

Dietary Recommendations for Men with Prostate Cancer

CASE PRESENTATION

A man presents to the urology clinic after a diagnosis of clinically localized prostate cancer. He says he has been reading online content about prostate cancer as he considers his primary treatment options. At today's visit, he inquires about a news article describing a link between red meat and lethal prostate cancer. He is motivated to make lifestyle changes after his cancer diagnosis and is wondering if he should change his diet to optimize his health.

COMMENT

Patients often ask about lifestyle changes to promote prostate health, and guidance on diet and nutrition is a key component of holistic survivorship care. But, as urologists, what dietary recommendations should we make to patients with prostate cancer?

Ideally, patients with prostate cancer should consume a *plant-based diet rich in cooked tomatoes and cruciferous vegetables*. Not only can this diet reduce the risk of cardiovascular disease, the leading competing cause of death, it may also improve prostate cancer outcomes.¹⁻³

In a recent systematic review of the impact of an overall plant-based diet on prostate cancer outcomes, interventional trials generally showed improvements in short-term oncologic outcomes and general health/nutrition among men who adopted a plant-based diet.⁴ For example, in the Prostate Cancer Lifestyle Trial, men on active surveillance who were randomized to a low-fat vegan diet experienced improved general health and a significantly reduced rate of progression to treatment compared to men in the control group at 2 years.⁵⁻⁶ Adherence to a vegan diet remained at 95% even a year after the intervention, indicating the potential feasibility and acceptability of a vegan diet in this patient population.⁶ In addition, multiple trials have demonstrated an improvement in PSA kinetics among men with biochemical recurrence after primary treatment who adopted a plant-based diet.⁷⁻¹²

Plant-based foods that have been shown to be particularly beneficial to prostate cancer outcomes include cooked tomatoes and cruciferous vegetables.¹³⁻²⁰ Cooked tomatoes are rich in lycopene, an antioxidant. In the Health Professionals Follow-Up Study, a 2-serving/week increase in intake of cooked tomatoes was associated with a 20% reduction in prostate cancer progression.²¹ Cruciferous vegetables contain isothiocyanates and indoles, 2 potential anticancer compounds. In a study of 1,560 men with clinically localized disease, men who had a high consumption of cruciferous vegetables (~1 serving/day) had an almost 60% reduced risk of recurrence in an adjusted model compared to men who did not consume cruciferous vegetables.²²

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Patients should also be counseled to avoid processed/red meats and whole milk, even if they do not fully adopt a purely plant-based diet. The World Health Organization classifies processed meat as a Group 1 carcinogen and red meat as a Group 2A carcinogen, and both types of meat have been associated with an increased risk of death due to cardiovascular disease.²³⁻²⁵ Among patients with prostate cancer, intake of processed/red meat has also been associated with an increased risk of prostate cancer recurrence and mortality in multiple studies.²⁶⁻²⁸ In addition, men with prostate cancer should avoid whole milk consumption. Multiple studies have demonstrated that men with clinically localized disease who have higher levels of whole milk consumption have an increased risk of disease progression and prostate cancer mortality.²⁸⁻³² Many alternatives such as almond, soy, and oat milk are fortified with levels of calcium comparable to dairy milk and can serve as a healthy replacement for patients with prostate cancer.

Overall, a prostate cancer diagnosis is a highly teachable moment, and urologists can help promote improved overall health and prostate cancer outcomes by counseling patients on the benefits of adopting a plant-based diet in conjunction with their primary treatment plan. As part of the dietary counseling conversation, urologists can direct patients toward evidence-based online resources about plant-based diets and prostate cancer such as the Physicians Committee for Responsible Medicine and NutritionFacts.org. To build on the currently available information, NYU Langone Urology is creating tailored multimedia resources and tips on how to adopt a plant-based diet for patients with prostate cancer and for caregivers of patients with prostate cancer. Stay tuned!

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NATASHA GUPTA, MD

Dr. Gupta is clinical assistant professor of urology and a postdoctoral scholar in the Department of Population Health at NYU Grossman School of Medicine. She has a specific interest in sexual health, plant-based diets, and behavioral health interventions as they relate to cancer survivorship. Dr. Gupta can be reached at natasha.gupta@nyulangone.org.

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For questions and/or patient referrals, please contact us by phone or by e-mail.

Faculty	Specialty	Phone Number/Email
James Borin, MD	Kidney stones, Kidney Cancer, Ureteral Stricture, UPJ obstruction, Endourology, Robotic Renal Surgery, Partial Nephrectomy, Ablation of Renal Tumors, PCNL	646-825-6387 james.borin@nyulangone.org
Benjamin Brucker, MD	Female Pelvic Medicine and Reconstructive Surgery, Pelvic Organ Prolapse-Vaginal and Robotic Surgery, Voiding Dysfunction, Male and Female Incontinence, Benign Prostate Surgery, Neurourology	646-754-2404 benjamin.brucker@nyulangone.org
Seth Cohen, MD	Female Sexual Dysfunction, Male Sexual Dysfunction, General Urology, Benign Disease Prostate, Post-Prostatectomy Incontinence, Erectile Dysfunction, Hypogonadism	646-825-6318 seth.cohen@nyulangone.org
Christina Escobar, MD	Female Pelvic Medicine and Reconstructive Surgery, Pelvic Organ Prolapse, Incontinence in Women, Female Voiding Dysfunction, Neurourology	646-825-6324 christina.escobar@nyulangone.org
Frederick Gulmi, MD*	Robotic and Minimally Invasive Urology, BPH and Prostatic Diseases, Male and Female Voiding Dysfunction, Kidney Stone Disease, Lasers in Urologic Surgery, and Male Sexual Dysfunction	718-630-8600 frederick.gulmi@nyulangone.org
Joel Hillelsohn, MD††	Erectile Dysfunction, Peyronie's Disease, Penile Prosthesis, Hypogonadism, BPH, Kidney Stones, Male Sexual Dysfunction, Chronic Prostatitis	646-660-9999 joel.hillelsohn@nyulangone.org
William Huang, MD	Urologic Oncology (Open and Robotic) – for Kidney Cancer (Partial and Complex Radical), Urothelial Cancers (Bladder and Upper Tract), Prostate and Testicular Cancer	646-744-1503 william.huang@nyulangone.org
Grace Hyun, MD	Pediatric Urology including Hydronephrosis, Hypospadias, Varicoceles, Undescended Testicles, Hernias, Vesicoureteral Reflux, Urinary Obstruction, Kidney Stones, Minimally Invasive Procedures, Congenital Anomalies	212-263-6420 grace.hyun@nyulangone.org
Matthew Katz, MD	Kidney Stone Disease, Upper Tract Urothelial Carcinoma, Ureteral Stricture Disease, and BPH/Benign Prostate Disease	646-825-6387 matthew.katz@nyulangone.org
Christopher Kelly, MD	Male and Female Voiding Dysfunction, Neurourology, Incontinence, Pelvic Pain, Benign Prostate Disease	646-825-6322 chris.kelly@nyulangone.org
Herbert Lepor, MD	Prostate Cancer: Elevated PSA, 3D MRI/Ultrasound Co-registration Prostate Biopsy, Focal (Ablation) of Prostate Cancer, Open Radical Retropubic Prostatectomy	646-825-6327 herbert.lepor@nyulangone.org
Stacy Loeb, MD, MSc**	Urologic Oncology, Prostate Cancer, Benign Prostatic Disease, Men's Health, General Urology	718-261-9100 stacy.loeb@nyulangone.org
Danil Makarov, MD, MHS***	Benign Prostatic Hyperplasia, Erectile Dysfunction, Urinary Tract Infection, Elevated Prostate-specific Antigen, Testicular Cancer, Bladder Cancer, Prostate Cancer	718-376-1004 danil.makarov@nyulangone.org
Meredith Metcalf, MD† ††	Urologic Oncology (Open and Robotic) - Kidney Cancer, Urothelial Cancer (Bladder and Upper Tract), Testicular Cancer, Prostate Cancer	718-630-8600 meredith.metcalf@nyulangone.org
Nnenaya Mmonu, MD, MS	Urethral Strictures, Robotic and Open Reconstructive Surgery for Ureteral Obstruction/Stricture, Fistulas, Bladder Neck Obstruction, Penile Prosthesis, Post Prostatectomy and Radiation Urinary Incontinence	646-754-2419 nnenaya.mmonu@nyulangone.org
Bobby Najari, MD	Male Infertility, Vasectomy Reversal, Varicocele, Post-Prostatectomy, Erectile Dysfunction, Male Sexual Health, Hypogonadism, Oncofertility	646-825-6348 bobby.najari@nyulangone.org
Valary Raup, MD†† †††	Male Infertility, Varicocele, Penile Prosthesis, Artificial Urinary Sphincter, Peyronie's Disease, Penile Plication, Erectile Dysfunction, Male Sexual Health, Vasectomy, Vasectomy Reversal	646-754-2000 valary.raup@nyulangone.org
Nirit Rosenblum, MD	Female Pelvic Medicine and Reconstructive Surgery, Voiding Dysfunction, Neurourology, Incontinence, Female Sexual Dysfunction, Pelvic Organ Prolapse and Robotic Surgery	646-825-6311 nirit.rosenblum@nyulangone.org
Ellen Shapiro, MD	Pediatric Urology including: Urinary Tract Obstruction (ureteropelvic junction obstruction), Vesicoureteral Reflux, Hypospadias, Undescended Testis, Hernia, Varicocele, and Complex Genitourinary Reconstruction.	646-825-6326 ellen.shapiro@nyulangone.org
Gary D. Steinberg, MD	Muscle-Invasive Bladder Cancer, Non-Invasive Bladder Cancer, Radical Cystectomy, Urinary Tract Reconstruction After Bladder Removal Surgery	646-825-6327 gary.steinberg@nyulangone.org
Lauren Stewart, MD	Female Pelvic Medicine and Reconstructive Surgery, Pelvic Organ Prolapse, Incontinence in Women, Female Voiding Dysfunction	646-825-6324 lauren.stewart@nyulangone.org
Samir Taneja, MD	Urologic Oncology – Prostate Cancer (MRI-Guided Biopsy, Robotic Prostatectomy, Focal Therapy, Surveillance), Kidney Cancer (Robotic Partial Nephrectomy, Complex Open Surgery), Urothelial Cancers	646-825-6321 samir.taneja@nyulangone.org
James Wysock, MD, MS	Urologic Oncology – Prostate Cancer, MRI-Guided Biopsy, Kidney and Prostate Cancer Surgery, Robotic Urological Cancer Surgery, Prostate Cancer Image-guided Focal Therapy (Ablation, HIFU), and Testicular Cancer	646-754-2470 james.wysock@nyulangone.org
Lee Zhao, MD	Robotic and Open Reconstructive Surgery for Ureteral Obstruction, Fistulas, Urinary Diversions, Urethral Strictures, Peyronie's Disease, Penile Prosthesis, and Transgender Surgery	646-754-2419 lee.zhao@nyulangone.org
Philip Zhao, MD	Kidney Stone Disease, Upper Tract Urothelial Carcinoma, Ureteral Stricture Disease, and BPH/Benign Prostate Disease	646-754-2434 philip.zhao@nyulangone.org

*at NYU Langone Hospital—Brooklyn **NYU Langone Ambulatory Care Rego Park ***NYU Langone Levit Medical †NYU Langone Ambulatory Care—Bay Ridge

††NYU Langone Ambulatory Care—Brooklyn Heights †††NYU Langone Medical Associates—Chelsea ††††Preston Robert Tisch Center for Men's Health

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