr. of days/week	4.87 (0.22)	5.72 (0.23)	5.39 (0.28)	5.52 (0.28)	5.17 (0.30)	5.00 (0.33)	4.94 (0.30)	4.69 (0.31)	4.95 (0.30)	4.92 (0.29)	5.14 (0.27)	4.80 (0.30)	4.81 (0.31)	4.81 (0.31)	0.03
Avg. min/day	20.19 (1.00)	21.56 (1.56)	20.63 (1.43)	23.14 (1.46)	20.21 (1.42)	20.06 (1.69)	19.06 (1.56)	21.43 (2.24)	23.39 (2.00)	22.15 (1.62)	24.98 (3.24)	19.76 (1.50)	19.31 (1.52)	19.89 (1.49)	0.09
Total min/week	110.53 (8.45)	129.87 (10.29)	118.59 (10.30)	138.59 (11.65)	110.48 (11.22)	113.90 (12.17)	103.96 (11.46)	116.21 (16.19)	126.34 (12.15)	120.55 (11.77)	138.91 (17.87)	107.92 (10.77)	112.75 (11.27)	110.83 (10.88)	0.01
Late PC-PEP group (control): Intervention received from 6- 12 months															
Week number	1–26M (SE)	1M (SE)	2M (SE)	3M (SE)	4M (SE)	5M (SE)	6M (SE)	7M (SE)	8M (SE)	9M (SE)	10M (SE)	11M (SE)	12M (SE)	13M (SE)	p
Pelvic floor exercises (Kegels) (suggested 7 days a week, 3 times a day, for 8 minutes/day)															
Nr. of days/week	5.29 (0.35)	5.82 (0.36)	5.79 (0.37)	5.49 (0.38)	5.64 (0.40)	5.33 (0.43)	5.36 (0.45)	5.73 (0.35)	5.73 (0.39)	5.61 (0.38)	5.58 (0.41)	5.39 (0.42)	5.12 (0.41)	5.09 (0.44)	0.09
Avg. min/day	20.35 (1.72)	19.79 (2.02)	19.21 (2.07)	21.73 (1.85)	19.49 (1.90)	18.91 (2.09)	20.36 (2.16)	21.06 (1.70)	21.36 (1.99)	21.11 (1.95)	21.30 (2.13)	20.71 (2.91)	19.86 (1.92)	19.91 (1.99)	0.48
Total min/week	123.84 (12.63)	120.88 (13.66)	124.46 (14.68)	126.42 (13.55)	123.94 (13.27)	120.85 (14.39)	128.30 (14.66)	128.42 (12.78)	135.61 (15.33)	130.70 (14.20)	136.79 (15.45)	129.83 (20.90)	121.47 (15.31)	123.61 (14.91)	0.48

POD 3.4. Table 3. Results of the two-level linear model analysis fitting IPSS score, IPSS bother score, EPIC urinary incontinence, EPIC urinary irritative/obstructive, EPIC-bowel, sexual and hormonal function among prostate cancer patients evaluating differences between groups (waitlist control vs. PC-PEP) by time

Level	Parameter estimate	95% CI		p
		Lower	Upper	
	IPSS sum scores			
Group (control vs. PC-PEP)	2.8	0.58	4.9	0.013
Time (baseline vs. 6 months)	-0.076	-1.8	1.7	0.9
Time x group (PC-PEPl)	-2.4	-4.9	0.097	0.059
	IPSS bother sum scores			
Group (control vs. PC-PEP)	0.88	0.35	1.40	0.001
Time (baseline vs. 6 months)	-0.11	-0.51	0.30	0.6
Time x group (PC-PEP)	-0.88	-1.46	-0.29	0.004
	EPIC urinary incontinence sum scores			
Group (control vs. PC-PEP)	-18	-25	-11	<0.001
Time (baseline vs. 6 months)	11	3.9	17	0.002
Time x group (PC-PEP)	20	10	29	<0.001
	EPIC urinary irritative/obstruction sum scores			
Group (control vs. PC-PEP)	-7.6	-12	-3.4	<0.001
Time (baseline vs. 6 months)	-1.4	-4.7	1.9	0.406
Time x group (PC-PEP)	6.5	1.7	11	0.008
	EPIC bowel sum scores			
Group (control vs. PC-PEP)	-2.8	-6.7	1.2	<0.001
Time (baseline vs. 6 months)	2.5	-0.3	5.3	0.079
Time x group (PC-PEP)	2.03	-2.02	6.09	0.323
	EPIC sexual sum scores			
Group (control vs. PC-PEP)	-2.67	-11.6	6.23	0.555
Time (baseline vs. 6 months)	30.0	22.67	37.36	<0.001
Time x group (PC-PEP)	4.84	-5.71	15.39	0.365
	EPIC hormonal sum scores			
Group (control vs. PC-PEP)	-2.08	-6.6	2.4	0.4
Time (baseline vs. 6 months)	4.6	1.4	7.7	0.005
Time x group (PC-PEP)	1.3	1.4	7.7	0.6

Note: Control was treated as reference group. Models included group, time (month), treatment modality (surgery vs. radiation), relationship status (not in a relationship vs. currently in a relationship), Charlson Comorbidity Index, prescribed medication for depression, anxiety, or both (yes vs. no), and days between randomization and treatment.



POD 3.4. Figure 1. Graphical comparison of average (A) IPSS score; (B) IPPS bother score; (C) EPIC urinary incontinence scores; (D) EPIC urinary irritative/obstructed scores; (E) EPIC hormonal scores; (F) EPIC bowel scores; and (G) EPIC sexual scores between the control group (black lines) at baseline and 6 months from treatment start. All values are estimated marginal means, controlled for the following covariates: patient age, time between randomization and treatment (surgery or radiation), and Charlson Comorbidity Index.

Methods: As part of the five-center, prospective PREP registry*, funded by Ontario Health for several clinical scenarios, we included our single-center post-RP patients who had an ^{18}F-PET between November 2018 and September 2020. Patient demographic, histological, radiological, and treatment data were analyzed.
Results: Three groups were identified from 278 patients. G1 (n=19, comprising 6.8%): node-positive or persistently detectable prostate-specific antigen (PSA) after RP; G2 (n=145, comprising 52.2%): BR after initial RP; and G3 (n=114, comprising 41.0%): BR after RP with adjuvant or salvage pelvic radiation therapy. The majority (76.6%) had ISUP 2 or 3 cancers. Positive studies were found in 133 (47.8%), of which 126 showed new lesions not identified previously with conventional imaging. Among these 126, 13 (4.7%) had local recurrence, 93 (33.5%) had oligometastatic disease, and 27 (9.7%) showed extensive metastatic disease. Scan results suggested potential management change in 153 patients (55%), of which 68 had a negative ^{18}F-PET. Binary logistic regression analysis was performed to identify predictors of positivity with PSA levels prior to PET (PSAprePET) ($p \leq 0.001$), PSA level prior to surgery (PSApreSur) ($p=0.007$), PSA doubling time prior to PET ($p=0.05$), and those diagnosed with ISUP ≥3 ($p=0.027$). ROC curves to identify best-related cutoff points for positive PET findings showed the only curve with a significant AUC (0.797) was for the PSAprePET. Curves were made using this variable among the three groups, identifying optimal sensitivity (sens) and specificity (spec) levels with PSA of 0.4 ng/dL for G1 (sens 87.5% and spec 87.5%) and G2 (sens 73.6% and spec 78.3%), and PSA of 1 ng/dL for G3 (sens 66.2% and spec 65.1%).
Conclusions: ^{18}F-PET is valuable for identifying disease possibly leading to management changes in patients with BCR after PR, with both positive and negative scan results. The best predictor for a positive study is PSAprePET levels, with cut-off points of 0.4 ng/dL after RP, and 1 ng/dL after RP and adjunctive radiotherapy.
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Reference:

1. Metser U, Zukotynski K, Mak V, et al. Effect of 18F-DCFPyL PET/CT on the management of patients with recurrent prostate cancer: Results of a prospective, multicenter registry trial. *Radiology* 2022;303:414-22. https://doi.org/10.1148/radiol.211824

POD 3.6

Transperineal targeted biopsy clinically significant prostate cancer detection and complications rate: Single-center experience in Canada

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Introduction: Most men diagnosed with prostate cancer undergo a prostate biopsy. The transrectal route (TR) is currently the most common technique in most countries but transperineal biopsy (TPBx) is increasingly being used. The aim of this study was to assess our center's detection rate of clinically significant PCa (csPCa) with the use of magnetic resonance imaging-targeted TP biopsy (MRI -TPBx) and post-biopsy infection and other complication rates.
Methods: We retrospectively included all men with suspicious lesions on MRI, an elevated PSA level, or a suspect digital rectal exam undergoing MRI-TPBx at the Jewish General hospital (Montreal, QC) from January 2020 to July 2022. All patients received antibiotic prophylaxis and local anesthesia before the procedure.
Results: We included 312 patients with a median age of 66 years (44–87), a PSA of 7.26 ng/mL (0.5–282), and a prostate volume of 44 cc (10–460). Overall PCa detection rate was 189 out of 312 (60%). Overall Clinically significant cancer detection rate of TP for PI-RADS 3, 4, and 5 was 9.1%, 51.5%, and 68.5%, respectively. Overall clinically significant cancer detection rate of TP was 86.7% for anterior lesions and 78.3% for posterior lesions. Two patients (0.6%) developed a post-biopsy urinary tract infection, four patients had urinary retention, and one had hematuria. No patients experienced urosepsis or admissions post-biopsy (Tables 1, 2).
Conclusions: TPBx sepsis can be avoided using transperineal approach under local anesthesia with equivalent cancer detection rate and better sampling of anterior tumors.

POD 3.6. Table 1

	Number of patients	csPCa	ncsPCa	-ve Bx	Ant.cs	Post.cs	Both
PI-RADS 5	73	50 (68.5%)	6 (8.2%)	17 (23.2%)	27/ 50 (54%)	19 /50 (38%)	4 /50 (8%)
PI-RADS 4	161	83 (51.5%)	19 (11.8%)	58 (36%)	34/83 (41%)	45/83 (54.2%)	4/83 (4.8%)
PI-RADS 3	44	4 (9.1%)	0 (0%)	40 (90%)	3/4 (75%)	1/4 (25%)	0 (0%)

POD 3.6. Table 2

	Anterior	Posterior	Anterior first Bx	Posterior first Bx	Anterior with previous -ve TR-Bx	Posterior with previous -ve TR-Bx	MRI tumor size 0–0.5 cm	MRI tumor size 0.5–1 cm	MRI tumor size 1–1.5 cm
csPCa	72/83 (86.7%)	72/92 (78.3%)	29/75 (38.6%)	37/75 (49.3%)	36/81 (44.4%)	39/81 (48.1%)	10/189 (5.3%)	46/189 (24.3%)	83/189 (54%)