



Informed Prostate Cancer Support Group Inc.

"A 501 C 3 CORPORATION ID # 54-2141691"



JANUARY 2023 NEWSLETTER
P.O. Box 420142 San Diego, CA 92142
Phone: 619-890-8447 Web: <http://ipcsdg.org>



Volume 16 Issue 01

Thursday, January 19, 2023

- **Next Meeting Saturday, January 21, 2023 IPCSG—10:00am PT.**
- **Dr. A. J. Mundt MD, UCSD Radiation Oncology, Updates on Radiation Oncology - Dr. Mundt will present the latest updates in the field of Radiation Oncology. Arno J Mundt MD FASTRO FACRO Professor and Chair UCSD Dept. of Radiation Medicine & Applied Sciences. A light luncheon will be served afterwards**
- **For links to further Reading: <https://ipcsdg.blogspot.com/> ; includes member suggested links.**
- **If you have Comments, Ideas and Questions, email to Newsletter@ipcsdg.org**
- **If you would like some copies of our new brochure by mail for distribution to your friends or physicians, please send email to bill@ipcsdg.org or call Bill at (619) 591-8670**



- **Last Meeting Saturday, November 19, 2022 IPCSG—10:00am PT.**
Dr. Mitchell Kamrava, MD presented a discussion on "Pros & Cons of Brachytherapy vs. SBRT". He is a Radiation Oncology Specialist in West Hollywood, CA. He is affiliated with medical facilities Cedars - Sinai Medical Center and Ronald Reagan UCLA Medical Center. He specializes in High Dose Rate Brachytherapy, IMRT (Intensity-Modulated Radiation Therapy), Image Guided Radiation Therapy, Intensity Modulated Radiation Therapy, Internal Radiation Therapy, Interventional Oncology, and various cancers. He spoke mainly about brachytherapy, with an update on his "Pros & Cons of Brachytherapy vs. SBRT" talk given to the Prostate Forum of Orange County, 2/22/2018.
HDR brachytherapy can be carried out in 2-3 hours with ultrasound guidance, in a radiation-shielded room, with the patient asleep. Alternatively, the tubes can be placed in an operating room with the patient asleep, and then the patient is moved to a CT or MRI machine for dose planning followed by treatment, with the patient awake and with local pain control. This takes 4-6 hours. Both approaches give similar results.
HDR is done at Cedars-Sinai and at UCLA. City of Hope does both HDR and LDR. LDR used to be done at UCSD, but Dr. Einck has left, and Dr. Mundt is expected to tell us in January about his replace-

(Continued on page 3)

Prostate Cancer: GET THE FACTS

Other than skin cancer, prostate cancer is the most common cancer in American men.

1 in 6 
men will be diagnosed with prostate cancer during his lifetime.



Prostate cancer can be a serious disease, but most men diagnosed with prostate cancer do not die from it. In fact, more than 2.5 million men in the United States who have been diagnosed with prostate cancer at some point are still alive today.

Organization

a 501c3 non-profit organization - all positions are performed gratis



Officers

Bill Lewis President

Additional Directors

- Gene Van Vleet
- Aaron Lamb
- Bill Manning

Honorary Directors

- Dr. Dick Gilbert
- Judge Robert Coates

Past President –Lyle Larosh

- Aaron Lamb, Facilitator
- Bill Manning, Videographer
- John Tassi, Webmaster
- Bill Bailey, Librarian
- Bob Stacy, Greeter
- Aaron Lamb, Meeting Set-up
- Stephen Pendergast Editor

NEWSLETTER

Table of Contents

Section.....	Page
Future Meetings	1
Last Speaker Summary.....	1,3-5
What We Are About	2
Video DVD's.....	2
Editorial.....	2
Lighter Side	9
Articles of interest.....	6-9
Networking, Finance.....	10

PROSTATE CANCER—2 WORDS, NOT A SENTENCE

What We Are About

Our Group offers the complete spectrum of information on prevention and treatment. We provide a forum where you can get all your questions answered in one place by men that have lived through the experience. Prostate cancer is very personal. Our goal is to make you more aware of your options before you begin a treatment that has serious side effects that were not properly explained. Impotence, incontinence, and a high rate of recurrence are very common side effects and may be for life. Men who are newly diagnosed with PCa are often overwhelmed by the frightening magnitude of their condition. Networking with our members will help identify what options are best suited for your life style.

Meeting Video DVD's

DVD's of our meetings are available for purchase on our website at <https://ipcs.org/purchase-dvds> and are generally available by the next meeting date.

Join the IPCSG TEAM

If you consider the IPCSG to be valuable in your cancer journey, realize that we need people to step up and HELP. Call **President** Bill Lewis @ (619) 591-8670 ; or **Director** Gene Van Vleet @ 619-890-8447.

From the Editor

In this issue:

Bill Lewis produced a summary of his last meeting presentation, Articles of interest include:

1. Short-Course Apalutamide to Reduce Active Surveillance Attrition in Prostate Cancer – apalutamide may prevent undetected low grade cancer from growing.
2. Many With Prostate Cancer Have Vertebral Fracture at ADT Onset – many men have undetected back fracture, check before going on ADT.
3. Uptick in Prostate Cancer Diagnoses Prompts ACS 'Call to Arms' – prostate cancer deaths up while most other cancers down
4. PSMA-PET/CT guided intensification of radiotherapy for prostate cancer (PSMAgRT): Findings of detection rate, impact on cancer management, and early toxicity from a phase 2 randomised controlled trial – better imaging helped direct radiation therapy
5. The Prognostic Value of Posttreatment 68Ga-PSMA-II PET/CT and 18F-FDG PET/CT in Metastatic Castration-Resistant Prostate Cancer Treated with 177Lu-PSMA-617 and NOX66 in a Phase I/II Trial (LuPIN) – PET/CT imaging indicates likely success of treating castrate resistant PC with Lu.

ment.

Is SBRT essentially a virtual HDR treatment modality? In the ASCENDE trial, high-risk patients were treated either with external radiation alone or with an LDR brachytherapy boost. All had 12 months of ADT after treatment. Results (PSA stabilization) were about the same for the two groups for 5 years, but then the radiation-alone group had significantly more PSA rise. However, overall survival over 10 years was essentially the same. This is likely because the radiation-alone group got additional treatments/therapies that kept them alive – whereas the boosted group did not [seem to] need additional treatment. This writer wonders if prophylactic follow-on treatment of the boosted group would have given them a survival benefit.

There was a morbidity (side effect) cost to the men who got the boost. About 18% of those men had urinary problems within 5 years, vs 5% of the men who got radiation alone. About half of those problems were resolved during the 5 years, so the numbers for residual problems were 8.6 vs. 2.2 percent. After the study, it was pointed out that a significant fraction of those with urinary problems after the boost seem to have had seeds placed too close to the genitourinary diaphragm in the apex of the prostate. Technique/skill matters!

There is a difference in quality of life with an LDR vs. HDR boost (see below). Whether SBRT is equivalent to treatments with more fractions is still somewhat controversial. Also, whether SBRT can be effectively used as a boost, instead of a BT boost. Recently, studies of “microboosting” with standard fractionation, to target specific lesions more than the rest of the prostate show improved PSA outcomes without worse toxicity (FLAME trial). Now, using SBRT in the same way, the HypoFLAME trial data suggests safety (at least for 90 days -- EUMC 2022 abstract).

For Low or favorable intermediate risk disease, both SBRT and BT (LDR/HDR) can safely deliver high doses to the prostate. SBRT and HDR mono have comparable PSA control and toxicities in the 5-10 year range (based on not-randomized data). The longest follow-up (10 or 15 years) with high PSA control and low serious toxicities is with LDR BT (i.e., best quality of life).

What’s the range of ADT duration after radiation (Brachy or external)? It depends on your risk group and may vary from four months to 36 months.

How to do genetic testing if biopsy cores are too old to use? We will likely soon get to “liquid biopsies,” that are currently being validated.

What about proton therapy? A study just completed should be reported soon, on efficacy and side effects of protons vs. photons.

What’s the number of LDR vs. HDR currently? Both are only a small fraction of radiation treatments, and using either as a boost is more common than their use alone. The lower urinary side effects in the short term, and faster recovery from bowel problems makes HDR more often used than LDR.

(Continued on page 4)

(Continued from page 3)

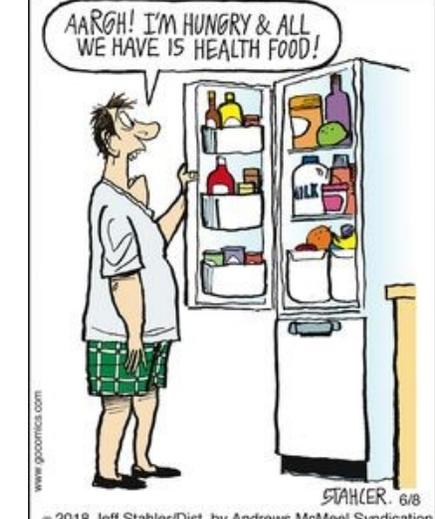
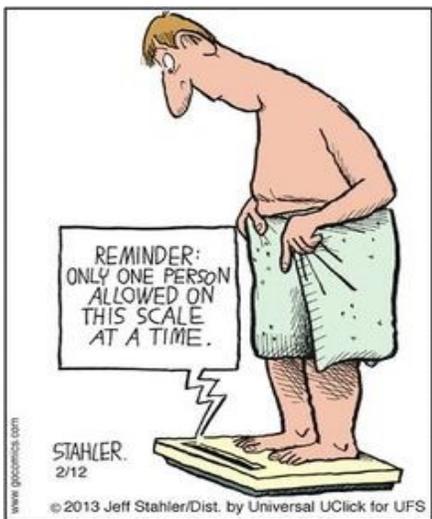
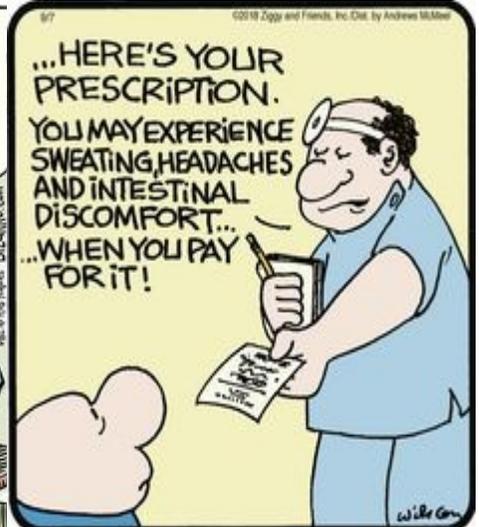
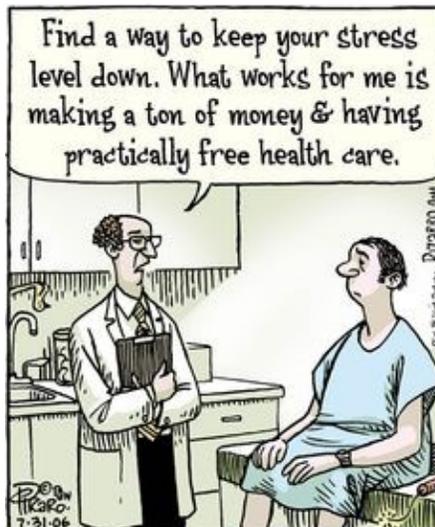
There are few practitioners being trained and low insurance reimbursements limit the increase in their use.

For recurrence, Dr. Kamrava prefers brachytherapy over SBRT, because he feels it limits the dose to normal tissue while targeting reemerging tumors.

See the video online for the talk and slides: <https://www.youtube.com/watch?v=sfwyAAYs3SQ>

We have discontinued making dvd's of IPCSG talks, since they are posted on YouTube. Those without a computer of their own may ask a friend, relative, or local library to access the meeting recording online. We have begun breaking videos into chapters, so that you may skip past the meeting preliminaries to the featured speaker or the Q&A session.

On the Lighter Side



Articles of Interest

Short-Course Apalutamide to Reduce Active Surveillance Attrition in Prostate Cancer

— *Editorialists question whether any intervention violates principles of surveillance*

[Oncology/Hematology > Prostate Cancer](#)

by [Charles Bankhead](#), Senior Editor, MedPage Today January 17, 2023

A majority of men in active surveillance (AS) for early prostate cancer had negative biopsies after a 90-day course of apalutamide (Erleada), a small phase II trial showed.

Follow-up pathology showed no evidence of residual cancer in 13 of 22 evaluable patients following treatment with the androgen receptor inhibitor. The median time to a positive biopsy was 364 days, and the treatment was associated with favorable pathologic changes in patients with higher-risk features, such as grade group 2 (GG2) disease and high genomic risk.

The treatment was well tolerated and had minimal impact on patients' quality of life (QoL), reported Michael T. Schweizer, MD, of the University of Washington in Seattle, and colleagues, in the [Journal of Urology opens in a new tab or window](#).

"While we acknowledge that a negative biopsy is not a validated proxy for long-term outcomes, this was felt to be a reasonable primary endpoint given that the majority of AS programs rely on pathological changes as a trigger to recommend definitive local treatment," the authors stated. "We acknowledge that the small sample size of this study is one of its primary limitations, which was further challenged by its premature termination. However, in spite of this shortcoming, we still detected a robust efficacy signal."

"Ultimately, large, randomized studies will be needed to evaluate if systemic therapies are useful in the management of patients with prostate cancer followed on AS."

Not Active Surveillance

The results added to evidence of potential benefits for hormonal therapy in active surveillance. The results compared favorably with previous studies of [dutasteride opens in a new tab or window](#) (Avodart), [leuprolide opens in a new tab or window](#), and [enzalutamide opens in a new tab or window](#) (Xtandi), showing negative biopsy rates at 12-18 months of 28%-45%.

Authors of an [accompanying editorial opens in a new tab or window](#) maintained that active surveillance is no longer active surveillance when a therapeutic intervention is introduced.

"The publication of these studies raises some critical questions about therapeutic intervention in men on AS," wrote Peter Lonergan, MD, and Louise C. McLoughlin, MBBCh, both of St. James's Hospital and Trinity College in Dublin. "First AS with a therapeutic intervention, such as an ARAT [androgen receptor axis-targeted agent], is active treatment, not surveillance. This strategy is, therefore, inconsistent with the principles of AS."

Medical News from Around the Web

They also pointed out that a negative biopsy has yet to be proven as a valid surrogate endpoint for long-term outcomes in active surveillance. Finally, they asserted that androgen receptor-targeted therapies have "considerable financial- and treatment-related toxicities."

"However, we have to acknowledge that AS is not perfect," Lonergan and McLoughlin added. "Despite a large body of evidence supporting this strategy in low-risk disease, there remains significant regional variation in the uptake of AS, particularly in the U.S. Therefore, we should direct our attention to initiatives which increase the utilization of AS and decrease the overdiagnosis of low-risk disease."

Studies of active surveillance for low-risk prostate cancer have shown that 20%-50% of patients subsequently

(Continued on page 6)

(Continued from page 5)

convert to local therapy (radiation or prostatectomy). Medical therapies offer an "appealing" option to decrease the rate of attrition, Schweizer's group noted. Apalutamide is an "ideal compound" to evaluate as a means of prolonging time to positive biopsy and associated dropout from active surveillance.

The authors reported findings from a phase II trial that evaluated the pathologic effects of a 3-month course of apalutamide on men with low- or intermediate-risk prostate cancer enrolled in active surveillance. Risk was determined by clinical stage T1c disease, PSA <15 g/mL, GG2 in ≤50% of one core/site, and GG1 disease in all other cores.

Repeat MRI- or transrectal ultrasound-guided biopsies was performed at the treating physician's discretion. Prostate biopsies were mandated at 365 and 730 days from enrollment. The primary endpoint was negative repeat biopsy at the end of the 90-day apalutamide treatment course.

Key Findings

The study had an accrual goal of 33 patients, but the enrollment ended prematurely because of slow accrual. Investigators enrolled 23 patients, who had a median time on active surveillance of 10.4 months at enrollment. A majority (n=13/23) of the patients had two or more prior positive biopsies while on active surveillance. All 23 participants completed the 90 days of treatment with apalutamide, and 22 underwent post-treatment biopsy.

Pathology results showed that 59% of the post-treatment biopsies showed no evidence of residual disease, significantly higher than an estimated rate of 20% predicted by statistical modeling ($P<0.001$). If 33 patients had been enrolled and all remaining patients had residual disease, the resulting negative biopsy rate (13/33, 39%) still would have exceeded the hypothesized rate ($P=0.008$).

All but one patient had a biopsy at day 365, and seven of 21 (33%) had no evidence of residual disease. Additionally, 19 patients had biopsies at day 730, and four (19%) had no residual disease. One patient had a positive biopsy at day 365 and a negative day-730 biopsy.

At day 91, all patients had a PSA decline exceeding 50% from enrollment and 15 (65%) had reductions of 90% or greater. PSA levels increased in all patients after discontinuation of apalutamide, and at 365 days, the median PSA value did not differ significantly from the baseline value. The median testosterone level increased significantly from baseline to day 91 (+275 ng/mL, $P<0.001$).

During a median follow-up of 753 days, five patients underwent definitive local therapy, four who had GG reclassification and one who opted for prostatectomy despite stable GG2 disease.

Adverse events were generally mild and consistent with known effects of apalutamide, the authors reported. Transient declines in several QoL scores occurred during the treatment period but returned to near baseline by day 180. No "clinically meaningful" changes in QoL occurred with the exception of a 13-point decline in the median score for energy/fatigue ($P=0.01$).

Charles Bankhead is senior editor for oncology and also covers urology, dermatology, and ophthalmology. He joined MedPage Today in 2007.

Disclosures

The study was supported by Janssen, NCI, the Canary Foundation, and the Prostate Cancer Foundation.

Schweizer disclosed relationships with Sanofi, AstraZeneca, Pharmin, Resverlogix, Zenith Epigenetics, Bristol Myers Squibb, Merck, Immunomedics, Janssen, Pfizer, Madison Vaccines, Hoffman-La Roche, Tmunity, SignalOne Bio, and Ambrx.

Lonergan and McLoughlin disclosed relationships with industry.

Primary Source: Journal of Urology

Source Reference: [opens in a new tab or window](#) Schweizer MT, et al "Pathological effects of apalutamide in lower-risk prostate cancer: Results from a phase II clinical trial" J Urol 2023; DOI: 10.1097/JU.0000000000003038.

(Continued on page 7)

Many With Prostate Cancer Have Vertebral Fracture at ADT Onset

[medscape.com](https://www.medscape.com)

Sharon Worcester, MA

The prevalence of vertebral fractures is high among men with [prostate cancer](#) at the start of androgen deprivation therapy (ADT), according to findings from a cross-sectional, real-world study in the Netherlands. Despite a low prevalence of [osteoporosis](#) and sarcopenia as well as a low fracture risk prior to therapy initiation, one third of men with prostate cancer were diagnosed with a [vertebral fracture](#) following a spinal x-ray.

The findings underscore the importance of assessing patients for vertebral fractures at a baseline, before initiating ADT, given that this therapy is known to increase fracture risk, conclude the investigators, led by Marsha M. van Oostwaard, PhD, of VieCuri Medical Centre and Maastricht University Medical Center, the Netherlands.

The [study](#) was published last month in the *Journal of Bone Oncology*.

Guidelines from the European Society for Medical Oncology, the European Association of Urology, and other organizations call for fracture risk assessment for men with prostate cancer who are starting or receiving ADT, but fracture screening and prevention in this setting remain suboptimal despite the guidelines.

Given that ADT increases fracture risk and about half of patients with prostate cancer will receive it, van Oostwaard and colleagues set out to evaluate the fracture risk and the prevalence of osteoporosis, vertebral fractures, and sarcopenia in men with prostate cancer at the start of ADT.

At ADT initiation, 115 men with prostate cancer were assessed for comorbidities, medication use, and 10-year fracture risk between January 2019 and December 2020. The mean age of the men was 73.3 years, and they had been receiving ADT for a mean of 56.5 days (range, 22.5 to 90.5 days). All men underwent laboratory tests, dual-energy x-ray absorptiometry, and spinal x-rays.

Overall, five men (4.3%) had osteoporosis, and one had sarcopenia. The mean 10-year risk for major osteoporotic fractures and hip fractures was also low — 4.4% and 1.7%, respectively.

However, 41 (35.7%) had osteopenia, and bone mineral density (BMD) was normal in only 69 men (60%).

Most notably, 37 men (32.2%) had at least one moderate or severe vertebral fracture, and 39 men (33.9%) had at least one grade 2 or 3 vertebral fracture, osteoporosis, or both. In addition, at least one new fracture risk-associated [metabolic bone disorder](#) was identified by laboratory testing in 10.4% of patients.

"Although ADT can have significant benefits on survival, the evidence that ADT increases long term fracture risk is convincing," van Oostwaard and colleagues explain.

The authors acknowledge limitations, such as the cross-sectional study design, possible selection bias, and the predominantly White study population, all of which may limit the generalizability of the findings.

Still, the results point to a need for better fracture risk assessment and management.

"Besides BMD measurement and fracture risk calculation using [FRAX](#), a systematic vertebral fracture assessment should be considered in all men with [prostate cancer] at initiation of ADT to provide a reliable baseline classification of VFs to improve identification of true incident VFs during ADT," the authors conclude.

Van Oostwaard has disclosed no relevant financial relationships.

J Bone Oncol. 2023;98:100465. [Full text](#)

Sharon Worcester, MA, is an award-winning medical journalist based in Birmingham, Alabama, writing for Medscape, MDedge and other affiliate sites. She currently covers oncology, but she has also written on a variety of other medical specialties and healthcare topics. She can be reached at sworcester@mdedge.com or on Twitter: [@SW_MedReporter](https://twitter.com/SW_MedReporter).

For more news, follow Medscape on [Facebook](#), [Twitter](#), [Instagram](#), and [YouTube](#).

Uptick in Prostate Cancer Diagnoses Prompts ACS 'Call to Arms'

[medscape.com](https://www.medscape.com)

Sharon Worcester

The latest trends in cancer incidence in the United States show both good news and bad news, as highlighted in the latest annual report from the American Cancer Society (ACS).

The good news is an "astounding" 65% drop in [cervical cancer](#) incidence among women in their early 20s, the first cohort to have access to the [human papillomavirus](#) (HPV) vaccine, noted ACS chief executive officer Karen E. Knudsen, MBA, PhD.

The bad news is an alarming 3% annual increase in [prostate cancer](#) incidence from 2014-2019 after two decades of declining incidence.

"Most concerning is that this [prostate cancer] increase was driven by the diagnosis of advanced disease" Knudsen said, noting that the highest incidence and death rates were among black men. This [increase in late-stage disease diagnoses](#) has also been highlighted by others, as reported by *Medscape Medical News*.

This uptick in prostate cancer has prompted a new ACS initiative called IMPACT: Improving Mortality from Prostate Cancer Together, to "mobilize resources across advocacy, patient support and research," she announced.

ACS chief scientific officer William Dahut, MD, explained that "IMPACT will fund bold new cancer research programs that connect the laboratory, the clinic, and the community...to help discern who is most at risk for prostate cancer, and how to prevent it."

Overall Cancer Deaths and Incidence

The cervical cancer and prostate cancer rates represent outliers at opposite ends of the spectrum. Overall, the data show a 33% decline in cancer mortality since 1991, which equates to an estimated 3.8 million cancer deaths averted, according to [the report, titled *Cancer Statistics, 2023*](#).

Notably, cancer deaths continued to decline after the beginning of the COVID-19 pandemic, with a 1.5% drop from 2019 to 2020.

The report was published online today in *CA: A Cancer Journal for Clinicians*. A consumer-friendly companion, [Cancer Facts & Figures 2023](#), can be viewed at [cancer.org](https://www.cancer.org).

Looking at population-based cancer occurrence and outcomes using incidence data from central cancer registries and mortality data from the [CDC's National Center for Health Statistics](#), the ACS projects there will be 1,958,310 new cancer cases and 609,820 cancer deaths in the United States in 2023.

Cancer incidence trends were mixed but were better among men than women. Lung cancer incidence from 2015-2019, for example, decreased by 2.6% for men and by 1.1% for women.

Breast and uterine corpus cancers, as well as [liver cancer](#) and [melanoma](#), continued to increase in women, stabilized in men aged 50 years and older, and declined in younger men.

The ACS attributes the overall drop in cancer mortality to advances in treatment, particularly for leukemia, melanoma, and [kidney cancer](#), and to accelerated declines for lung cancer.

Cervical Cancer: A Vaccine Success Story

The steep 65% decline in cervical cancer incidence in women aged 20-24 years from 2012-2019 — compared with a 20%–30% decline in pre-HPV vaccine cohorts over the prior decade — underscores the value of HPV vaccination and provides "clear population-level evidence that vaccination can reduce cancer incidence and provides optimism for expanding research toward the development of additional cancer prevention vaccines," an [ACS press release](#) notes.

PSMA-PET/CT guided intensification of radiotherapy for prostate cancer (PSMAgRT): Findings of detection rate, impact on cancer management, and early toxicity from a phase 2 randomised controlled trial

[sciencedirect.com](https://www.sciencedirect.com)

Abstract

Purpose

Prostate specific membrane antigen (PSMA) ligand positron emission tomography (PET) is increasingly integrated in prostate cancer management due to its diagnostic performance. We sought to evaluate the impact of PSMA-PET/CT-guided intensification of radiotherapy (PSMAgRT) on patient outcomes. Here, we report secondary trial endpoints including the rate of new lesion detection, impact on prostate cancer management, and treatment-related toxicities.

Methods

In this phase II cohort multiple randomised controlled trial across 2 institutions, men with prostate cancer planned for radiotherapy (RT) were randomly selected for PSMAgRT across 4 strata: oligometastatic, high risk (CAPRA ≥ 6 or cNI), salvage post-RT, and salvage post-prostatectomy (RP). Primary endpoint is failure-free survival at 5 years, with analysis pending further follow-up. Secondary endpoints include new lesion detection yield of PSMA-PET/CT, acute and delayed toxicities, impact on prostate cancer management, and health-related quality of life (HRQoL) outcomes. *NCTXXX companion to registry NCTXXX.*

Results

Between May 2018 and February 2021, 262 patients were enrolled and randomised. Nine patients were later excluded (5 control, 4 PSMAgRT), leaving 253 patients for analysis (23 oligometastatic, 86 high risk, 16 salvage post-RT, and 128 salvage post-RP). New lesions were detected in 45.5% of oligometastatic, 39.5% of high-risk, 14.3% of salvage post-RT; and in 51.6% of salvage post-RP. Overall, PSMA-PET/CT led to intensification of RT in over half of patients (52.0%), with minimal intensification of systemic therapy (4.0%). With a median follow-up of 12.9 months, this intensification was associated with three attributable grade 3+ events (2.5% of patient undergoing PSMAgRT), but no difference in the rate of grade 2+ events attributable to RT compared with controls (43%, both arms).

Conclusion

In this randomized trial, PSMA-PET/CT led to intensification of RT in more than half of patients. Longer follow-up is required to determine whether this intensification translates to impact on cancer control and long-term toxicity and HRQoL outcomes.

The Prognostic Value of Posttreatment ^{68}Ga -PSMA-11 PET/CT and ^{18}F -FDG PET/CT in Metastatic Castration-Resistant Prostate Cancer Treated with ^{177}Lu -PSMA-617 and NOX66 in a Phase I/II Trial (LuPIN)

Sarennya Pathmanandavel, Megan Crumbaker, Andrew Nguyen, Andrew O. Yam, Peter Wilson, Remy Niman, Maria Ayers, Shikha Sharma, Peter Eu, Andrew J. Martin, Martin R. Stockler, Anthony M. Joshua and Louise Emmett

Journal of Nuclear Medicine January 2023, 64 (1) 69-74; DOI: <https://doi.org/10.2967/jnumed.122.264104>

^{177}Lu -PSMA-617 therapy has shown high prostate-specific antigen (PSA) response rates in men with metastatic castration-resistant prostate cancer. However, early treatment resistance is common. This LuPIN substudy aimed to determine the prognostic value of post-treatment quantitative PET for PSA progression-free survival (PFS) and overall survival (OS) with ^{177}Lu -PSMA-617 therapy.

Methods: Fifty-six men with progressive metastatic castration-resistant prostate cancer were enrolled in the LuPIN trial and received up to 6 doses of ^{177}Lu -PSMA-617 and a radiation sensitizer (NOX66). ^{68}Ga -PSMA-11 and ^{18}F -FDG PET/CT, diagnostic CT, and bone scanning were performed at study entry and exit. Quantitative analysis tracked change in total tumor volume (TTV) and SUV. Univariable and multivariable analyses were conducted to examine the association of change in TTV (continuous and $>30\%$), SUV_{max} , PSA, and radiographic progression with PSA PFS and OS.

Results: All men (37/56) who underwent both screening and posttreatment molecular imaging were analyzed; 70% (26/37) had a PSA response of more than 50%. Median PSA PFS was 8.6 mo, and median OS was 22 mo. Clinical progression had occurred at trial exit in 54% (20/37). In response to treatment, a reduced PSMA SUV_{max} was demonstrated in 95% (35/37) and a reduced PSMA TTV in 68% (25/37). An increase in PSMA TTV by at least 30% was associated with worse OS (median, 10.2 vs. 23.6 mo; $P = 0.002$). Change in PSMA SUV_{max} was not associated with PSA PFS or OS. ^{18}F -FDG SUV_{max} was reduced in 51% (18/35) and ^{18}F -FDG TTV in 67% (22/35). An increased ^{18}F -FDG SUV_{max} was associated with worse OS (median, 20.7 vs. 25.7 mo; $P < 0.01$). An ^{18}F -FDG TTV increase by more than 30% was associated with a short PSA PFS (median, 3.5 vs. 8.6 mo; $P < 0.001$) but not OS. Both PSA and radiographic progression were associated with shorter OS (median, 14.5 vs. 25.7 mo [$P < 0.001$] and 12.2 vs. 23.6 mo [$P = 0.002$]). On multivariable analysis, only increased PSMA TTV and PSA progression remained independently prognostic of OS (hazard ratio, 5.1 [95% CI, 1.5–17.1; $P = 0.008$] and 3.5 [95% CI, 1.1–10.9; $P = 0.03$], respectively).

Conclusion: Change in quantitative PSMA TTV has strong potential as a prognostic biomarker with ^{177}Lu -PSMA-617 therapy, independent of ^{18}F -FDG PET parameters, PSA, or radiographic progression. Further research into the value of posttreatment PET as an imaging biomarker is warranted.

[metastatic prostate cancer](#)

NETWORKING

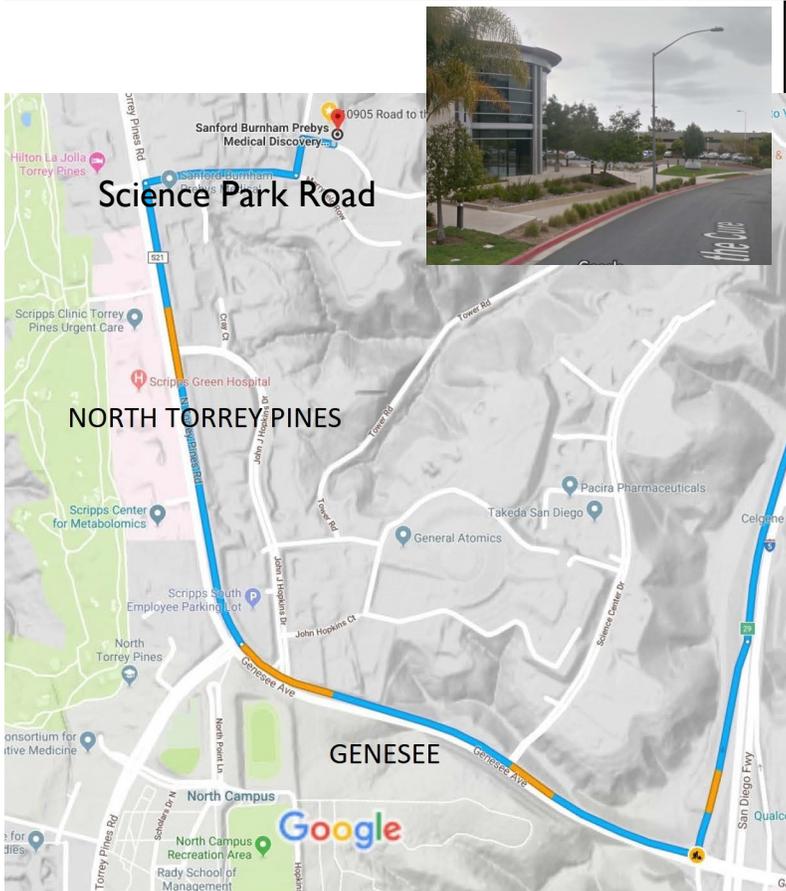
Please help us in our outreach efforts. Our speakers bureau consisting of Gene Van Vleet and Bill Lewis is available to speak to organizations of which you might be a member. Contact Gene 619-890-8447 or gene@ipcsg.org or Bill 619-591-8670 (bill@ipcsg.org) to coordinate.

Member John Tassi is the webmaster of our website and welcomes any suggestions to make our website simple and easy to navigate. Check out the Personal Experiences page and send us your story. Go to: <https://ipcsg.org/personal-experience>

FINANCES

We want to thank those of you who have made special donations to IPCSG. Remember that your gifts are tax deductible because we are a 501(c)(3) non-profit organization.

We again are reminding our members and friends to consider giving a large financial contribution to the IPCSG. This can include estate giving as well as giving in memory of a loved one. You can also have a distribution from your IRA made to our account. We need your support. We will, in turn, make contributions from our group to Prostate Cancer researchers and other groups as appropriate for a non-profit organization. Our group ID number is 54-2141691. Corporate donors are welcome!



Directions to Sanford-Burnham-Prebys Auditorium 10905 Road to the Cure, San Diego, CA 92121

Take I-5 (north or south) to the Genesee exit (west).

Follow Genesee up the hill, staying right.

Genesee rounds right onto North Torrey Pines Road.

Do not turn into the Sanford-Burnham-Prebys Medical Discovery Institute or Fishman Auditorium

Turn right on Science Park Road.
Watch for our sign here.