# Leading in Urology and Pioneering in Social Media Outreach

## A Conversation Among Declan Murphy, Ken Herrmann, and Michael Hofman

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Ken Herrmann, MD, MBA, a professor of nuclear medicine at the Universitätsklinikum Essen (Germany), and Michael Hofman, MBBS, FRACP, director of the Prostate Cancer Theranostics and Imaging Centre of Excellence at the Peter MacCallum Cancer Centre (Melbourne, Australia), talked with Declan Murphy, FRACS, FRCS, about his career in genitourinary (GU) oncology. Dr. Murphy is a consultant urologist, the director of robotic surgery, and the director of GU oncology at the Peter MacCallum Cancer Centre and a professorial fellow at the University of Melbourne. He is an internationally recognized subject matter expert in GU oncology, with a focus on prostate cancer, including prostate-specific membrane antigen (PSMA) imaging and theranostics. He has been chief investigator on numerous large-scale competitive GU oncology grants and leads an active team of clinical researchers at Peter MacCallum.

After completing specialist urology training at Guy's and St. Thomas' Hospital (London, U.K.), Dr. Murphy spent a year in Melbourne as a fellow in laparoscopic and robotic urology under the supervision of Tony Costello. He returned to Melbourne in 2010 to take up his current positions. In 2020 he was named Australia's top researcher in urology, based on publications and citations in top journals in the field. He is a member of the invitation-only Advanced Prostate Cancer Consensus Conference and of the exclusive Association of Academic European Urologists. He holds senior editorial positions at the *BJU International, European Urology, Nature Reviews Urology,* and *Prostate Cancer & Prostatic Diseases* and is on the board of reviewers for many other journals.

Dr. Murphy is active on social media, with a large Twitter following and a busy YouTube channel. He blogs regularly for several websites and hosts the popular *GU Cast* podcast, focusing on GU oncology topics.

***Dr. Herrmann:*** *Welcome, Dr. Murphy. Everyone knows you as the driving force of the GU program at the Peter MacCallum Cancer Centre. Please tell us how you came to be there.*

**Dr. Murphy:** I grew up and completed my medical and surgical training in the beautiful west of Ireland, followed by urology training at Guy's and St. Thomas' in England and a GU oncology fellowship at the Royal Melbourne Hospital and Peter MacCallum Cancer Centre in Melbourne. We said goodbye to Melbourne and returned to the U.K. in 2007. However, we returned to Australia in 2010, when Peter MacCallum invited me to contribute to building a new cancer center and lead the GU oncology team.


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***Dr. Hofman:*** *Our paths almost crossed when I did a nuclear medicine fellowship at Guy's and St Thomas'. When did you realize the importance of nuclear medicine in urology? While exposed to the PET Center at St Thomas' or when you arrived in Australia?*

**Declan Murphy, FRACS, FRCS**

**Dr. Murphy:** While at Guy's Hospital, in Urology up until 2009, we used bone scans but not PET, despite increasing interest in $^{18}$F-FDG PET around the world. In addition, choline PET was unrealistic for many centers. After moving to Peter MacCallum in 2010, the GU community showed little interest in PET imaging. While we did have a choline PET program running at Peter Mac, there were logistic and technical problems resulting from scanning availability, and the clinical utility was limited. Therefore, our multidisciplinary tumor team had no involvement with nuclear medicine up until the arrival of PSMA PET/CT in 2014.

***Dr. Hofman:*** *Tell us how your interest was sparked.*

**Dr. Murphy:** I'll never forget it. I ran into Rodney Hicks (MD, FRACP) and Dr. Hofman at lunch, and they told me about PSMA PET imaging. I hadn't heard of it, but they said it was going to be sensational. I initially ignored this, but then I saw the imaging of the first patient scanned at Peter MacCallum in mid-2014—and it was indeed sensational. We still show that first case, as you could see the prostate tumor, lymph nodes, and bone metastases all in one scan, with a stunning tumor-to-background ratio. Sometimes in oncology a stunning image can be just as dramatic as a significant *P* value. That image is where our enthusiasm started. Then you and your nuclear medicine colleagues, especially your colleagues in Germany, began to produce the data. We haven't looked back since.

***Dr. Herrmann:*** *You were one of the first urologists in Australia to see the value of PSMA PET/CT. Despite concerns about stage migration and possible downsides of new technologies, you and your team embraced it. Why?*

**Dr. Murphy:** The stage migration issue does get overexpressed. It comes back to the design of the proPSMA study, with the primary endpoint being accuracy (Fig. 1). Accuracy was very attractive for this novel imaging technology, because we knew there were problems with conventional technologies for staging prostate cancer. Bone scans have false-positives and -negatives, and CT scans often miss lymph node involvement. We were making decisions based on poor-quality information; if better-quality information is available, that should not be described as stage migration. It should be described as improved accuracy.


**FIGURE 1.** Dr. Declan Murphy (left) and Dr. Michael Hofman (right) accepting the 2021 Australian Clinical Trials Alliance (ACTA) Trial of the Year Award for the ProPSMA study.

***Dr. Herrmann:*** *That is an excellent point. When you look at PSMA PET/CT, how early can we implement it? For example, is there potential for replacing multiparametric MRI for detection of prostate cancer?*

**Dr. Murphy:** In the 2014–2017 era, multiparametric MRI was used for early detection, after an elevated prostate-specific antigen (PSA) level and before biopsy. Now we use it routinely for all patients, with any suspicion of prostate cancer guiding the need for biopsy. But we know there are limitations for MRI, and patients with normal or equivocal MRIs but with concerning features (such as young age or high PSA density) may need biopsies as well. I don't think PSMA PET will replace MRI, but there is a subset of patients with normal or equivocal MRI results in whom PSMA PET/CT can add value, and we are evaluating this in a further randomized study.

***Dr. Hofman:*** *Not only did you embrace PSMA PET/CT early for diagnosis, but you also embraced it for therapy—designing and participating in the first prospective study of lutetium PSMA that led directly to the TheraP trial and now investigating lutetium PSMA as a first-line therapy in the UpFrontPSMA and LuTectcomy trials. What do you think of the use of lutetium PSMA early, either before surgery or instead of surgery?*

**Dr. Murphy:** It is very important to have scientific rigor in evaluating these exciting new technologies. Successful randomized trials in patients with advanced disease have demonstrated the utility of lutetium PSMA, which is now FDA-approved and included in guidelines. We also need to use prospective studies to evaluate early metastatic and high-risk localized prostate cancer. That's my first message.

We recently operated on the final patient (number 20) in our LuTectomy trial, in which patients received lutetium PSMA before radical prostatectomy. The initial data from the first 10 patients, presented at the European Association of Urology (EAU) this summer, showed very encouraging results documenting excellent tolerability and safety, and we look forward to publishing the final data in early 2023.

***Dr. Herrmann:*** *Urology is an important partner in driving the acceptance of theranostics in Europe. How do you see this in the United States and globally?*

**Dr. Murphy:** Prostate cancer multidisciplinary meetings need to include the nuclear medicine team, to benefit our patients. A message for the readership of *The Journal of Nuclear Medicine* is that urology and nuclear medicine can partner really well. Everyone should advance partnerships that they have with their colleagues, optimally selecting patients for FDA-approved therapies and research studies. I'm very optimistic that we'll see more successful partnerships around the world as these technologies become more available.

***Dr. Herrmann:*** *On a society level, EAU and the European Association of Nuclear Medicine (EANM) do a great job partnering. How do you see this on a global level?*

**Dr. Murphy:** This is indeed really important. EAU and EANM established a productive relationship over many years, including joint section meetings and many joint publications. This could or should be the template toward which we aspire. But we really need to turbocharge these advances, because that's what's required (especially for patient care) on a global level.

***Dr. Herrmann:*** *In addition to your outstanding scientific track record, you are also famous for your social media activities, including the GU podcast, your Twitter activities, your YouTube presence, and, of course, outstanding movielike talks. Tell us how you embraced social media and what nuclear medicine can learn from you?*

> ``If you're not embedded with these clinical teams, there's a high risk that the technology that you learned in your fellowship will be gone by the wayside 5 years later.''

**Dr. Murphy:** I joined Twitter in 2011. This was triggered by an article describing how an academic hematologist found Twitter to be quite useful for looking at newly released papers and opinions. So I just made a Twitter profile, typed in "prostate cancer," and started following a few of my friends who were leaders in the field. All of a sudden, my phone was lighting up with these great papers, just-published opinions, and images. I became very active and was soon appointed as associate editor for social media for the *British Journal of Urology*. We developed a strong social media strategy using Twitter, YouTube, and blogging to disseminate information outward—but also engaging with clinicians and researchers inward. To me, it is surprising that 10 years later Twitter remains the most important tool for clinicians and researchers who want to keep up to date with content and also have some fun engaging with their colleagues and friends around the world. Especially for an imaging-based specialty like nuclear medicine, it's a great opportunity to share interesting images and tell tales.

***Dr. Herrmann:*** *My cointerviewer, Dr. Hofman, is also a social media giant. He will follow up with more detailed social media questions.*

***Dr. Hofman:*** *You recently transitioned away from Twitter toward podcasting and YouTube TV. What led you to this transition, and how do you see this new form of knowledge dissemination playing out?*

**Dr. Murphy:** Spotify made a large investment in podcasting in about 2019, and Apple Music put a huge investment into podcasts. This caught my attention. At around that time, mirroring technology in cars was beginning to take off, so that podcasts could be played while driving. The world was transitioning to on-demand for everything. These technologic and behavioral changes resulted in a tremendous boom in the market for on-demand podcasting. I wanted to use my time biking to work to listen to urology-related topics, but there was not much out there. We decided to set up a podcast just for ourselves, our local community, to discuss hot topics that we talked about on Twitter. In early 2020 we bought some technology and spent a couple of months trying to figure out how to set up a podcast. Then suddenly the pandemic hit, and we posted our very first podcast at the end of March 2020, when Melbourne was in complete lockdown. The EAU meeting had been canceled, along with the presentation by Dr. Hofman on the proPSMA study to coincide with publication in *The Lancet,* so we made the proPSMA study the topic of our first podcast. Now 2.5 years later we are approaching 100 episodes and many tens of thousands of downloads. I am convinced that the pandemic facilitated the acceleration of our podcasting program.

Today, my colleague Renu Eapen (a real talent) and I talk about anything to do with GU oncology. We absolutely love talking about nuclear medicine, and therefore, we have had lots of interactions with PSMA experts from around the world. About a year ago we expanded into YouTube, because that was growing in the podcasting world. I read an article saying that YouTube gave different value for visual bites and that you could grow, not split, your podcasting audience by going into YouTube. I also quite like video technology, and now it's like a TV production.

***Dr. Hofman:*** *You recently talked about obsolescence in surgical training. I wonder what advice you would give a young doctor thinking about nuclear medicine training?*

**Dr. Murphy:** The title of the talk was "Avoiding Obsolescence as a Cancer Surgeon." I was just about to turn 50 when I was tasked to give this talk challenging my own relevance and future job security. My first message was that lifelong learning is essential. Looking back to my training as a young surgeon, we did basic surgery, including radical mastectomy and axillary lymph node clearance, with techniques that would never be used in patients today. No matter what you're doing out there today (and certainly in surgical training), it's important to understand that by the time you reach midcareer, there's a high chance that all these things are going to be obsolete. Therefore, of course, lifelong learning has to be essential not only to remain relevant but to do the best for our patients.

Nuclear medicine is a naturally evolving specialty, where new ligands and new imaging technologies such as total-body PET will always be creating new opportunities for your imaging capabilities. What the theranostics revolution in prostate cancer has shown us is that the most important thing for nuclear medicine practitioners, especially those who do theranostics, is to embed yourselves with clinical teams, whether these are in oncology or in functional imaging. If you're not embedded with these clinical teams, there's a high risk that the technology that you learned in your fellowship will be gone by the wayside 5 years later. If you work embedded in clinical teams, then you are much more likely to evolve and to help develop the best research questions for your patients.

***Dr. Herrmann:*** *Success of institutional programs often boils down to individuals. How do you transfer your enthusiasm, your energy, and your visionary thinking to the next generation of clinicians?*

**Dr. Murphy:** In surgery, we have traditionally had problems with too many men. One of our favorite missions is to attract fantastic, smart young women to urology. In part, this is because we need to change the structure of our workforce to be more representative. But also, to be brutally honest, it's a competitive world out there and we have all these wonderful young women doctors coming through. Unless we are attractive to them as a specialty, we will lose the smartest people. They will go to other areas in medicine where they feel more valued or more looked after. So, making sure we have a diverse workplace is important. The best workforce is diverse, and that sometimes takes a lot of strategy, leadership, and planning. In surgery, certain specialties (and urology is one of them) have far too many men. We have to actually go out of our way to ask: How are we going to change that? How are we going to change our scientific meetings to make them more sex-balanced? How are we going to change our training programs or the way we offer flexible training to young women? That is one of the points in my "Avoiding Obsolescence"—how to include young women in our specialty and make sure we are attracting the best people. We also need to think about other people who are not as well represented as they could be and reach out, widening participation.

***Dr. Herrmann:*** *What 3 wishes do you have from or for nuclear medicine for the future?*

**Dr. Murphy:** Wish number 1 is around imaging technology. Can you please accelerate total-body PET/CT into clinical practice all around the world? Because I think this will be a game changer for prostate cancer. Wish number 2: please keep developing radioguided surgery opportunities in prostate cancer. This offers great promise, but we're not there yet. Number 3: we are at only the start of the theranostics revolution in GU oncology. I encourage you to be ambitious and change the world for all our GU oncology patients.

***Dr. Herrmann:*** *Dr. Murphy, Dr. Hofman, thank you very much for your time.*