Funding for Yale Cancer Answers is provided by Smilow Cancer Hospital. Welcome to Yale Cancer Answers with your host, Doctor Anees Chagpar. 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's a conversation about prostate cancer with Doctor Joseph Kim. Doctor Kim is an associate professor of internal medicine and medical oncology at the Yale School of Medicine, where Doctor Chagpar is a professor of surgical oncology.

So Doctor Kim, maybe we can start off by you telling us a little bit more about yourself and what it is you do. I'm a medical oncologist. I specialize in taking care of patients with prostate cancer and other urinary tract cancers. I've been here at Yale for the last nine years or so. I received my training at the National Cancer Institute of NIH. Since I came to Yale, I have been taking care of patients with prostate cancer and other tumor agencies.
I also specialize in clinical trials.

It’s prostate cancer awareness month and many people have heard about prostate cancer, but there’s still a lot of questions.

So I’m hoping that we can unpack a lot of that today.

So to kick us off, why don’t you tell us about the epidemiology of prostate cancer?

How common is it, who gets it and how lethal or not lethal is it?

So that’s a very good question.

So prostate cancer is a very common cancer.

Other than skin cancer,

prostate cancer is the most common cancer in American men.

And according to the epidemiology, they estimate about 260,000 new cases of prostate cancer this year and about 34,000 men will unfortunately die of prostate cancer.

As you see this number,

not everyone dies of prostate cancer.

Clearly there’s a certain phenotype that is very lethal prostate cancer and this is very important for us to understand who are these group of patients.

how aggressive it could be in identifying these patients and treating
0:02:13.852 –> 0:02:16.252 the patients and improving
0:02:16.252 –> 0:02:18.317 the outcomes of these patients.
0:02:18.32 –> 0:02:20.975 So who gets prostate cancer?
0:02:23.1 –> 0:02:24.997 A common risk factor is age.
0:02:25 –> 0:02:27.488 The older the man is, the more likely you
0:02:27.488 –> 0:02:29.799 will develop prostate cancer and also
0:02:29.799 –> 0:02:32.235 it appears that some ethnic backgrounds
0:02:32.303 –> 0:02:34.775 play a role for reasons unclear.
0:02:34.78 –> 0:02:36.3 African American men seem
0:02:36.3 –> 0:02:37.82 to have prostate cancer
0:02:37.82 –> 0:02:39.717 that is somewhat more aggressive.
0:02:39.72 –> 0:02:41.939 And also there are other risk factors
0:02:41.939 –> 0:02:44.669 too such as we’ll describe.
0:02:44.669 –> 0:02:47.231 Genetic syndromes such as
0:02:47.24 –> 0:02:48.02 Lynch syndrome.
0:02:48.02 –> 0:02:49.97 Patients with this genetic syndrome
0:02:49.97 –> 0:02:51.844 tend to have prostate cancer
0:02:51.844 –> 0:02:53.776 in early age and also have
0:02:53.78 –> 0:02:55.289 somewhat aggressive biology.
0:02:57.36 –> 0:02:59.664 So tell us a little bit more about
0:02:59.664 –> 0:03:01.5 the screening for prostate cancer,
0:03:01.5 –> 0:03:04.524 because it seems to me that has
0:03:04.524 –> 0:03:08.156 had its ebbs and flows over the years
0:03:08.156 –> 0:03:11.184 from digital rectal exam to PSA to,
0:03:11.184 –> 0:03:14.004 you know, potentially even more
0:03:14.004 –> 0:03:16.26 sophisticated forms of screening.
0:03:16.26 –> 0:03:18.575 And yet not everybody requires
0:03:18.575 –> 0:03:20.427 screening, there are different ages for
0:03:20.427 –> 0:03:22.349 starting screening and stopping
0:03:22.349 –> 0:03:24.201 screening at different intervals
0:03:24.201 –> 0:03:27.088 at which one should get screening.
What are the latest guidelines in terms of screening for prostate cancer? So that’s a very good question. I think prostate cancer screening has evolved the last couple of decades or so. It’s been very confusing because the guidelines change, you know, over the last few years. So the latest guideline is that you have to talk to your doctor and your doctor should have a very well involved discussion about the prescan screening. In other words, if you have a strong family history, if your father, your uncles, had prostate cancer in early age, you should be concerned about it, and you can talk to your doctor about this and see what other tests that you could do to screen for prostate cancer. The most commonly used test to screen for prostate cancer is a blood test called PSA. It’s a simple blood draw and the normal value is 4. If your PSA is higher than four, this may raise some concern. And you may get referred to a urologist for further evaluations. And the other method you can screen for prostate cancer will be doing a
digital rectal examination, which should be done by your primary care physician. If you have any symptoms in your urination, such as weak stream urgency, urinary frequency or urinary tract infection, your doctor should evaluate this further to evaluate for the underlying pathology. And so for patients who are at average risk, let’s suppose that they don’t have a family history, they don’t have a genetic mutation. When should they start getting PSA testing and how frequently should that occur? Generally speaking, age 55 is the age that they begin to talk about prostate cancer screening in patients with risk factors. So if you are 55 and older, if you have any concern about the prostate cancer, you can discuss your concern with your doctor, especially if you have a strong family history. If you don’t,
then you don’t necessarily have to have pre cancer screening. What goes into that decision making? Because you know, when you start off by saying prostate cancer is one of the most common cancers, presumably not everybody has symptoms when they develop prostate cancer. So if you’re at average risk and you don’t have symptoms, what’s the likelihood of you being diagnosed with prostate cancer and a relatively frequent event, why don’t we have screening on a regular basis like we do for other kinds of cancers like breast cancer or colon cancer? That’s a very good question. And that’s in part because of the long Natural History of the prostate cancer and very diverse biology of the prostate cancer. And as I mentioned on epidemiology, not everybody dies of prostate cancer. I think it’s very important to identify this type, but the majority of prostate cancer can be very indolent in biology, meaning that you will develop a
0:06:46.3 → 0:06:47.69 prostate cancer in your lifetime,
0:06:47.69 → 0:06:50.226 but you may not die of prostate cancer.
0:06:50.23 → 0:06:52.45 So having a diagnosis and
0:06:52.45 → 0:06:54.635 going through a procedures and
0:06:54.635 → 0:06:56.82 treatments is another and whether
0:06:56.897 → 0:06:58.949 you die of prostate cancer
0:06:58.95 → 0:07:00.829 is what we are really afraid of, right.
0:07:00.829 → 0:07:02.642 So really a lot of things go
0:07:02.642 → 0:07:04.666 into making a decision.
0:07:04.67 → 0:07:06.8 Now you know about the prostate
0:07:06.8 → 0:07:07.51 cancer screening.
0:07:07.51 → 0:07:09.596 I think the future of prostate
0:07:09.596 → 0:07:11.6 cancer screening is really identifying
0:07:11.6 → 0:07:12.812 those who are at
0:07:12.812 → 0:07:15.08 risk of developing prostate cancer,
0:07:15.08 → 0:07:16.8 not just prostate cancer,
0:07:16.8 → 0:07:18.088 but lethal prostate cancer
0:07:18.088 → 0:07:19.88 and indolent prostate cancer,
0:07:19.88 → 0:07:22.424 they may not need to be diagnosed because,
0:07:22.43 → 0:07:25.174 you know, they may live with the disease,
0:07:25.18 → 0:07:28.06 but they may not die of the disease.
0:07:28.06 → 0:07:29.868 And so you mentioned a few of the
0:07:30.409 factors that tend to be associated
0:07:34.146 → 0:07:36.26 with more aggressive disease,
0:07:36.26 → 0:07:37.768 being African American,
0:07:37.77 → 0:07:39.734 having a family history,
0:07:39.734 → 0:07:41.698 particularly a genetic mutation and so on.
0:07:41.7 → 0:07:45.165 And so let’s suppose
0:07:45.17 → 0:07:47.11 did fit into that category and
you went and you had a conversation with your Doctor who decided to screen you with a PSA and you mentioned that the normal value is 4. And let’s suppose that your value was higher than four. What does that mean? Does that automatically mean that you have prostate cancer or what happens after that? So this will generate a lot of questions and discussions with your doctor. The first step is to be referred to a urologist, not all elevated PSA means prostate cancer, sometimes having inflammation in the prostate gland or having some procedures done with the prostate gland, these conditions can raise the PSA value too, so you don’t have to be too worried about it, but clearly deserve a conversation with the urologist. And he or she will guide you about the next steps. Usually what happens as the next step is that depending on the timeline, he or she may want to repeat the PSA value to see whether it’s real.
elevation or false elevation. If it’s confirmed to be elevated, then, depending on your medical conditions, your doctor will talk to you about whether you should get a prostate biopsy or not to monitor and those are the conversations you would have with your urologist. And ultimately if you do end up having a prostate biopsy and if that biopsy indeed confirms prostate cancer, there’s a whole system of grading of prostate cancer that really influences whether we need to be more aggressive or less aggressive in terms of its management. So we use what we call Gleason score to create groups. These are the pathological terms to describe the logical assessment of the prostate cancer and you know, the higher the grade is more ugly looking the prostate cancer cells. In other words, this may predict more of aggressive biology of the prostate cancer, but they also are low grade prostate cancer as well. So these tumors may have more indolent biology.
And so talk to us a little bit more about that because one of the things that I think may be confusing for people is the fact that some people may be diagnosed with a more indolent prostate cancer. And for them they may have watchful waiting or active surveillance, whereas others who may have a more aggressive prostate cancer may have other treatment modalities.

So at what point is that decision made? Is there a particular Gleason score cutoff that helps us to decide which category people fall into or what are the factors that go into that decision making?

When we make a decision on treatment there are multiple factors to consider. Gleason scores you mentioned are one of the critical ones, but also we look at tumor staging, patients comorbidities and life expectancy. A lot of things factor into making a treatment decision to answer your questions about the Gleason score, generally you will hear Gleason score 6,7,8,9 or 10. So Gleason six is generally speaking or low grade prostate cancer oftentimes.
A patient is very less likely to die of prostate cancer. So oftentimes patients with increasing disease, they can be monitored with what we call active surveillance or watchful waiting.

Score 7 is sort of like intermediate risk prostate cancer. Again depending on other conditions, you could talk to your doctor about being treated, whether surgery or radiation, but for Gleason score 8-9 or 10, these are rather higher grade prostate cancer and you really want to consider receiving more definitive treatments with the radiation or surgery. So again, Gleason score is one of the factors going in and making a treatment decision, but we should also think about other factors as well.

And so when patients are treated with active surveillance, what does that mean? Does that mean that we just kind of close your eyes and say, well, you have indolent disease or are these people followed?

And if they’re followed
0:12:16.048 –> 0:12:17.314 with imaging modalities,
0:12:17.32 –> 0:12:19.707 what modality is that and how
0:12:19.707 –> 0:12:21.592 frequently are people monitored
0:12:21.592 –> 0:12:23.956 or are they monitored with PSA?
0:12:23.96 –> 0:12:25.52 What does active
0:12:25.52 –> 0:12:27.08 surveillance really look like?
0:12:27.42 –> 0:12:29.46 It’s an active surveillance,
0:12:29.46 –> 0:12:30.74 not passive active surveillance.
0:12:30.74 –> 0:12:33.119 We go in with an active surveillance
0:12:33.119 –> 0:12:35.119 with the goal of intervening.
0:12:35.12 –> 0:12:37.388 At some point, again, this discussion
0:12:37.388 –> 0:12:39.61 would happen with the urologist.
0:12:39.61 –> 0:12:42.64 Primarily so during the active surveillance
0:12:42.64 –> 0:12:45.758 patient will follow with the PSA one
0:12:45.758 –> 0:12:48.145 summer once a year or prostate MRI
0:12:48.226 –> 0:12:50.896 to really understand the morphology,
0:12:50.9 –> 0:12:52.66 the how the prostate tumor
0:12:52.66 –> 0:12:54.42 looks in the prostate gland.
0:12:54.42 –> 0:12:56.38 They also follow with the
0:12:56.38 –> 0:12:57.556 digital rectal examinations.
0:12:57.56 –> 0:13:00.146 So they follow these patients very
0:13:00.146 –> 0:13:02.259 carefully and throughout the course
0:13:02.259 –> 0:13:04.779 to really make a decision as to when
0:13:04.779 –> 0:13:06.695 to intervene the prostate cancer.
0:13:06.695 –> 0:13:08.525 Oftentimes you may end up receiving
0:13:08.525 –> 0:13:10.408 a surgery or radiation therapy.
0:13:10.41 –> 0:13:12.414 But often other times you may
0:13:12.414 –> 0:13:14.849 not need to be intervened for
0:13:17.98 –> 0:13:20.024 Well, we’re going to take a
0:13:20.024 –> 0:13:22.08 short break for our medical minute.
And when we come back,
we're going to learn more about the
treatment of prostate cancer patients
with my guest, Doctor Joseph Kim.

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There are many obstacles to
face when quitting smoking,
as smoking involves the potent drug nicotine.
Quitting smoking is a very
important lifestyle change,
especially for patients
undergoing cancer treatment,
as it's been shown to positively
impact response to treatments,
decrease the likelihood that patients
will develop second malignancies,
and increase rates of survival.
Tobacco treatment programs are currently
being offered at federally designated
Comprehensive cancer centers such
as Yale Cancer Center and Smilow
Cancer Hospital all treatment
components are evidence based and
patients are treated with FDA approved
first line medications as well as
smoking cessation counseling that stresses appropriate coping skills.

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You’re listening to Connecticut public radio.

Welcome back to Yale Cancer Answers.

This is doctor Anees Chagpar and I’m joined tonight by my guest,

Doctor Joseph Kim.

We’re talking about the care of patients with prostate cancer in honor of prostate Cancer Awareness Month.

Right before the break, Doctor Kim, you were mentioning that many patients have indolent prostate cancer, which even if diagnosed, may be indolent in its course.

And it may be followed with active surveillance with PSA’s.

And so on and so forth.

For the patients who have more aggressive disease, can you talk to us a little bit more about their management?

So first of all, how do you know if a patient is diagnosed and let’s say that they have more aggressive disease?

We talked a little bit about the Gleason score and you mentioned that an 8-9 or a 10 is more aggressive if a
patient is diagnosed with such disease, how do we know that this cancer is confined only to the prostate? And hasn’t spread all over their body. Is there some sort of staging test that we need to do before we embark upon therapy? A very good question. So yes, we do several imaging modalities truly understand the extent of the prostate cancer. The most commonly used imaging modality we use is a prostate MRI. This will really give us a better description of what’s going on with the prostate gland and the tumors and how the tumors invading around the surroundings. So we use a prostate MRI and if we are worried that this is a high risk disease then we often get stage and scanned. Now with a CT scan and the whole body bone scan, we get a whole body bone scan because bone is a very common site that prostate cancer can spread to. So we get a CT scan and the bone scan in the prostate MRI to understand the extent of the disease. In some settings when we are making decisions as to what kind of a local therapy to do and
in a patient we highly suspect to have metastatic disease, we now use a new imaging. Or PSMA PET CT scan to see whether a patient in fact has a metastatic disease or not. Tell us more about this PSMA. Is that the same as a regular FDG PET or is it special for the prostate? Tell us more about that and in what patients you would use that as opposed to simply using a CT scan and a whole body bone scan. So that’s a very good question. So PSMA stands for prostate specific membrane antigen as the name implies. It’s supposed to be very specific to prostate cancer. So if you think about this, this is actually much more sensitive PET imaging than the conventional CT scan or the bone scan. This is different from FDG PET to scan after looking for hypermetabolism of the glucose. But here we are looking for the tumor cells that are expressing PSMA and we are trying to detect, you know, very low levels of prostate cancers by using this trace PSMA tracer, so this PSMA.
0:17:59.066 –> 0:18:02.018 has about 3 indications.
0:18:02.02 –> 0:18:04.18 So in a localized setting in patients
0:18:04.18 –> 0:18:06.107 who just received the diagnosis
0:18:06.107 –> 0:18:08.645 of high risk prostate cancer and
0:18:08.645 –> 0:18:10.28 your doctor’s discussing NOTE Confidence:
0:18:10.28 –> 0:18:12.38 whether we need to do a surgery,
0:18:12.38 –> 0:18:15.264 radiation or whether we should do a
0:18:15.264 –> 0:18:17.852 systemic therapy based on
0:18:17.852 –> 0:18:20.834 parameters such as PSA level, Gleason score,
0:18:20.84 –> 0:18:22.175 which really raised our concern
0:18:22.175 –> 0:18:23.856 that this patient may in fact
0:18:23.856 –> 0:18:25.04 have a metastatic disease.
0:18:25.04 –> 0:18:26.6 Then we may actually get
0:18:26.6 –> 0:18:28.16 a PSMA to scan,
0:18:28.16 –> 0:18:30.05 to document and to prove that
0:18:30.05 –> 0:18:32.5 patient has a metastatic disease.
0:18:32.5 –> 0:18:34.884 So in such a setting we can avoid doing
0:18:34.884 –> 0:18:36.736 surgery or surgery or radiotherapy
0:18:36.736 –> 0:18:38.716 for that group of patients.
0:18:38.72 –> 0:18:41.728 So we use this scan in making a
0:18:41.728 –> 0:18:43.655 treatment decision for whether
0:18:43.655 –> 0:18:45.851 patients receive local
0:18:45.851 –> 0:18:48.047 therapy versus systemic therapy.
0:18:48.05 –> 0:18:50.283 And the caveat for this is that
0:18:50.283 –> 0:18:52.426 this can detect sometimes a false
0:18:52.426 –> 0:18:55.037 signals and false positives as well.
0:18:55.04 –> 0:18:57.72 So one has to look at the imaging
0:18:57.72 –> 0:19:00.189 data in the clinical context.
0:19:00.76 –> 0:19:03.462 Let’s suppose a patient is diagnosed
0:19:03.462 –> 0:19:06.925 with a more aggressive prostate cancer
and their doctor decides that they’re going to get treatment and staging scans, whether a CT and bone scan or a PSMA and no metastatic disease is found. So this is localized to the prostate itself. Talk to us a little bit about how that’s treated. You mentioned surgery, you mentioned radiotherapy, you also mentioned systemic therapy, how do you decide which modality a patient will be treated with or is a combination often used? Tell us more about how prostate cancer is treated in that setting. So a lot of factors go into treating patients with a localized prostate cancer that is high risk. The options are several as mentioned, surgery is one, radiation therapy with hormone therapy is another, sometimes systemic therapy followed by radiotherapy is another approach that we can take in treating this group of patients. And again you know in making a treatment decision a lot of factors go into it in terms of patients preference as well. We counsel him about the potential complications of each of these approaches. Again our intent here is a cure,
the long term cure. 

So whenever we make a decision on a certain treatment we have to keep in mind of their long term complications as well. 

So generally speaking with the surgery, we can cure some of these patients, but some of these patients may end up with the long term urinary issues or erectile dysfunctions and other, you know, long term complications. The rates are relatively low. But again, patients would have to be concerned about that. 

And with the radiation therapy, patients will receive radiation therapy about five to six weeks of radiation therapy along with the hormonal therapy and these patients would have a very nice response in their PSA. And their clinical improvement, but the long term complication of this treatment would be sometimes this can cause some issues in bladder area, some abnormal blood vessels and sometimes this can cause second malignancy as well in these organs. How often does that occur? Because I can imagine that patients who have just been diagnosed with
prostate cancer may not want to hear that one of the potential risks of their treatment is getting yet another cancer. So is that pretty uncommon. That is a good question. Again, remember, we are going in with a curative treatment. In other words, we want to see our patients 10 years out, 20 years out and 25 years out. So the risk of having these malignancies with the radiotherapy, there’s a time factor so in patients who live long enough, after being treated with radiotherapy for prostate cancer, I don’t know the exact percentage of this, but we do see some malignancies, but relatively this is uncommon, I would say less than 5%. Now you also mentioned endocrine therapy or hormone therapy, for which patients is that recommended and what are the side effects. So hormone therapy is very commonly used as systemic therapy to treat prostate cancer. So when we say hormone therapy, we have to understand the biology of the prostate cancer.
So prostate cancer is really a testosterone or androgen driven cancer. So what we do first to treat prostate cancer is to lower the testosterone by giving another hormone therapy called GNRH agonists or GNRH antagonists. This is what we call a shot that we give once every three months or four months or on a monthly basis depending on the dose. So when patients receive this hormone injection oftentimes patients will experience hot flashes, male menopause like symptoms. Some irritability, they may have some fatigue, losing muscle mass, gaining fat, and those are common side effects that we see with endocrine therapy in prostate cancer. It sounds like many patients may not particularly love those symptoms, especially if they’re young. Are there other systemic therapy options for young patients? So there are other systemic therapy that we use to treat prostate cancer, mostly still hormone therapy and we
have other oral hormonal therapies, we have immunotherapies and other chemotherapies and novel therapies as well. But these systemic therapists are indicated for patients with metastatic prostate cancer. Let’s talk a little bit more about that if a patient is diagnosed with metastatic cancer. The systemic therapy really the mainstay of therapy and what can they expect in terms of their management. So when patients hear the word metastatic disease it can be big shocker for many of our patients. But I would like to reassure our patients that these systemic therapies work especially with the hormonal therapy the chance of benefiting these patients is nearly 100%. So other than hormonal therapy we use you know other oral hormonal therapies and chemotherapies to maximize the benefit of the treatment to improve the outcomes of our patients. And when we think about all of these therapies, the endocrine therapies, the systemic chemotherapies immunotherapies and all of the side
effects that go along with them, the list that you mentioned was not particularly something that I think a lot of patients would be very enthused about.

Are there ways that you can help them get through those side effects or ameliorate those side effects so that they still can have a reasonably good quality of life, especially if they’re going to live, as you mentioned 10, 20, 25 years out? You know, if the patients experience really significant hot flash or other side effects, we sometimes use other supplements to help with some of their side effects. But actually in patients with metastatic disease, these patients have symptoms of the cancer such as pain, fatigue and other cancer related symptoms. So actually when they start this hormonal therapy, they do feel better, their pain goes away and they regain their energy. Therefore they should feel better while they are on treatment. But for patients who have no symptoms at baseline, yes, these patients will experience some of
the side effect and there are other supplements or medication that we can use to treat those endocrine therapy related side effects.

So tell us about some of the new and novel things that are exciting in coming down the pipeline for prostate cancer management.

You mentioned at the top of the show that you’re very interested in clinical trials. Clinical trials always make us think about exciting new developments that might be helpful for our patients.

So what’s new in prostate cancer, what can we expect in the coming years?

The latest development in prostate cancer is a treatment called PSA targeted radioligand therapy.

As I mentioned earlier, this is in a way a targeted radiation therapy in patients who have PSA positive prostate cancer, which have become refractory to multiple lines.

This treatment can be used for this group of patients and the studies have shown that you know patients receiving this class of therapy actually did much better in terms of their symptoms in terms of disease control and the overall survival.
So that is one of the newest treatment that we have and there are other ongoing trials going on to really use this therapy in earlier setting and in combination with other therapies as well. So we are very excited about this new class of therapy.

Is this widely available or is this available only on clinical trial? So actually this therapy was recently approved by the FDA in April of this year, but then there was some issue with the supply. So there is a little bit of delay in using this therapy in operation in our clinics. But then there are other trials going on to investigate this treatment with other therapies to improve the outcomes of our patients. You also mentioned that immunotherapy was something that is being used. One is a treatment called sipuleucel-T and this treatment was approved in 2010 and we also have another treatment called immune checkpoint inhibitors.
This is really for patients with what we call mismatch repair deficiency which is seen in about 5 to 10% of prostate cancer patients and these patients may be eligible to receive this immunotherapy.

Doctor Joseph Kim is an associate professor of internal medicine and medical oncology at the 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.

We hope you’ll join us next week to learn more about the fight against cancer here on Connecticut Public Radio. Funding for Yale Cancer Answers is provided by Smilow Cancer Hospital.