

## Advances in the Treatment of Prostate Cancer

Webcast

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### **Andrew:**

Thank you for being with us once again on one of our webcasts every two weeks on [mdanderson.org](http://mdanderson.org). We're broadcasting worldwide, and our goal is to bring you the latest information about cancer, about a diagnosis you or a loved one may have or something you're trying to prevent. And, you know, one of the more common cancers certainly is prostate cancer. It affects about 230,000 men in the United States. They'll get that diagnosis this year. And, unfortunately, more than 30,000 will die from the disease.

But as you maybe have heard, and I know my dad used to tell me, he lived to be 92, but he did succumb to some complications of prostate cancer, but we were always told along the way, well, many men will die with prostate cancer rather than from it. So we're trying to understand if you're diagnosed which are you and which treatment might apply to you. Do you need treatment, how aggressively, how soon. And there's a whole array of treatments that are available. And as you can bet, M. D. Anderson Cancer Center, one of the world's leading cancer centers, has put together not just the arsenal of treatments but the expertise of multidisciplinary team and researchers who continue to try to figure out who needs treatment, when, and understand the different subtypes, if you will, of prostate cancer.

And that's why I went there as a leukemia patient because they had experts such as that in my illness and why many people come from around the world to either get a second opinion about their prostate cancer or maybe surveillance to see what should be done and when or if they should go ahead with treatment and then get some good counsel on what.

Along the way today in our hour-long program we're going to meet two of the leading specialists in prostate cancer at M. D. Anderson, and I'll introduce them in just a minute but tell you who they are. Dr. Deborah Kuban, who is professor of radiation oncology and she's section chief of genitourinary radiation oncology. She's a radiation oncologist at M. D. Anderson and she's the medical director of their multidisciplinary clinic, and we'll hear more about that as we go. And we'll also meet a surgical oncologist, a urologist, who's trained particularly in prostate cancer, and that's Dr. John Ward.

But first I want you to meet their patients. And I'd like you to meet first from Houston, Texas, Sam Farmer. Let me tell you a little bit about Sam. Sam is 52 years old. His job is as a warehouse manager in Houston. He's got a kid, he's got three grandkids, which is great. He's actually a patient of Dr. Ward, but how he got there is interesting.

Sam, welcome to the program. My understanding is it was a high PSA and then a biopsy that confirmed prostate cancer just a few months ago, right?

**Mr. Farmer:**

Yes, sir. This all started back in November of last year, sir. And it's been just a ride since then, and everything is going great right now.

**Andrew:**

Well, let's talk about how you got there. Eventually, you were referred to M. D. Anderson, and I know you were determined to beat the cancer. And so you've had a really go for it, let's get the treatment you need. And that included, when it was offered to you, being in a clinical trial, right?

**Mr. Farmer:**

Yes, sir. And that clinical trial, that medication they wanted to put me on was CCI-779. And everything worked out great, it had a few side effects but everything went fine.

**Andrew:**

Well, we'll find out more about where clinical trials come in. So you were actually taking little pills prior to having surgery, correct?

**Mr. Farmer:**

Yes, sir. First they gave me a hormone shot first, and then they turned around, I took this CCI-779, which was three little pills about the size of the end of your little finger, taking them once a day. And I took it all the way up until surgery time.

**Andrew:**

And then you've had surgery, and how was the recovery from surgery? Because we're doing this program in June, you had surgery in April. How has it gone? Since the surgery how have you recovered, all your functions, etc.?

**Mr. Farmer:**

Well, I'll put it this way, everything is going fine so far. And the only thing is my doctor took away three of the best things I love to do, which is ride a motorcycle, ride a WaveRunner and ride a bicycle during the summertime. He took that away from me for six months, but other than that everything's going great.

**Andrew:**

Okay. Well, we're going to consult with Dr. Ward in a minute and find out when you can be given the okay to do that again.

You know, everybody's prostate cancer situation is a different, and we're going to talk about how you need to get the care that's personalized for you. So let's meet someone with a different situation. And this is a special day for him. Joseph Jefferson joins us from Sugar Land. He's a professor, a counseling professor at Texas Southern University, 66 years old. And along the way, 42 years ago got hitched, if you will, to Ida and had three children and two grandchildren.

Today is your 42nd wedding anniversary, right Joseph?

**Mr. Jefferson:**

That's correct.

**Andrew:**

So we have special permission from Ida that you're doing this program. She must think it's really important.

**Mr. Jefferson:**

She does. She's a nurse, so she's right in line with me.

**Andrew:**

Okay. Well, first of all, congratulations to you and the best to you. So tell us, you've been living with diabetes, I understand, since you were about 50

**Mr. Jefferson:**

Right.

**Andrew:**

And there are various things that can happen, you know, circulatory problems and sometimes even urinary problems with diabetes. Was it the diabetes symptoms that made you maybe miss the signs of prostate cancer?

**Mr. Jefferson:**

Absolutely. I didn't know, I didn't have any feelings or any thoughts about prostate cancer. I thought it was diabetes that I had to get up and, you know, in the middle of the night, go to the bathroom. And it didn't phase me on it. But what really happened, M. D. Anderson had a prostate cancer awareness program, and it was free. And my wife kept getting on me, said, Why don't you go over there and get a prostate cancer check. So finally I did. So it looked like I would never get the results back, and the old adage about no news is good news isn't always true. So about three weeks later I got a beautiful letter, I thought, and it said I had 3.3, my

PSA was 3.3, and that was above normal range. Please get in touch with my general practitioner. And I did and then he sent me to a neurologist, and he wants to do surgery right away.

**Andrew:**

A urologist.

**Mr. Jefferson:**

Yes, urologist. And I wasn't for that. So I did a little research, and I asked him to send me to M. D. Anderson. And I knew who I wanted to see because I did research on her. And after doing research on Dr. Kuban I found that she had written a lot of papers and she had gone around the world doing lectures on prostate cancer. And then I knew right then, Andrew, that was the person that I wanted. And I was able to get her.

**Andrew:**

So you saw her. You saw Dr. Kuban, who we're going to meet in just a second. And so you ended up having radiation and then you continued to take some hormone shots about every three months?

**Mr. Jefferson:**

Hormone shots, that's correct. And I had a little bit of doubt about the hormone shots.

**Andrew:**

Right. I understand.

**Mr. Jefferson:**

You know, being a male you have those funny feeling about hormones. And I do still have the hot flashes. That's the only side effect that resulted from the whole treatment process.

**Andrew:**

Well, Ida probably knows about that, so you've been in it together.

**Mr. Jefferson:**

Well, she tells me I should know how she feels.

**Andrew:**

There you go. So Joseph, just a question. So now your PSA is way down?

**Mr. Jefferson:**

0.10.

**Andrew:**

And I have a question for Sam. Sam, same thing, your PSA?

**Mr. Farmer:**

My PSA level is nondetectable as of right now, sir.

**Andrew:**

Okay. We're going to learn about PSA in just a minute. Well, gentlemen, I'm going to just move on for a second because I think we want to meet your doctors who've helped you get back to health. So you were just mentioning, Joseph, Dr. Deborah Kuban, Dr. Kuban, professor of radiation oncology. So he sought you out, and Joseph told me on the phone the other day he thinks you've been a blessing to him, and I'm sure many other people say that too. And that's not to put down Dr. Ward, because I know a lot of people must say that about him too.

Help me understand something, Dr. Kuban, PSA, prostate specific antigen, this test. What do these numbers mean? Because we continue to hear that it's a controversial. Should you have the screening test? What does the number mean? Can you put that in perspective for us?

**Dr. Kuban:**

Sure. PSA is just a protein, and it's produced first by normal prostate and also by prostate cancer. And so it's the best tool we have but it's not a perfect tool. So you have to play the numbers game. How high is too high? What should a normal PSA be? And it's not an all-or-nothing thing because it doesn't just detect prostate cancer. A more ideal test, of course, would be one that only showed up if there was prostate cancer present, and PSA is produced both by normal prostate and prostate cancer. So then we have to take into account how much PSA would the normal prostate be producing, and so if PSA is elevated then we would start to consider that perhaps the excess PSA might be coming from cancer.

However, as men age the prostate gland increases in size and typically produces more PSA. So you would expect a higher PSA from a normal prostate in a more elderly man than in a younger man because typically that prostate would be increasing in size. And so by studying large groups of men over many years we have determined what the range for a normal PSA should be versus an abnormal PSA.

These are just general guidelines, and it doesn't prove for certain that there is cancer present or not. Only a biopsy would do that. So PSA then is just a clue that perhaps something could be amiss, and we've developed these levels over the years. And we've found recently from some large studies that have been done that there may be cancer present actually with lower PSAs than we had thought in the past. I'm sure everyone has heard the level of 4 thrown around, but that's a PSA for a more elderly man.

Older than 65 we would consider PSA of 4 a normal level. And for men who are younger than 65 we usually use a level of 2.5 or so. And then for very young men,

in the 45 to 50 age range, we look at PSAs more around the level of 1. So it is age dependent.

And it's not just the absolute PSA, but it's also the change in PSA. So on a yearly basis the PSA can change a small amount, but it should not be changing by larger amounts. By small amount we mean less than one point, something on the order of .35 or .5 change per year would be considered normal.

**Andrew:**

Dr. Kuban, we're going to come back with more from you. And certainly we're going to meet Dr. Ward and hear all about surgical approaches as well and learn about new approaches in radiation and drug therapy as well.

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Well, let's meet a urologist who went on to study cancer and specifically prostate cancer. Dr. John Ward is a surgical oncologist. He's one of nine at M. D. Anderson, and he's an assistant professor in the department of urology. And he works with Dr. Kuban in that multidisciplinary clinic we talked about, which is very unique because if you go to M. D. Anderson to the multidisciplinary clinic for prostate cancer and you're there, and, you know, do you need surgery, do you need radiation, some other approach. You're there in the exam room; the doctors come to you, same day, same place. And they've worked that to--because these questions are tough in prostate cancer.

So Dr. Ward, let me ask you about that. You know, there's debate about what's the right number in prostate cancer or the rate of change depending upon your age. And we as patients say can't you just tell us what to do. You know, isn't there a maybe not a one size fits all, but what's so difficult about prostate cancer knowing whether it's going to be aggressive and needs lots of treatment or treatment A or treatment B or that you just watch it?

**Dr. Ward:**

What makes it so difficult to determine is because prostate cancer seems to come in multiple different subtypes. And while patients will sometimes present with very

similar general prostate cancer characteristics their course over the next decade or longer can be very different despite starting at the same place. And why patients will take very different courses despite seemingly starting at the same place, we don't quite understand yet.

**Andrew:**

That's the \$64,000 question. Now, M. D. Anderson researchers are working on that, right?

**Dr. Ward:**

It is. And the focus of much of our research is trying to find the fingerprint of these different subtypes of prostate cancer so that when we're sitting with a patient, and Dr. Kuban and I have the opportunity to discuss treatment options with a patient, that we can better predict the future and better predict how they will respond to one therapy or another therapy.

**Andrew:**

Now, let's talk about surgical approaches, because that comes up for a lot of men as they move forward with therapy. It's not always what happens, but certainly Sam had surgery. And we'll talk about medicine before, like he did an experimental medicine, and we'll talk later about clinical trials.

So a man is going to have his prostate removed, because the thought is, let's say, that it's contained within the prostate gland. There are different approaches. We hear now about, you know, it's advertised on radio or TV around the country, robotic surgery, minimally invasive surgery, nerve sparing surgery. Take us through that. So, first of all, there's a lot of hoopla about robotics, and you have some doctors at M. D. Anderson, that's what they do. Put that in perspective. Tell us about where that fits in first.

**Dr. Ward:**

Sure. Well, first I just wanted to say something to Joseph's experience in meeting a urologist in that not all urologists immediately jump for their knives. And one of the wonderful things about being at M. D. Anderson is we can take care of the patient and not have to worry about any of the other considerations. It just becomes the patient. So I can sit there and honestly provide the patient with my opinion on whether he needs surgery or if he needs a different form of therapy.

As far as surgery when we do recommend surgery, there are different ways of skinning a cat is really what it comes down to in the end all of the different methods of approaching the prostate and removing the prostate in what we call a radical prostatectomy, which means that we remove all of the prostate and some of the surrounding tissue, accomplish the same thing. The question in today's age becomes, is there a method that's better at accomplishing that without having the side effects that none of us want, which is primarily erectile dysfunction or urinary incontinence, and what is the recovery time from that? And there is a lot of debate

within our own community as to what's the best method to approach a gentleman's prostate, to remove it.

**Andrew:**

So robotics, what does that mean? Does that mean a robot does the work, or?

**Dr. Ward:**

Robotics is another way of doing a laparoscopic prostatectomy. So laparoscopic prostatectomy is putting a little port into the belly to look at the prostate and remove it with the first minimally invasive means of removing the prostate. And any time you hear the words "minimally invasive" it means we're taking little ports, usually about five of them, and poking them into the belly and using a camera to look at what we're doing.

What happened after laparoscopic prostatectomy started was that a company introduced a robot to control the handle. So a surgeon will sit at a console separate from the patient, usually a number of feet from the patient while there's still a scrubbed-in surgeon at the side, but the surgeon at the console sitting away from the patient will be controlling the arm.

The benefit is that the arms, the laparoscopic arms have more motion than just the regular laparoscopic arm. So robotic-assisted laparoscopic prostatectomy is a better term because it's just a robot onto a laparoscopic instrument machine.

**Andrew:**

And of course guiding all that though at M. D. Anderson you have surgeons who are specialists and very experienced in that approach.

**Dr. Ward:**

Absolutely. And just like with any type of surgery the robot itself does not make the outcomes any better. It still depends upon the surgeon who's doing it. And you can have good or bad surgeons with either open procedures or with laparoscopic procedures. Probably more than the way in which the prostate is removed, it's the person who's doing it that's going to affect the overall outcome.

**Andrew:**

For a few years now there's been this term "nerve-sparing radical prostatectomy" so that you can get all the cancer but you don't have all those unwanted side effects. That sounds tricky. Is it something that you all do, though, regularly?

**Dr. Ward:**

It is. It is a technically challenging method of performing a prostatectomy, and different people are more proficient at it than others. It has certainly revolutionized our way of approaching men with prostate cancer. It's not appropriate for every patient, but it is appropriate for many patients I should say.

**Andrew:**

Dr. Kuban, let's go on to you. Now, you're a radiation oncologist. You specialize in prostate cancer. Often men have choices about radiation too. There's seeds that can be implanted in the prostate. There's external radiation. There's different ways of approaching that. Help us understand some of these tools that you now have at M. D. Anderson.

**Dr. Kuban:**

Sure, of course. The two broad categories of radiation are, as you suggest, Andrew, either an implant, which if we do it in a permanent fashion it would be with seeds. There is a way to do an implant which is a temporary implant that is done a little bit more uncommonly. And then the other broad category would be external beam. For external beam here at M. D. Anderson we have both x-ray treatment, which is the more classic type. And we also just recently in the last year opened a proton therapy center. And protons are positively charged particles, so it's just a different way to do external beam, and the energy is deposited in a different way. So these would be the broad categories, either the implants or the external, and then there are some subcategories within those.

And it tends to depend on the tumor presentation, such as the stage of the tumor, how large is it, the grade, how does it look under the microscope, the PSA level. Those are some of the main things that would determine whether the patient was a candidate for an implant or external beam. And typically implants are done with relatively small, localized, very early-stage tumors because we can't get very far around the prostate margins with an implant, and we can't treat the glands on top of the prostate, called seminal vesicles, very well. So it has to be a very localized tumor. And external beam can be more universally applied, either for early stage cancers or for more locally advanced tumors.

**Andrew:**

Dr. Kuban, where are we with radiation? I mean, all your fields continue to evolve, but when you use the word "radiation" it sounds pretty scary, but what I mean is if you know somebody who's treated with radiation for prostate cancer or other cancers years ago often there was collateral damage to healthy tissue. Where are we now with your ability, with your skill and with the equipment you have to hit the cancer and try to avoid the healthy tissue?

**Dr. Kuban:**

We've made phenomenal progress over the last several years. Surely in the last ten years and even in the last five years we've made vast progress technically. And much of this has to do with imaging, the CAT scans, the MRIs, the ways to actually see the tumor and see the extent of tumor has improved considerably over the last several years, and that's really key to what we do. Because we really need to be able to see that tumor and exactly where it is to be able to aim the radiation.

And then the second thing that's helped us a great deal is computer technology, because all of our equipment now is computer driven. We take a CAT scan of a patient. We put it in a treatment planning computer. We essentially simulate the radiation treatment. In the computer, we can apply the beams, we can see how the radiation dose is falling, determine how much dose is going to the prostate, how much to the rectum, which is right next door, and how much to the bladder. And if we don't come up with a good plan the first time we can try a second and third and fourth rendition. And this is all done before we ever do it to the patient.

So now we have very, very good ways to actually target the tumor, which means we can increase the dose, we can avoid the normal tissue and we can effect a much better result both for killing the cancer and for the patient in avoiding complications and improving quality of life.

**Andrew:**

Now, a question about that. The prostate is soft tissue and it's not down there in the lower abdomen. I never took an anatomy class but I know it's down there somewhere. So things are moving around. I mean, do you have gas, did you go to the bathroom.

**Dr. Kuban:**

Yes.

**Andrew:**

Did it shrink. So is your equipment such now that you can target where the cancer cells are today versus where they were weeks ago when you maybe did your original plan?

**Dr. Kuban:**

Yes, absolutely. Our targeting techniques for daily treatment have also improved. We have several techniques now where we can determine the exact position of the prostate on any given day. And similar to surgery we would treat the entire prostate, because prostate cancer can be distributed throughout the gland. A biopsy may locate a couple of places, but we know if we remove that prostate we may find it in other areas as well. So similar to surgery we would treat the entire prostate.

And the prostate can move on a daily basis. From one day to the other its position can be slightly different, as you suggest, depending on the filling of the bladder and the filling of the rectum and sometimes the patient's position can be a little bit different. So we need to know exactly where that prostate is, of course, so we can deliver the radiation to the right place.

We have a few techniques to do that now. Just before treatment we can do an ultrasound, through the abdomen, actually, not through the rectum similar to the way biopsies are done, but just by pressing a little probe against the abdomen we can see where that prostate is.

One other technique we use is to implant little gold markers which can show up on an x-ray picture and so we can compare that to a template.

**Andrew:**

Yes, I've heard of that. It's sort of an instrument landing system for your radiation, to get it where it needs to go. We're going to have to take a break, Dr. Kuban, forgive me. We're going to have plenty more time to talk and learn more about it. By the way, we got a bunch of questions in. Thank you for emailing them in. We're going to fire some questions at our experts, let Dr. Kuban talk more about the targeting when we continue Patient Power and our discussion of prostate cancer brought to you by M. D. Anderson Cancer Center.

Welcome back to our live webcast, Patient Power. And, you know, on July 10th we had some discussion earlier about minimally invasive surgery, and we're going to hear from two experts from M. D. Anderson, Dr. Wayne Hofstetter and Dr. John Davis, and they're going to discuss minimally invasive surgery for cancer. So we'll get more perspective on that and go into greater depth.

Dr. Kuban, you were helping us understand how the computing technology and you were talking a little about little gold beads to help target getting the radiation where you need it at the intensity you need it and not hitting the healthy tissue, right?

**Dr. Kuban:**

Yes, exactly. And, you know, as you suggested, there's actually now a second generation of gold markers. The first generation were considered pretty static, where they were implanted in the prostate and then just before treatment we'd line everything up and make sure the prostate was in the right place using these markers because they show up on x-ray film. But now there's a new generation of markers that actually give off an electromagnetic signal, what we call GPS for the body--you know, the system, the locator system, the GPS system--and these markers will each give us an electromagnetic signal throughout the course of radiation so that if while the patient is being radiated, for that 15-minute period of time, if the prostate moves these markers will actually show the movement during the treatment. So it's not just one static picture before treatment but now we can monitor the prostate actually every minute throughout the entire treatment course. So, you know, as we said a few minutes ago our technology keeps improving and improving and we keep progressing.

**Andrew:**

Well, I think what I take comfort in is that you've got the technology, and I know you've got the expertise to go with it. Let's fire some questions at you.

Dr. Ward, we're going to go over to you now. Tom Ashville emailed in a whole bunch. We were talking about robotic surgery earlier, so he wants to know--and of course it applies not just to robotic surgery but that's kind of the specially precise and can bend in all directions--what percentage of men retain their continence after robotic surgery?

**Dr. Ward:**

Again, it's going to be very surgeon-dependent, and you need to know whether your surgeon is actually keeping track of his continence rates and using validated tools to do that. So having the doctor sit there and say, so, are you continent, some patients will feel uncomfortable saying anything other than yes. So you need validated tools to measure that, and your surgeon should be doing it, should be following his outcomes or her outcomes

In good hands, whether it's an open prostatectomy or robotic prostatectomy, at one year you should expect continence rates approaching 95 percent complete continence. Now, that takes about a year to get complete continence, to get that sort of number, but whether it's open or closed it's still going to depend on your surgeon who's actually doing your surgery what your return to continence is going to be.

**Andrew:**

All right. Let's talk about the big fear. I mean, that incontinence is certainly a fear, but the worst would be the cancer coming back. So when does prostate cancer recur if it's going to? Is there some point when you're in the clear?

**Dr. Ward:**

There is no point that you're in the clear. And we actually when I was at Mayo Clinic we looked at this over a 20-year period and there's unfortunately no period when you're in the clear. Now, the further you get out the less chance you have of having recurrence, so most of your recurrences are going to occur after surgery within the first two years. But you continue to require follow-up. And follow-up becomes simpler in prostate cancer because of PSA, but you continue to require that PSA testing, you know, as far as we can tell from now until something else calls you home.

**Andrew:**

Now, where does the recurrence typically happen and what would be the signs of a recurrence? Would it just be the PSA is rising or would you have some pain somewhere? What could happen?

**Dr. Ward:**

The vast majority of recurrences are detected as PSA-only recurrences following surgery at this stage. Now, we are beginning to look at operating on patients with more advanced disease, in other words cancer that's not necessarily contained

within the prostate and even sometimes patients who have metastatic disease. And so you have to keep that into mind when you're looking at patients whether or not they had locally advanced disease and if they had surgery what their margin status was.

So recurrences can occur within the prostatic fossae, so the bed at which the prostate was sitting in that you removed it. Or they can recur within lymph nodes, within the retroperitoneum which is the back of the belly there. Or they can more commonly occur within bones. But oftentimes the PSA has to be very high before you can detect the sites of recurrences.

**Andrew:**

Dr. Kuban, people wonder, well, who is at risk. So my dad developed prostate cancer like a lot of older men, and eventually, some complications of that, he died. But he lived a long time. He was 92, and he was working almost up until his dying day. But am I at higher risk for prostate cancer at an earlier age? We talk about in breast cancer, if your mom had breast cancer let's say prior to menopause then you need to be screened earlier and things like that. So what about a family connection in prostate cancer or any indication, anything that might put someone at higher risk?

**Dr. Kuban:**

Well, we do think that men would be at higher risk if they had a primary relative or more than one secondary relative who did have the disease, although we know that men who have no relatives or no reason that we know of to have the disease can be diagnosed with prostate cancer. But surely these are risk factors or some warning that you should keep it in mind a little bit more or perhaps be screened a little earlier or just be more aware that it could be a problem for you.

The other population that we worry about are African Americans, because we know that the risk of prostate cancer in this population is higher. And so we do recommend screening the African population at a slightly younger age and especially if they have a family member who was diagnosed with prostate cancer. So we do take that into account.

As far as other risk factors, there have been many over the years and some of them have held true and some of them have sort of come and gone. But one thing we seem to relate is diet, and more and more we're studying this. And, you know, we think that a low-fat diet is good for so many things, you know, the heart, the colon, the prostate. And countries where we see very low incidences of prostate cancer are those that have mainly a plant-based diet and don't have a lot of fat in the diet. So we think that you can do yourself a big favor if you would just reduce the fat. So many times patients ask me, what can I do for myself, and I think that's something that's universal and that's quite doable actually.

**Andrew:**

Dr. Kuban, you mentioned age. So for me, as a Caucasian, when should I be having the PSA test? And if I were African American, if it's earlier, when would that be?

**Dr. Kuban:**

We usually drop down about five years for African American or patients who have some other risk such as a family member who had prostate cancer. The general age to start screening is at age 50, and that's what's recommended for the general population. And then typically we'll drop down to 45 or so for the other populations that are higher risk.

**Andrew:**

Okay. Now, I know there's a big study going on with men taking selenium, I think 200 micrograms a day. And maybe the study is to see whether that lowers the risk of prostate cancer. Is that right?

**Dr. Kuban:**

Yes, the study actually combines vitamin E and selenium to see if that might reduce the risk of prostate cancer. And the study is closed. It's accrued I think about 32,000 men. It's closed now, but we don't have any results yet.

**Andrew:**

Okay. Stay tuned.

**Dr. Kuban:**

Yes. And, Andrew, that's the way we're moving. We moved toward earlier diagnosis for prostate cancer, and now we're taking a step even further than that and moving toward prevention. Because obviously if you can prevent the disease, you know, it's better than ever having to treat it.

**Andrew:**

One other question. This came in from Bill in Katy, Texas. And he wanted to understand this term, BPH, and I worry about it, you know, getting up in the middle of the night. And Joseph was talking about it too. Whether you have diabetes or not, you know, urinary problems. And we understand that our prostate can become enlarged as we get older. But is there any connection between having BPH and being at higher risk for developing prostate cancer?

**Dr. Ward:**

There's probably a higher risk for undergoing a prostate biopsy, but I'm not sure that there's necessarily a higher risk for prostate cancer. And the reason for the higher risk for the prostate biopsy is as Dr. Kuban was saying earlier is that an enlarged prostate produces more PSA, and so we're more willing to recommend having a biopsy.

**Andrew:**

Okay. But an enlarged prostate has nothing to do with having tumors, having prostate cancer?

**Dr. Ward:**

Correct.

**Andrew:**

Okay. That's good to know.

Now here's another question. Help us understand about hormone therapy, Dr. Ward. So hormone therapy, what's it doing? So where does it come in? What's its benefit? How does it work?

**Dr. Ward:**

Hormone--testosterone is the fuel for prostate cancer. So thus far the only urologist who's won the Nobel Prize it was Dr. Huggins who described the relationship between testosterone and prostate cancer. And back in the 50s this was a Nobel Prize winning event. Actually, late 40s but he got it later.

When we deliver hormone therapy essentially what we're doing is a chemical castration in that we're robbing the body of testosterone by giving an injection that drives the testosterone down so it stops the testicles from producing testosterone. There's also a form of hormone therapy that you take by mouth that's actually a testosterone receptor blocker because a bit of the testosterone comes from the adrenal gland. So if you want to have complete androgen blockade you'll be having both the shot and some pills to not only decrease the testosterone that's produced by the testicles but also to block the testosterone that's coming from the adrenal glands

**Andrew:**

Okay. And one other thing while we talk about it, we have just a couple of minutes before we take another break, but Sam was taking pills that you recommended or at least gave him the option to, when he decided to be in a clinical trial, where are we with research as far as use of pills like that? What's the goal?

**Dr. Ward:**

Well, the goal of Sam's study was to look at this medication, as he said, CCI-779, or other medications similar to it, and the effects that it has both on the actual tissue that's removed, so for Sam after Sam underwent his surgery his prostate is being looked at in a specialized manner to look at the effects of this medication on the cancer cells. And then following Sam to see if by giving this medication--for Sam, he had an advanced cancer--whether this improved his overall outcome. So combining some sort of chemotherapy with surgery can we get better results in men who are very high risk for having progression and/or death from the disease itself.

**Andrew:**

And, Sam, you've been feeling great, right?

**Mr. Farmer:**

Yes, sir. Been feeling really good and just everything is going excellent. Just doing whatever I would like to do and moving right along.

**Dr. Ward:**

You want to get back on the motorcycle.

**Andrew:**

Well, we've got to get you clearance for riding that motorcycle. Yes. Motorcycle and a WaveRunner, something else like that, Sam, right?

**Mr. Farmer:**

Yes, sir. It's a bicycle. Dr. Ward, you'll give me clearance in about four months.

**Dr. Ward:**

Yes. The only reason I asked Sam to stay off of that is because when we do surgery, whether it's open or robotic, Sam is essentially sitting on the repair between his bladder and his urethra. And I have no literature to support it but I'd rather see everything heal real nicely and have him avoid taking an unwanted hit underneath the scrotum.

**Andrew:**

Sam, you and I are going to go out on the jet skis next summer, okay?

**Mr. Farmer:**

That will work for me.

**Andrew:**

Okay. We'll do that. We're going to take another break. We'll be back in just a minute as we continue our discussion with experts, expert patients, expert physicians associated with M. D. Anderson on prostate cancer. Remember you're listening to Patient Power brought to you by M. D. Anderson Cancer Center.

Welcome back as we come to the last segment of our live Patient Power webcast on [mdanderson.org](http://mdanderson.org). We've been discussing prostate cancer, and it's great to just have the time to be with the experts and really learn what they're thinking is. And of course there's an art to medicine. Fortunately, cancer is becoming better understood. There's still lots of things to figure out, but it's great to be in a dialogue with folks like Dr. John Ward, a urologist, surgical oncologist and radiation oncologist, Dr. Deborah Kuban, who devoted their lives to helping you, if you have prostate cancer, live a long and healthy life.

So, Dr. Kuban, a lot of what goes on at M. D. Anderson is clinical research. So as Dr. Ward was saying there's a \$64,000 of who needs treatment, how aggressively and when, and, of course, other areas of research too. Where are things headed? What would you like to point out that you're excited about as research at M. D. Anderson?

**Dr. Kuban:**

Well, I think as a general rule we're really trying to individualize treatment for patients now. And clinical studies help us to do that because we can take a group of patients and we can, for example, have two different treatment arms. We can treat half the patients one way and half the patients another way and in a very controlled setting see which treatment would be best for that particular patient with their particular tumor characteristics. So we tend to choose a problem and then go after it in this matter so that we can keep improving our treatment methods. That's how we learn, and that's how we can do better for our patients.

And one topic now that I think is very pertinent that you mentioned was who really needs treatment? I think we talked about prevention. That would be best if we never had to treat it. But once you have the disease who do we really need to treat? And we know from many studies over many years that there are men who have prostate cancer for a significant part of their life, die with it but not of it, and it was never treated. So we're trying to establish who those patients are and who it would be safe not to treat. Actually we have a protocol for this. Dr. Ward and I are physicians who treat patients either with surgery or with radiation, but we are in favor of this and we are actually participating in this and this is something we offer patients in our multidisciplinary clinics, the appropriate patients obviously.

But we offer them this protocol for no treatment. And these are patients who have very small amounts of disease that look under the microscope like it's not going to progress quickly, and then we can offer them this trial, which is no treatment. And all of these patients are followed very, very carefully, and there's an algorithm that's followed. If the PSA goes up too quickly or if the repeat biopsy doesn't look the way we want it to or if we feel something on the prostate, then that would make us consider treatment. It's called active surveillance now, not just watchful waiting, because we are actively following these patients and we're ready to introduce treatment if it's necessary. But we're hoping that this will help us to determine which patients it would be safe to watch. We're doing biopsies on everybody after a year, so we're going to have that tissue to examine. We're doing blood work on patients every six months.

So we're going to be doing a lot of studies on these patients looking for various tumor markers, treatment etc., that will help us to determine who may not need treatment.

**Andrew:**

Okay. That sounds exciting and I wish you well with your research. One thing we haven't talked a lot about is related to drug therapy now. Sam had some medicine before surgery. And then we talked about hormonal therapy. But certainly there are some medicines also used, chemotherapies, etc., when it's advanced to help people live as well as they can for as long as they can. And of course that varies very much by patient. So that comes into play, Dr. Ward, too. And I know they're working on progress there too with those medicines, correct?

**Dr. Ward:**

Correct. And a lot of drug therapy has been aimed in the past with men with very advanced disease or men who are going into an androgen-independent state, in other words the cancer is growing despite having no testosterone around. And a couple of three years ago two seminal papers were published in the New England Journal showing that the medication called docetaxel can actually improve survival for men with androgen-independent prostate cancer.

But where we would really like to see an improvement is moving combination therapies even earlier into men's treatment. So as Dr. Kuban was mentioning and as you have mentioned also, we're trying to figure out which of those patients ten years down the road will develop that androgen independence. So we're spending an awful lot of time looking at the genes so that we can come up with the genes such as you had mentioned earlier, breast cancer, which has a couple of genes and even has the MammoPrint these days, that can predict based on the genes your chance of having a recurrence.

So we're trying to develop a manoprint or a prostoprint or something to give us that sort of look into the future so that we can start introducing these medications early into the course of treatment that will treat the disease that has gotten outside the prostate already.

So there's a lot of exciting things for a disease that at one stage once it got outside of the prostate we thought the game was over. We're now starting to realize that we do have methods of treating these patients and will have more in the future.

**Andrew:**

That's neat. Dr. John Ward, urologist, surgical oncologist, I want to wish you well. Dr. Debbie Kuban, radiation oncologist with your multidiscipline clinic there at M. D. Anderson.

I want to give the last word to your patients. First of all, Sam Farmer, you're doing great. Pretty grateful for the care you got at M. D. Anderson?

**Mr. Farmer:**

Well, I put it this way, if it wasn't for M. D. Anderson I wouldn't know what to do. I mean, they were excellent to me and, I mean, you go in there with a positive attitude, they have a positive attitude, and I would recommend it for anybody.

**Andrew:**

Well, there you go. And I went there too. And heard the expertise in prostate cancer tonight, and they've got a whole team. And Mr. Jefferson, Joseph Jefferson, all of us, thousands of people around the world are wishing you and Ida a happy 42nd anniversary.

**Mr. Jefferson:**

Andrew, thank you.

**Andrew:**

You've got a lot of life to celebrate. We wish you all the best. Take her out for a great dinner, okay, Joseph?

**Mr. Jefferson:**

I sure will. Thank you so much.

**Andrew:**

Yes, thank you for being with us.

Ladies and gentlemen, we've been discussing prostate cancer for an hour. The replay will be there for you on the M. D. Anderson website, and then the transcript will be added. It will be all there for you. And then on July 10th we're going to talk about minimally invasive cancer surgery. Remember, besides this expertise you need to be a smarter patient because knowledge can be the best medicine of all. See you in just a few weeks. Have a great July 4th between now and then. Andrew Schorr saying thank you to M. D. Anderson for sponsoring yet another great webcast. Bye-bye everyone.

Please remember the opinions expressed on Patient Power are not necessarily the views of M. D. Anderson Cancer Center, its medical staff or Patient Power. Our discussions are not a substitute for seeking medical advice or care from your own doctor. That's how you'll get care that's most appropriate for you.