

Association des Urologues du Québec Congrès Annuel 2026 – Résumés

Session scientifique I

Vendredi 6 novembre 2026 • Friday, November 6, 2026

Cité comme suit : *Can Urol Assoc J* 2026;20(11 Suppl3):S135-8. <http://dx.doi.org/10.5489/auqj.10113>

Opposing effects of high-fat diet by physical activity on the progression of prostate cancer

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Introduction: Therapeutic strategies to treat prostate cancer (PCa), such as androgen deprivation therapy (ADT), have limited success in PCa management and often lead to obesity. Obese men have a higher risk of developing PCa, which could partially be due to altered composition of intestinal microbiota. Considering that losing excess weight is not easy in aged men, complementary treatment like physical activity (PA) might impede PCa growth; however, whether PA can execute this function under obese conditions (e.g., high-fat diet [HFD]) and the underlying mechanisms are not known. We hypothesize that PA prevents PCa progression under obese conditions by altering lipid, inflammatory cytokines, and intestinal microbiota.

Methods: Using NRG mice, we followed the effect of HFD and PA on metabolomics and immunohistochemistry (IHC). Using blood and feces, we monitored metabolites and microbiota changes in response to HFD and PA. We also followed the response to enzalutamide in microfluidic devices and treating MDTs.

Results: Our preliminary findings have shown that in mice on HFD, PA does show a trend of reducing tumor growth and a delay in tumor growth. Furthermore, analysis of the fecal samples of the mice showed evolution of the microbiota in response to PA and diets. Analyzing lipid species also revealed lowered levels of diacylglycerol and ceramides in response to PA.

Conclusions: We postulate that PA, by modulating lipid metabolism in tumors and adipose tissue and affecting gut microbiota composition, may mitigate the negative effects of HFD. Our study will provide information on how PA reprograms the adipose-muscle-microbiota axis in prostate cancer. The discovered pathways likely reveal novel drug targets, enabling the design of therapies and microbiota-targeted interventions that recapitulate the tumor-suppressive effects of exercise without requiring patient adherence to exercise regimens.

Alcohol consumption and prostate cancer risk: A prospective analysis of the BIOmarkers of Prostate Cancer/Prevention and Environment cohort

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Introduction: Alcohol consumption is a modifiable risk factor associated with several chronic diseases; however, its relationship with prostate cancer (PCa) remains inconsistent. This study aimed to evaluate associations between alcohol consumption, including total intake and beverage type, and PCa risk.

Methods: Between 2013 and 2020, 2053 men at risk of PCa were enrolled in the prospective, multicenter, observational Biomarkers of Prostate Cancer/Prevention and Environment (BioCaPPE) study. At baseline, alcohol intake was assessed using a validated web-based food frequency questionnaire. Incident PCa

cases were identified through annual medical record review. Cox proportional hazards models estimated hazard ratios (HR) for total alcohol and beverage-specific intake in relation to PCa risk.

Results: Alcohol intake data were available for 1909 participants. Over a median followup of 6.2 years (IQR 4.4–7.8), 310 PCa cases were diagnosed, including 99 high-risk cases (ISUP grade group ≥ 3). Higher total alcohol consumption (>23.3 g/day, equivalent to >1.7 standard drinks/day), was associated with an increased risk of PCa (HR 1.46; 95% CI 1.03–2.07, $p=0.032$). Wine consumption (≥ 7 glasses/week) was also associated with an increased PCa risk (HR 1.49, 95% CI 1.05–2.12, $p=0.027$), driven primarily by red wine (HR 1.55, 95% CI 1.03–2.35, $p=0.035$). Spirit consumption was also associated with an increased risk of PCa (HR 1.29, 95% CI 1.02–1.64, $p=0.035$). Total alcohol intake was associated with low-risk PCa (HR 1.50, 95% CI 1.02–2.20, $p=0.039$), with no significant association for high-risk PCa. No associations were found for beer or liqueurs.

Conclusions: Alcohol consumption, particularly red wine, was associated with increased PCa risk, mainly low-risk disease. Consistent with Canadian guidelines, these findings highlight the need for further research on beverage-specific effects and support integrating alcohol into PCa prevention strategies.

Parental leave practices among urologists and trainees in Canada

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Introduction: Paid parental leave is associated with lower infant mortality, improved maternal health, and higher rates of breastfeeding. Physicians and surgeons face barriers in taking leave, including demanding work culture, restrictive policies, and financial constraints. This study assessed parental leave practices among Canadian urologists and trainees and identified factors that influence family building.

Methods: A survey on family planning and parental leave experiences was distributed to Canadian urologists and trainees. An anonymous, 18-item questionnaire of multiple-choice and open-ended questions was developed in RedCAP and distributed through residency programs, the Society of Academic Urologists, the Canadian Society of Women in Urology, and the Association des Urologues du Québec. Respondents with children answered an additional 10-item survey for each child. Data was collected from March 2026 to May 2026.

Results: A total of 115 respondents completed the survey, from which 65 with children also completed the child-specific survey. Participants identified as female (52.6%), male (46.5%), or undisclosed (0.9%). Most were practitioners (87%) working in academic (52.6%) or university-affiliated settings (26.3%). Key barriers to family building included long work hours (55.7%), unpredictable work schedules (48.7%), and duty to patients and colleagues (18.3%). A quarter or respondents (25.2%) had access to breastfeeding accommodations upon returning to work. Among respondents with children, 89.2% took parental leave (median 16 weeks, SD 11.8). Just over half (50.8%) rated overall parental leave support, including support from colleagues, hospitals, and professional organizations, as somewhat or very supportive. Comments cited financial strain, limited institutional support, burden on colleagues, and inadequate breastfeeding accommodations.

Conclusions: Parental leave practices among Canadian urologists and trainees are variable and limited by institutional barriers and inadequate return-to-work support. Standardized policies may improve family planning support.

Reconnaissance endoscopique des calculs : formation, pratique et performance — une étude transversale Canada-France

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Introduction : La reconnaissance endoscopique des calculs urinaires (REC) constitue un outil diagnostique important dans la prise en charge des calculs. Bien que largement pratiquée en France, cette approche demeure peu connue mondialement, notamment au Canada. Cette étude visait à évaluer le niveau de connaissance des urologues et résidents en urologie en matière de REC, à mesurer leur intérêt en REC et à comparer la performance entre ces deux pays.

Méthodes : Une étude observationnelle transversale a été conduite au moyen d'un questionnaire en ligne structuré, diffusé auprès des urologues et résidents en urologie au Canada et en France. Les questions portaient sur des données sociodémographiques et professionnelles, les préférences pédagogiques, la perception de l'intelligence artificielle (IA) en contexte diagnostique ainsi qu'une évaluation des connaissances en REC selon sept morphologies de calcul.

Résultats : Au total, 151 participants ont répondu au sondage dont 42 Canadiens et 103 Français. Les groupes différaient significativement en termes de formation en REC (absence de formation : 78,6 % au Canada vs. 32,0 % en France, $p < 0,001$) et d'expérience clinique (< 5 ans : 33,3 % vs. 2,9 %, $p < 0,001$). La performance globale en REC était supérieure chez les participants français (OR 2,42 en ITT, IC 95 % [2,06–2,84], $p < 0,001$). Les deux groupes obtenaient de meilleurs résultats pour l'identification de l'espèce cristalline que pour la morphologie ($p < 0,001$). Les limites incluent l'hétérogénéité du taux de réponse entre les provinces du Canada et le faible pourcentage de réponse global.

Conclusions : Cette étude met en évidence une hétérogénéité importante du niveau de formation et des connaissances en REC. Ces résultats suggèrent un besoin de structuration de l'enseignement de la REC, particulièrement en Amérique du Nord. L'intégration d'outils pédagogiques innovants, incluant potentiellement l'IA, pourrait contribuer à améliorer l'apprentissage et la performance diagnostique.

Les basophiles circulants comme biomarqueur pronostic pour les patients avec cancer de la vessie infiltrant recevant une cystectomie radicale

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Introduction : Le cancer de la vessie est une maladie biologiquement hétérogène avec un éventail thérapeutique en expansion, justifiant le besoin de biomarqueurs accessibles et fiables. Des travaux antérieurs dans nos centres ont montré que les basophiles circulants sont pronostiques dans le cancer de la vessie non infiltrant. On ignore toutefois si les basophiles conservent une valeur pronostique dans un cancer de la vessie infiltrant (TVIM) traité par cystectomie radicale (CR).

Méthodes : Il s'agit d'une étude rétrospective basée sur les données du Vancouver General Hospital (2009–2024) et de l'Hôtel-Dieu de Québec (2009–2023). Les formules sanguines complètes ont été obtenues, incluant les taux absolus de basophiles, avant la cystectomie radicale ou la chimiothérapie néoadjuvante (si reçue). Des analyses de survie de Kaplan-Meier comparant les patients avec basophiles détectables et indétectables avant traitement ont été réalisées. Des analyses de régression de Cox multivariées ont également été effectuées.

Résultats : Parmi 1 706 patients, 1 124 (66 %) avaient des basophiles indétectables et 582 (34 %) des basophiles détectables. Les caractéristiques démographiques étaient similaires. Les basophiles détectables étaient associés à une survie inférieure autant globale (HR 1,40, IC 95 % 1,17–1,67, $p < 0,001$) que spécifique au cancer (HR 1,65, IC 95 % 1,36–2,01, $p < 0,001$). Les courbes de Kaplan-Meier montrent une survie globale inférieure significative chez les patients avec des basophiles détectables, tant dans la cohorte complète ($p = 0,013$) que dans celle excluant la chimiothérapie néoadjuvante ($p < 0,001$).

Conclusions : Ces résultats suggèrent que des basophiles détectables pourraient constituer un biomarqueur indépendant pour la TVIM chez les patients traités par CR. De la recherche supplémentaire sera nécessaire pour valider ces observations et mieux comprendre la biologie du microenvironnement tumoral sous-jacent.

The impact of urinary metabolic abnormalities on disease-specific quality of life in kidney stone disease

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Introduction: Twenty-four-hour urinary parameters are central to kidney stone disease (KSD) evaluation. It is unclear whether metabolic abnormalities are associated with disease-specific health-related quality of life (HRQoL).

Methods: A total of 1 126 patients were analyzed. The primary urinary exposures were hypercalciuria, hyperoxaluria, hypocitraturia, hyperuricosuria, acidic urine, low urine volume, hypernatruria, and cumulative urinary abnormality burden, each tested in a linear mixed-effects model with site-level clustering and adjustment for demographic and clinical covariates. The primary outcome was the Wisconsin Stone Quality of Life Questionnaire (WISQoL) scores, standardized from 0–100.

Results: Most individual urinary abnormalities were not independently associated with WISQoL score, including hyperoxaluria ($p = 0,215$), hyperuricosuria ($p = 0,526$), acidic urine ($p = 0,396$), low urine volume ($p = 0,852$), and hypernatruria ($p = 0,582$). Only hypocitraturia is associated with lower WISQoL scores ($\beta = -6,41$, $p = 0,012$), although this did not survive Bonferroni correction (threshold $p = 0,007$). Hypercalciuria approached but did not reach significance ($\beta = -2,98$, $p = 0,072$). Cumulative urinary abnormality burden was not associated with WISQoL score ($p = 0,196$). Clinical variables showed stronger associations: active stone status was associated with lower WISQoL scores across models ($\beta = -11,8$ to $-15,4$, $p < 0,001$), and the absence of depression, UTIs, and type 2 diabetes was associated with higher scores.

Conclusions: Most urinary abnormalities and cumulative burden were not associated with disease-specific HRQoL. Hypocitraturia was the only urinary abnormality associated with lower WISQoL scores, though this should be interpreted cautiously, given multiple-testing corrections and the absence of a cumulative-burden association. Overall, HRQoL appears driven more by active stone status and clinical comorbidities than by urinary metabolic profile.

Intrarenal pressure regulation in flexible ureteroscopy: Comparative outcomes with standard irrigation, suction ureteral access sheath, and an automated fluid management system

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Introduction: Elevated intrarenal pressure (IRP) during flexible ureteroscopy (fURS) increases the risk of postoperative pain and infection. Innovations such as pressure-sensing ureteroscopes (LithoVue™ Elite [LVE]), flexible and navigable suction ureteral access sheaths (FANS), and automated fluid management systems (Asurys™ FMS) aim to improve safety. This study compared IRP dynamics across patients undergoing fURS with standard irrigation, FANS, and FANS with Asurys™ FMS.

Methods: Group 1 ($n = 53$) underwent fURS with LVE and standard irrigation. Group 2 ($n = 25$) had LVE and FANS. Group 3 ($n = 26$) had LVE and FANS with Asurys™ FMS performed by surgeons aware of real-time IRP. Asurys™ FMS can automatically manage irrigation pressures based on IRP readings from LVE. Group 4 ($n = 11$) used the same setup as group 3, but surgeons were blinded to real-time IRP. Outcomes of interest included median IRP and relative cumulative surgery time exceeding various IRP thresholds.

Results: In group 1, median IRP was 29.0 mmHg (IQR 20.5–49.5), with 72.0% of surgery time <40 mmHg, 92.2% of surgery time <60 mmHg, 7.2% of surgery time >100 mmHg, and 1.6% of surgery time >200 mmHg. In group 2, median IRP was 22.0 mmHg (IQR 19.0–25.0), with 74.2% <40 mmHg, 94.3% <60 mmHg, 1.9% >100 mmHg, and 0.3% >200 mmHg. In group 3, median IRP was 25.0 mmHg (IQR 21.0–33.0), with 81.0% <40 mmHg, 92.3% <60 mmHg, 0.8% >100 mmHg, and 0.1% >200 mmHg. In group 4, median IRP was 26.0 mmHg (IQR 23.5–29.5), with 89.2% <40 mmHg, 96.3% <60 mmHg, 0.3% >100 mmHg, and 0.01% >200 mmHg.

Conclusions: Conventional irrigation produces higher and sustained IRP. FANS significantly reduce IRP, while automated FMS maintain remarkably stable and low pressures, even when surgeons are blinded to IRP. Asurys™ FMS offers consistent lower-pressure regulation and represents a major step toward safer, standardized IRP management in fURS.

Clinical outcomes following active surveillance after Gleason grade group ≤2 upgraded to grade group 3

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Introduction: In the context of active surveillance (AS), certain patients experience progression from a Gleason grade group (GG) 1–2 to 3; however, information on the outcomes is still limited. We conducted a study to evaluate the results after radiotherapy in a large group from one institution.

Methods: Patients with localized prostate cancer were treated with primary external beam radiotherapy (EBRT), brachytherapy, or a combination of both. We identified patients who had an upgrade from an GG 1–2 to 3 before treatment. The primary endpoint was biochemical recurrence-free survival (bRFS), defined as a nadir plus 2 ng/mL.

Results: We identified 65 patients who were initially on AS and progressed to GG 3; no patient progressed to GG 4 or 5. The median time from the initial biopsy to grade upgrade was 20.7 months (IQR 11–46). The median age was 70 years (IQR 64–75). Baseline PSA was <10 ng/mL in 63% of patients and >20 ng/mL in 5% of patients. A total of 28% of patients underwent androgen deprivation therapy (ADT) for 6–12 months, whereas 22% received a combination of brachytherapy and EBRT. During the followup period, 14% of patients experienced biochemical recurrence, with a median followup time of 56 months (IQR 30–78 months). The four-year bRFS rate was 86% (number at risk: 37), and the five-year bRFS rate was 65% (number at risk: 28). There was no statistically significant difference in bRFS between patients who were upgraded during active surveillance and those who initially presented with a GG 3 on the initial biopsy ($p=0.74$).

Conclusions: Many patients experiencing progression to GG 3 during AS require treatment escalation with ADT and a combination of EBRT with brachytherapy. Biochemical control following radiotherapy was comparable to that in patients initially diagnosed with a higher-grade disease without prior AS.

Longitudinal monitoring of circulating transcripts in liquid biopsies of prostate cancer patients

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Introduction: The limited treatments available for advanced prostate cancer (PCa) show variable response rates, with few predictive biomarkers available. Cellular heterogeneity is a key issue affecting outcomes, with subsets of cells surviving treatments through selection and adaptation. We previously reported on the clinical relevance of cell subtype transcripts in blood RNA for tracing disease evolution. To better characterize the evolution of lethal PCa, we opted for a multiomic high-throughput discovery approach. This included whole-blood RNA sequencing, providing a global view of molecular changes throughout the disease trajectory.

Methods: We performed deep sequencing of whole-blood RNA following globin depletion; 375 longitudinally collected samples were sequenced from: 20 patients with no sign of recurrence >10 years after radical prostatectomy (RP); 20 patients who remained hormone-sensitive and non-metastatic at least six years

post-recurrence; 29 cases who developed lethal PCa; and 12 healthy controls. Deep whole-genome sequencing of cell-free DNA (cfDNA) was available for 10 of these lethal PCa cases.

Results: RNA sequencing was suitable for detection of PCa-relevant genes in blood. At diagnosis, we identified a signature predicting development of lethal PCa, whereas ctDNA remained negative. At late stages, results were in line with ctDNA, with overexpressed transcripts reflecting increasing stemness and neuroendocrine (NE) differentiation features. Interestingly, lethal PCa cases whose primary tumors were enriched in luminal vs. NE/stemness features showed distinct blood signatures throughout the disease trajectory. Furthermore, we detected several transcripts for which drugs are available for other indications.

Conclusions: The phenotypic evolution and therapeutic targets identified in the blood of patients with lethal PCa may be useful for stratifying patients and predicting treatment responses. The presence of circulating genes encoding therapeutic targets could inform precision oncology.

Tumor size effect on cancer-specific mortality in T2N0M0 urothelial bladder cancer treated with trimodal therapy

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Introduction: Current guidelines recommend trimodal therapy (TMT) for muscle-invasive bladder cancer when complete visible transurethral resection is feasible, but no specific tumor size cutoff is defined. We evaluated the impact of tumor size on cancer-specific mortality (CSM) in T2N0M0 urothelial bladder cancer treated with TMT.

Methods: Using the Surveillance, Epidemiology, and End Results database (2004–2022), pT2N0M0 urothelial bladder cancer patients treated with TMT were identified. Sequential testing of tumor size cutoffs of 3, 4, 5, 6, and 7 cm were applied. Propensity score matching and multivariable competing risks regression (CRR) models were used.

Results: Among 3014 included pT2N0M0 urothelial bladder cancer patients treated with TMT, tumor size ranged from 0.3–10.0 cm (median 4.0 cm). In multivariable CRR models, each tested cutoff independently predicted higher CSM, except for at 3 cm. Multivariable CRR-derived hazard ratios (HR) for cutoffs of 4, 5, 6, and 7 cm were respectively 1.23, 1.28, 1.72, and 2.22 (all $p<0.05$). Applying established and recommended non-inferiority margins in oncology trials of up to 30% suggests that tumor size cutoff of 6 cm (HR 1.72) could represent a clinically meaningful criterion used in patient selection for TMT. Limitations include retrospective design and lack of data on comorbidities and treatment specifics.

Conclusions: Tumor size is directly proportional to CSM rate in pT2N0M0 urothelial bladder cancer treated with TMT. A tumor size cutoff of 6 cm (HR 1.72) could represent a clinically meaningful criterion used in patient selection for TMT when the intent of avoiding excess CSM represents the endpoint of interest.

Un substitut optimal par génie tissulaire pour la vaginoplastie d'affirmation de genre

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Introduction : La vaginoplastie d'affirmation de genre améliore le bien-être des femmes trans mais repose surtout sur l'inversion de peau pénienne, dont la nature kératinisée, sèche et hétérotopique cause souvent des complications. Nous avons développé un substitut vaginal par génie tissulaire issu de cellules de la fosse naviculaire (FN), région de l'urètre distal d'origine embryologique commune au vagin et aux propriétés similaires (glycogénéation, lubrification, résistance aux pathogènes). Des fibroblastes vaginaux allogéniques ont aussi été évalués.

Méthodes : Des cellules épithéliales et fibroblastes de la FN ont été isolés de biopsies de 14 patientes transféminines (19–71 ans). Des protocoles enzymatiques ont été comparés (dispase ou thermolysine; collagénase ± élastase). Les fibroblastes cultivés avec 2-phospho-L-ascorbate ont formé des feuillets matriciels empilés en stroma. Les cellules épithéliales ont été cultivées en immersion 1 semaine puis 3 semaines à l'interface air-liquide. Des substituts avec fibroblastes vaginaux ou estradiol ont été comparés à des témoins vaginaux et urétraux,

greffés sur tuteurs de silicone et implantés en sous-cutané chez la souris nude. Analyses : trichrome de Masson, PAS, marqueurs épithéliaux.

Résultats : La dispa et la collagénase $\pm$ élastase ont donné le meilleur rendement. Les substituts FN ont formé un épithélium squameux stratifié glycogéné exprimant le récepteur des œstrogènes, semblable à la muqueuse vaginale. Les fibroblastes vaginaux ont accru l'expression de marqueurs vaginaux (kératine 10, mucine 1) et l'estradiol a augmenté l'épaisseur du stroma et la différenciation épithéliale. In vivo, les substituts ont conservé leur morphologie et des cellules souches basales p63+.

Conclusions : L'épithélium de FN combiné aux fibroblastes vaginaux allogéniques est le substitut le plus prometteur, surtout chez les patientes au tissu pénién limité par les bloqueurs de puberté, pouvant améliorer les résultats à long terme.

Utility of repeated cystoscopic surveillance after urethroplasty for urethral stricture disease

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Introduction: Cystoscopic surveillance following urethroplasty is standard of care for detecting endoscopic recurrence, but the optimal followup schedule remains uncertain. Although a normal three-month cystoscopy is generally considered reassuring, its ability to predict freedom from later recurrence has not been well-defined. We aimed to identify predictors of recurrence at 12 months among patients with a normal three-month cystoscopy.

Methods: We retrospectively reviewed a prospectively maintained, single-center urethroplasty database. We included 204 patients who had both a normal three-month cystoscopy and available 12-month cystoscopic followup. Recurrence was defined as inability to pass a 17 Fr flexible cystoscope through the area of reconstruction at 12 months. Demographic, stricture-related (etiology, location, length), operative, and postoperative variables were analyzed, including uroflowmetry and patient-reported outcomes by the Urethral Stricture Score Patient-Related Outcome Measure (USSPROM). Fisher's exact and Mann-Whitney U tests were used.

Results: Among 204 patients with a normal three-month cystoscopy, seven developed recurrence by 12 months, yielding a negative predictive value of 96.6%. Stricture length was significantly greater in patients with recurrence (median 10.0 vs. 5.0 cm, $p=0.011$). At 12 months, ureflowmetry peak flow rate (Qmax) was lower in the recurrence group (10.4 vs. 18.0 mL/s, $p=0.025$), and USSPROM Q9 satisfaction was worse. Six of seven patients had undergone substitution with graft urethroplasty.

Conclusions: A normal three-month cystoscopy after urethroplasty is highly reassuring, with a 96.6% negative predictive value for recurrence at 12 months. Recurrence was uncommon, with longer stricture length as an associated variable. Notably, patient satisfaction remained high despite endoscopic recurrence, questioning its clinical significance. Routine cystoscopy at 12 months may therefore be unnecessary in all patients with a normal early evaluation, supporting a risk-stratified surveillance approach.

Délais entre l'installation d'une sonde double J et l'urétéroscopie et impacts sur la morbidité et la qualité des soins

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Introduction : Le délai entre la pose d'une sonde urétérale double J (JJ) et l'urétéroscopie (URS) pourrait influencer la survenue de complications infectieuses, l'incrustation de la sonde et le recours aux ressources hospitalières. Le rapport UETMIS de 2022 souligne une augmentation du risque d'événements indésirables lorsque la durée d'implantation excède 30 jours. Cette étude visait à évaluer l'association entre un délai JJFFURS supérieur à 30 jours et la morbidité cliniquement significative.

Méthodes : Étude de cohorte rétrospective monocentrique au CHU de Québec de l'Université Laval, incluant les épisodes d'URS pour lithiase(s) chez des adultes porteurs d'une sonde double J au moment de l'intervention en 2023. L'exposition était le délai entre la pose de la sonde et l'URS, analysé en deux groupes : 30 jours ou moins et plus de 30 jours. Les issues comprenaient les complications selon Clavien–Dindo, les événements infectieux selon Sepsis-3, les consultations à l'urgence, les hospitalisations, les admissions aux soins intensifs et les décès, analysés avant l'URS et dans les 30 jours suivant l'URS.

Résultats : Au total, 157 épisodes chez 151 patients ont été inclus. Le délai moyen était de 40,8 jours. Un délai de plus de 30 jours était observé dans 116 épisodes (74 %), comparativement à 41 épisodes (26 %) avec un délai de 30 jours ou moins. Avant l'URS, aucune infection urinaire n'a été observée dans le groupe 30 jours ou moins, contre 10 infections (8,6 %) dans le groupe plus de 30 jours. L'incrustation de la sonde était plus fréquente dans le groupe plus de 30 jours (7,8 % contre 2,4 %). Après l'URS, les infections urinaires étaient comparables entre les groupes (7,3 % contre 6,9 %). Les complications sévères Clavien–Dindo grade III ou plus étaient de 5,2 % contre 2,4 %. Aucun décès ni admission aux soins intensifs n'a été rapporté.

Conclusions : Dans notre centre, les délais entre la pose d'une sonde urétérale double J et l'urétéroscopie dépassaient fréquemment 30 jours, avec près des trois quarts des épisodes concernés. Un délai prolongé était associé à une augmentation des complications préopératoires, particulièrement des infections urinaires et de l'incrustation des sondes, tandis que les complications postopératoires demeuraient comparables entre les groupes. Ces résultats appuient l'importance d'optimiser l'accès au traitement définitif de la lithiase et soutiennent la mise en place d'un suivi structuré des sondes JJ ainsi que d'un indicateur institutionnel de qualité ciblant un délai JJFFURS de 30 jours ou moins.

The combination of physical activity and leucine restriction on prostate cancer progression: An in vitro study with a translational approach

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Introduction: Current treatments for prostate cancer (PCa) are challenging, so diet and exercise could help delay progression. mTORC1 kinase is highly active in PCa, promoting protein translation and cell proliferation. Leucine and glutamine (Leu and Gln) are mTORC1 activators, and their depletion could decrease mTORC1 activation. Leu can be reduced by a Leu-restricted diet, while Gln can be decreased by moderate-intensity exercise. Together with exerkins, Gln and Leu restriction could reduce PCa progression in vitro and in vivo.

Methods: LNCaP, C42B, DU145, and PC3 cell lines were treated with varying concentrations of Leu and Gln, and their combination. Proliferation, mTORC1 and AMPK activation, apoptosis, senescence, and autophagy were measured. C2C12 myotubes were electrically stimulated, and the exerkin media was used to treat PC cell lines.

Results: Gln restriction (0 mM) decreased the proliferation of C42B (-33%), DU145 (-97%), and PC3 (-53%) compared to 2 mM. Leu restriction (0 mM) reduced the proliferation of LNCaP (-37%), C42B (-45%), DU145 (-74%), and PC3 (-61%) compared to 0.4 mM. The highest combined concentrations of Gln and Leu that could decrease proliferation were 0.4 mM/0.05 mM for LNCaP and C42B, 0 mM/0.025 mM for DU145, and 0 mM/0 mM for PC3, suggesting feasibility for the application of exercise and Leu restriction as treatments, as these are within the physiological range. DU145 and PC3 had higher basal mTORC1 activation, but only DU145 had lower autophagy levels, suggesting a disconnection of mTORC1 downstream targets in PC3. LNCaP and C42B showed higher senescence markers and less phosphorylation of AMPK (cell starvation) compared to DU145 and PC3. Myotube-stimulated media was able to decrease proliferation and/or cause morphologic changes in all cell lines.

Conclusions: The in vitro model of exercise induces loss of viability in PCa cell lines. Combined with a Leu-restricted diet, it could render tumors more sensitive to cell death.