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Welcome to Yale Cancer Answers with doctors Anees Chagpar and Steven Gore. I am Bruce Barber. Yale Cancer Answers features the latest information on cancer care by welcoming oncologists and specialists who are on the forefront of the battle to fight cancer. This week it is a conversation about men's health month and prostate cancer screening with Dr. Michael Leapman. Dr. Leapman is an Assistant Professor of Urology at Yale School of Medicine and Dr. Gore is a Professor of Internal Medicine and Hematology at Yale and Director of Hematologic Malignancies at Smilow Cancer Hospital. Gore I did not realize we had a men's health month, nobody told me about it.

Leapman We certainly do, the idea behind men's health is that everyone obviously deserves to be healthy, but there are certain considerations for men's health that we believe require some attention.

Gore Different than women.

Leapman Different than women, so there are certain urologic conditions, urinary health, sexual health, reproductive health which are clearly specific to men, but men also are less likely to go to the doctor, more likely to engage in risky behaviors, smoke, drink alcohol. So, we think it does require some attention.

Gore I think for women their GYN is often their primary health provider during the reproductive years, whether that is good or not I do not know, so you often hear OB/GYNs talking about general health, but my guess is urologists are not who guys go to for influenza vaccinations and stuff like that?

Leapman You are absolutely right, there is a gap that is not really being met right now for men, and based on the number of urologists in this country it is very unlikely that urologists will assume that role. And that is where I think men maybe fall between the cracks is if they are not going to primary care doctors there is no one else really looking after them advising them on screening, advising them on healthy behavior.

Gore Your interest primarily is in prostate cancer and if a guy is not being seen by a doctor, how is he coming to people like you unless he is having some terrible symptoms of advanced prostate cancer, which we do not want to happen. Some guys have blood in the urine or semen and that will get somebody's attention, but that would not be a typical presentation for a prostate cancer.

2:50 into mp3 file https://cdn1.medicine.yale.edu/cancer/2018-YCA-0617-Podcast-Leapman_335945_5_v1.mp3 Leapman That is correct and so that is why the relationship of a patient with the primary care doctor someone who knows them, cares about them understands their desires, their wishes and their preferences is so important. A urologist will never be the ones who are

primarily screening every male American or deciding who needs to be screened, who does not need to be screened, and that is where I think better efforts for engagement with primary care with internal medicine are so critical.

Gore But even there isn't there a lot of controversy about screening for prostate cancer in general?

Leapman Absolutely, and right now there is a little bit of a pendulum swing, there was swing against screening, the US Preventative Service Task Force issued a grade D recommendation saying do not screen any man under any condition and that was in 2012. Right now, they are reevaluating that statement and it is likely to change in the next few months, but we think screening, if it should happen, should occur in a decision making fashion. Men should understand what that risks of screening are, what the benefits are and what the options are.

Gore Can you walk us through why this is even controversial? We have heard for years about mammography, although there has been some controversies about what age to start and how often, I do not think you were saying do not get mammography and for a long time you know the PSA, I think that is the test right, why wouldn't you get it?

Leapman It is a great question, on the surface it sounds very simple, finding cancers earlier are better.

Gore That is what everyone says.

Leapman That is the premise. But we found that if you look hard enough, you are going to find prostate cancer in many, many men. A lot of the cancers we find by screening are not actually lethal, these are the cancers that someone is more likely to die with that from and if you find cancers in men we are likely to treat them and treatment has consequences. So we are trying to be very, very selective in who we identify and only offer treatment selectively to men who are most likely to derive a benefit.

Gore So you are saying that the problem is the urologists cannot control themselves from sending people to surgery, is that what it is?

Leapman I think that is the big part of it.

Gore I was teasing.

5:01 into mp3 file https://cdn1.medicine.yale.edu/cancer/2018-YCA-0617-Podcast-Leapman_335945_5_v1.mp3 Leapman But for decades we had a problem of over diagnosis and over treatment. It was clearly well intentioned, we were trying to save people's lives from dying from prostate cancer, it is one of the leading cancer killers in man, we are trying to combat that, but treating men with non-aggressive cancers is not going to extend their life. So my interest really is finding ways to refine that prediction, tell people you do not need to be treated and watch it carefully versus offer a high level of confidence and good treatment to those who do have a cancer that needs to be addressed.

Gore Okay, so I am a pretty healthy 60-year-old guy and my brother recently has had prostate cancer, but until recently we had no prostate cancer in the family, so what do I do? I see my internist every year and am pretty good about that and he always asks me, do I want my PSA done, and I have gone through years where I said well I am trying to live what I teach and there was a time when I was not getting it and now I am saying yes, but how do you approach me?

Leapman It is very interesting that we have shifted a lot of this responsibility onto the patient

Gore Which does not seem fair

Leapman I agree completely and it has been under the guise or the name we call shared decision making. The patient and the doctor are going to sit down together and hash out a plan. The doctor will inform the patient what the risks and benefits are and the patient will ultimately make a decision.

Gore Walk us through that, using my scenario for example.

Leapman I would tell you that if we tested your PSA, if it shows that it is elevated, it is possible that I will offer you a biopsy. A biopsy is an invasive procedure. There is a risk of getting an infection from it. There is risk of it being uncomfortable. You could experience bleeding and we could diagnose a prostate cancer which is aggressive, but we could also diagnose a cancer that is not aggressive and you have that shackled to you for the rest of your life.

Gore But the risks of some inconvenience and a little pain for a couple days against the risk of not knowing there was an aggressive prostate cancer to me, that seems like a no brainer.

Leapman Yeah and I would agree with that sentiment. I think that screening is warranted but I do have some concerns about shifting it entirely onto the patient. Steve, you are a physician, I think you understand the complexity of it, but if I am just someone who this is the first conversation I ever had or even heard about it that is a big burden to shoulder and so I think that streamlining this is going to be very, very important in the next few years.

7:38 into mp3 file https://cdn1.medicine.yale.edu/cancer/2018-YCA-0617-Podcast-Leapman_335945_5_v1.mp3 Gore How do you advise patients who are coming to you because they think maybe they should be screened or your internal medicine colleagues who are really kind of confused about what to do with their patients, what do you recommend?

Leapman I always fall back on the data and unfortunately we have very high level, level 1 evidence, randomized trials of population based trials of screening. The controversy really started because they were 2 that happened at the same time. One was performed in the United States where men were randomized where they said half the group could get screened, half the group would not get screened

Gore Flipping a coin, basically?

Leapman Basically flip a coin and we are going to look at 10 years later and say well, the group who got screened, are they less likely to die from prostate cancer or have a bad outcome? The same trial happened essentially in Europe. The US trial came out first and it showed no difference in the likelihood of being dead from prostate cancer at the end of the study and this was very, very controversial and pretty much closed the door on the screening question temporarily. But that was a very flawed study. Actually, upwards of 90% of the group who were randomized were being told do not screen were actually getting screened anyway, because in the United States you cannot stop someone from getting screened. Their primary doctors were ordering it anyway, so there is not really a true screening trial. The Europeans were a little bit ahead of us here and that really was a good screening trial. There was a big difference between the group who was randomized to not get screened and a group who was randomized to get screened.

Gore In terms of the incidence of the cancer or in terms of overall survival?

Leapman Both, so if you screened, you are going to find cancers, but there was a significant difference in the risk of death from prostate cancer, and so I fall back on that and you also have to be very careful to see are we screening the right people. The group that derived the benefit, the patients were enrolled from the age of 50 to 69. So this a younger group with a good life expectancy. In the United States unfortunately, still many men who are above the age of 80 or who have multiple medical problems who are probably not going to derive benefit from screening nonetheless still get tested, and I am worried about that, because if you find a cancer in someone who has many medical problems and you treat them, you are only to make their life worse.

Gore I project frighteningly 10 years for now, when I am hopefully a healthy 70-year-old and I am thinking if I am a healthy active 70-year-old why wouldn't I get screened?

Leapman I agree and so fortunately we have guidance on that, so according to the guideline bodies, the American Urologic Association, the NCCN, if you do have a good life expectancy, if you are in good shape at 70, I see no reason to stop screening.

10:19 into mp3 file https://cdn1.medicine.yale.edu/cancer/2018-YCA-0617-Podcast-Leapman_335945_5_v1.mp3 Gore So it is really individualized to the patient.

Leapman Absolutely.

Gore Are there special populations at increased risk who definitively should be screened or should even start screening earlier?

Leapman People with the first-degree family history.

Gore What does that mean?

Leapman That means, a father or brother, a close family member had prostate cancer or many people in your family who have prostate cancer, we believe that you should consider getting screened earlier, so as opposed to 50 or 55 start at 45. Also African American men are at a much higher risk for developing cancer and developing lethal prostate cancer. So we believe that African American men should start considering screening earlier, around the age 45.

Gore Do we understand why there is this difference in people of color?

Leapman It is a great question, we do not really have a great answer. We think that these differences are not just explainable by different screening practices, there might be something real that is going on there

Gore And that could be genetic or it could be environmental, food based or not?

Leapman Yeah, we think it is probably a combination of all of them. Not to mention, not only are African American men more likely to develop aggressive cancer, there are less likely to get treated for it which is concerning and that is one of the disparities of cancer care in The United States that we are trying to study and address.

Gore And I suppose in New Haven in the Connecticut urban areas, this will be a place where one could really study disparities I would think that this would be a good environment for that.

Leapman Absolutely, the New Haven area is very representative of The United States where it is a very diverse community that is not homogenous, we are lucky to practice in an academic setting which does resemble the United States. Some academic environments are very homogenous, but this really represents the melting pot of the United States.

12:28 into mp3 file https://cdn1.medicine.yale.edu/cancer/2018-YCA-0617-Podcast-Leapman_335945_5_v1.mp3 Gore One thing that I have learned recently as we have gone through our every 5-year cancer center review by the NIH is that access to medical care in this area is much more universal than in many other areas, although we have a very significant racial heterogeneity, a very significant racial minority and I think the access to care for Latinos and African Americans is really much better than in many parts of the country, I am very proud of that.

Leapman I think that is true, I have been delighted to see how engaged the community is and how the barriers between the university and the community are very minimal.

Gore Yeah, it is different than other places are.

Leapman It really is.

Gore Let's go back to my hypothetic, and so I have had my PSA done because I just decided I should or I would or whatever and it is elevated, not

crazy high, but elevated, so now what happens?

Leapman We know that a million biopsies are done every year in the United States right now for people who are suspected to have prostate cancer. So are trying to hone that number down because not everyone who has an elevated PSA is going to have prostate cancer, so we are trying to apply new tools like MRI, genomic testing prior to conducting a biopsy.

Gore Well that is going to be a wonderful topic for a second half, because you got my attention, but right now we are going to take a short break for a medical minute, please stay tuned to learn more information about men's health and particularly prostate cancer screening with Dr. Michael Leapman. Support for Yale Cancer Answers comes from AstraZeneca, providing important treatment options for patients with different types of lung, bladder, ovarian, breast and blood cancers. More information at AstraZeneca-us.com.

This is a medical minute about breast cancer, the most common cancer in women. In Connecticut alone, approximately 3000 women will be diagnosed with breast cancer this year but thanks to earlier detection, noninvasive treatments and novel therapies there are more options for patients to fight breast cancer than ever before. Women should schedule a baseline mammogram beginning at age 40 or earlier if they have risk factors associated with breast cancer. Digital breast tomosynthesis or 3D mammography is transforming breast screening by significantly reducing unnecessary procedures while picking up more cancers and eliminating some of the fear and anxiety many women experience. More information is available at yalecancercenter.org. You are listening to Connecticut Public Radio. 15:20 into mp3 file https://cdn1.medicine.yale.edu/cancer/2018-YCA-0617-Podcast-Leapman_335945_5_v1.mp3 Gore Welcome back to Yale Cancer Answers. This is Dr. Steven Gore. I am joined tonight by my guest Dr. Michael Leapman. Michael, before the break you kind of teased us with this kind of high tech sounding thing about trying to stratify or using new techniques to tease out those worrisome PSAs which are likely to be cancer related from those which are not. Can you tell me more about that?

Leapman I will be happy to, so as I was mentioning before many men who get their PSA tested are going to have an elevated PSA. It is going to be abnormal, maybe because they have cancer, maybe because they have inflammation in their prostate and maybe some men just make more PSA than others for genetic reasons. So to tease that out a little bit, that has been an effort for many, many years to refine who gets a biopsy to offer biopsy to those who we really think might have prostate cancer and maybe carefully watch those who are the lower risk for it.

Gore Primarily that is happening on 2 fronts, one is offering an MRI of the prostate, an MRI is the test people go for like a CAT scan, makes a lot of noise.

Leapman It makes a lot of noise, the next thing it offers, there is no radiation in it. We get a very high quality picture of the prostate and it is useful to identify lesions or areas which are suspicious for cancer and if they are not there, we can

feel a bit better about it. If there are areas that are suspicious, we can perform a targeted biopsy,and when we do biopsy it we make sure to hit it directly and we have technology here, that is growing all over the country and all over the world to essentially be like a GPS for your car. So as opposed to saying I am going to hover around this vicinity, it tells you exactly where to put the target.

Gore Is it done by a robot?

Leapman There is a machine that the urologist will use and technology will tell you just where to put that needle.

Gore That is incredible.

Leapman Yeah and it has really improved our detecting. So if we tell someone you have a clean biopsy we can be more certain of that than we used to be. We also have at our disposal now better markers, kind of cousin molecules of PSA which are better at telling people you are at risk for having prostate cancer or you are not a risk for having prostate cancer. So our reflex currently is if you have an elevated PSA to offer some additional testing, simple blood test to better hone in on that individualized risk.

Gore And how helpful is that?

17:55 into mp3 file https://cdn1.medicine.yale.edu/cancer/2018-YCA-0617-Podcast-Leapman_335945_5_v1.mp3 Leapman It really is helpful, so if you have an elevated PSA, there is maybe a 60% chance that you have prostate cancer somewhere around there, this improves that confidence. It improves that area under the curve that prediction of the likelihood of having prostate cancer.

Gore So if those tests are negative, can you be rest assured?

Leapman It requires some interpretation, it is not a simple yes or no. It depends on the patient's overall risk, their age, their preferences, but I think slowly stepping in that direction of saying if your PSA is elevated but all the other test look good, maybe we could start holding back on the biopsy. I still think in today's day and age, we are still being cautious here, but in select patients we are forgoing immediate biopsy if the other tests are encouraging.

Gore Am I wrong in thinking that prostate cancer in general tends to be slow growing so that a watchful waiting and looking at the trend of PSA in such cases may not be warranted?

Leapman You are correct that we generally think prostate cancer is a slow growing disease for some, but the aggressive ones we think can move quickly and so that is the reason for the uncertainty, that is what makes it so challenging is that one size fits all approach is not going to work for prostate cancer.

Gore I see and none of these adjunctive tests tell you the likelihood of it being one of these more aggressive things which you want to make an earlier diagnosis?

Leapman They actually do, so if the MRI looks very abnormal that is a problem, if the biomarkers are very abnormal we also think that is suspicious. So are trying to build a model or prediction tool that helps people make these decisions earlier and not only before diagnosis, but if someone has a biopsy showing prostate cancer and it looks low grade, we want to improve the confidence with which we tell them, you do not need to get treated right now. You do not need to have surgery, you do not need to have radiation.

Gore How do men respond to that, because I think it is got to be very challenging to know that you have got a low-grade prostate cancer, and it is cancer right, it has got that C word and you are not going to do anything about it, I mean that does not sit well I would think with a lot of people.

Leapman It can be very tough to begin with and I agree those are some of the hardest conversations to tell someone, especially maybe someone who has lost a family member to cancer, to say we have identified a cancer in your body and we are not going to do anything about it. But I think what gives people comfort and solace is the strength of the experience and the strength of the evidence supporting the safety of watching it carefully and we do not stop at just the biopsy. So there were tools we talked about MRI, biomarker and genomic testing. Basically, testing the genes in someone's cancer also improves our confidence that this is really not an aggressive entity. We do

20:44 into mp3 file https://cdn1.medicine.yale.edu/cancer/2018-YCA-0617-Podcast-Leapman_335945_5_v1.mp3 not stop there. We also monitor very carefully. So we do not just say you have a low-grade cancer, see me in 10 years. We really keep you under our thumb and say we are going to check you PSA at 3-6 month intervals. We are going to do repeat MRI and unfortunately repeat biopsy, but to make sure we have fully characterized it we do not let anything slip between the cracks.

Gore So it requires a certain amount of being tied to the system and maybe some intermittent anxiety and the 3-month or 6-month visit, but then maybe hopefully you can sort of live your life in the interim periods without a lot of anxiety?

Leapman Correct, so the whole purpose of doing this is to improve people's quality of life. The rationale behind doing it is that treatment even in the best hands occasionally can have a cost, that can be urinary and sexual function. So for men whose sexual life and whose urinary function is good, they stand to be harmed by immediate treatment, now clearly if you have an aggressive cancer, we take steps to minimize those treatments, minimize those complications and we do offer treatment and I think that is a sound approach, but if you have a cancer that is of very, very, very low risk to your life we have to be sure that we preserve the quality of your life.

Gore But if people need to have treatment or want to have treatment and they are very concerned about their sexual functioning, can't they opt for something like radiation instead of surgery?

Leapman Radiation and surgery, they do pose similar risks of deterioration of sexual function. So if you look at about 3 years after treatment, those lines converge. And so unfortunately, there is no way to come off completely without effect. The quality of surgery has improved dramatically and with the integration of robotic techniques, radiation has improved dramatically as well, but I am sort of a believer in the approach of, if it is not broken do not fix it, right and so for many men, if it is a truly low grade cancer

Gore You would rather just watch it?

Leapman You would rather watch it; nonetheless, the quality of treatment has really improved and so I think the risk of having a major urinary or sexual problem has really gone down, so that is encouraging as well.

Gore Let's say it is a lower grade cancer and you really believe that the right thing to do is to watch it, but you have got a person who says look, I cannot live with that anxiety and don't want to have this cancer, are you willing to perform a prostatectomy in such a patient or you are going to say, my medical conscious does not allow me to do that, I can refer you to the other people whom might feel differently, how do you handle that?

23:25 into mp3 file https://cdn1.medicine.yale.edu/cancer/2018-YCA-0617-Podcast-Leapman_335945_5_v1.mp3 Leapman I think personally, if we build a relationship with a patient and really and I think if they trust me and I trust them and we have a good relationship, believe it or not, those are not very common events, but certainly if someone said listen I cannot sleep at night about this, this is really harming me, then of course I think to alleviate that patient's anxiety and to let them get on with their life and live their life to the fullest, then I would feel comfortable offering treatment.

Gore Let's go a little passed that in terms of men's health and so your patient has had surgery or radiation as it may be and is unfortunately suffering from some degree of sexual impotence or unacceptable incontinence, what is your relationship to them, how does that play out, how can you help them?

Leapman In almost every situation we can address those issues and so I think thier urologist and myself would like to stay very, very involved with patients afterwards and so the sexual function can be addressed in many ways. There are medications like Viagra, Levitra, Cialis which we know about. There are also other interventions, injection therapy which can really help men achieve erections in people who have been treated for prostate cancer and people who have not been treated for prostate cancer. So there is a lot we can do for erectile function. So prostate cancer is not the end of sexual function for males at all.

Gore Which I am sure makes people feel much better because for some reason I hear that sex is important to men, I do not know.

Leapman Yeah, exactly, but it is a common misconception I think that if I get treated for prostate cancer, that is it for sex for me, and it is really not the case. It is a small minority of men who suffer from urinary incontinence

afterwards, but there are things we can do to address it. There are corrective procedures we can do, things like urinary slings or artificial sphincters which can help restore continence for men if you are in that unlucky small minority.

Gore Those are surgical procedures?

Leapman Yeah, they are surgical procedures.

Gore I think a lot of guys hearing that, if you have erectile dysfunction, we have a medication that you can inject into the penis before sex, that does not sound like really very romantic?

Leapman Correct, it really depends on the situation and it sounds like a big hurdle and most men look at me just the way you are looking at me right now. I must be crazy.

Gore Which nobody can see, but I am kind of glad because that would be embarrassing, but that sounds horrifying.

26:19 into mp3 filehttps://cdn1.medicine.yale.edu/cancer/2018-YCA-0617-Podcast-Leapman_335945_5_v1.mp3 Leapman But like anything else it becomes part of the routine, becomes part of the ritual and after a few months of doing it and if men can achieve a good erection then it becomes second nature.

Gore I would think it is much easier in an established and longitudinal primary relationship than in somebody who is dating or something.

Leapman Absolutely.

Gore What is an encouraging outcome for these patients long term in terms of their cancer?

Leapman It really depends on the aggressiveness of the cancer, intermediate risk cancers that are kind of on the fence between nonaggressive and very aggressive, we have a very good handle on it as well as high grade cancers and so we can watch people very carefully, offer additional treatments if necessary and I think that has really resulted in prostate cancer being one of those cancers which has a very good cure with a capital C not just control rate. Across the disease spectrum, unfortunately some men still do show up on the doorstep and they have aggressive cancer which is spread beyond the prostate and could be in their bones, their lymph nodes and that is a difficult situation, but we have really made tremendous triads in offering very durable treatments to those patients.

Gore Right and they have got to see my colleagues in medical oncology.

Leapman Correct.

Gore And are these people who have been treated successfully at risk for developing subsequent prostate cancers?

Leapman If they have been treated, we think that they are at risk for that cancer coming back, so it is not maybe a secondary cancer, we think it is the primary cancer hiding out somewhere.

And so we watch people very carefully. After treatment, the PSA test which is so tricky beforehand actually becomes very valuable. If your prostate is removed, your PSA should be 0. So it is very easy for us to track elevations in it. So if your PSA goes down to 0, but then climbs back up, and it hits 0.2, 0.4, we begin to get concerned and say you know the fire is not totally out.

Gore We have got a couple minutes left and I wonder what you think about testosterone screening. We see all these guys and I see a lot of patients and they want their testosterone screened and I do not know it seems like a big industry?

28:50 into mp3 file https://cdn1.medicine.yale.edu/cancer/2018-YCA-0617-Podcast-Leapman_335945_5_v1.mp3 Leapman It is the hot topic we see so many patients who have heard about it from other people and they want it, but for men who genuinely do have a testosterone deficiency, a low testosterone and the symptoms of low testosterone lethargy, feeling tired, low libido and if they also do have a genuinely low testosterone they can really make a dramatic improvement in the quality of their life. There is a lot of testosterone supplementation which appears to happen kind of outside of that, people trying to reach super-therapeutic or super-physiologic levels.

Gore Just feel better right?

Leapman Just feel better because if a little testosterone is good, more is better. That is the inclination. So that is part of I think the men's health issue, to educate men about testosterone health. For example, young men might not know that if you take testosterone go to the gym and get big muscles you probably are going to be infertile.

Gore And you get small testicles.

Leapman And you get small testicles. People do not know that, I mean I am amazed that information does not trickle down. They might have complex regimens of how they are going to take it and what they are going to do, but the fact that it is probably going to shut down sperm production, at least while you are on it, maybe longer, is something that is really important for urologists and primary care doctors to educate on. Dr. Michael Leapman is an Assistant Professor of Urology at Yale School of Medicine. If you have questions, the address is canceranswers@yale.edu and past editions of the program are available in audio and written form at yalecancercenter.org. I am Bruce Barber reminding you to tune in each week to learn more about the fight against the cancer. You are on Connecticut Public Radio.