

Welcome to Yale Cancer Center Answers with Dr. Edward Chu and Dr. Ken Miller. I am Bruce Barber.

- Barber Usually my role is to introduce the entire WNPR health forum, but this week it is a little different. Usually we come right into the studio every week and go directly to Ed and Ken. My thought was that it would be a nice opportunity to have no guests for this weeks show and make our hosts the guests. So now the tables are officially turned.
- Miller It's very exciting I have to say.
- Barber Yes, and now you two are occupying the interviewee chairs. How does it feel over there Ed?
- Ed: I think it is great.
- Barber Now, by way of introduction, Dr. Chu is Deputy Director and Chief of Medical Oncology at Yale Cancer Center. And as I tell you every week, Dr. Miller is a medical oncologist who specializes in pain, and I find this part interesting because some people say palliative and some people say palliative, but palliative care.
- Miller You can say it either way. I say palliative.
- Barber That is what I have been using, so I am glad we are going with that. You also run the Connecticut Survivorship Clinic.
- Ed: It is called the Connecticut Challenge Cancer Survivorship Clinic.
- Barber Let's start with Ed Chu. What I wanted to do is start with your job description. Ed, what does it entail when we say that you are Deputy Director and Chief of Medical Oncology at Yale Cancer Center?
- Ed: The best way to describe it is that I oversee and work very closely with the faculty in medical oncology. As we have talked about on the show before, oncology is the practice of taking care of cancer patients with a specialty focus on giving chemotherapy, or cancer drugs. We have had other guests on the show who specialize in radiation oncology; those folks specialize in giving radiation therapy to the cancer patients. We have had surgical oncologists on whose main specialty is performing surgery on cancer patients. All of our faculty members, and Dr. Miller and myself, are board certified trained medical oncologists. Our training is in chemotherapy, the delivery of cancer drugs to the patient.

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Barber I hear that you also speak a lot about your role in research. What is your role with respect to that?

Chu As well as being Chief of Medical Oncology, which is an important academic title and responsibility, my role is Deputy Directory of the cancer center. My charge and mission is to oversee the clinical translation of surgery programs here at the Yale Cancer Center. That concentrates on developing clinical trials and clinical investigations. One of the extraordinary strengths here at the Yale Cancer Center, for really the last 35 years or so, is phenomenal basic science. What we have tried to do over the last 3 to 5 years is bring in a number of very talented clinical investigators, such as Dr. Miller, and take that basic science and bring it into the clinic to offer what we believe to be state of the art treatment in the way of clinical research.

Miller: We should point out that there has been a lot of press with respect to the fact that there is now a physical building going up called the Yale Cancer Center, but there has always been one.

Ed: We are in fact one of the very first cancer centers to have been designated by the National Cancer Institute as a comprehensive cancer center. Right now there are only 41 such centers in the country. We are the only one here in the state of Connecticut.

Barber When you say that it is a center, are you physically located together, or is that saying more that it's a series of groups that interact?

Chu You raised a very good point Bruce. People call me up and say, "Finally, Yale has a cancer center." That's because of all the publicity and hoopla with the new building, which for us is huge because it kind of galvanizes everything. The fact is that to become an NCI designated comprehensive cancer center, the cancer center has to have a strength in basic research, strength in clinical research, strength in translation research and also focus and have strength in cancer control and prevention, as well as community outreach and education. That is why this show, we believe, is really quite important. It does help fulfill one of our mandate missions which is to reach out to the community and provide knowledge to individuals and patients with cancer.

Barber As you guys point out every week, and what I like, is that it is both an opportunity to hear from the viewers, physicians and researchers, but it also provides an opportunity to talk about some of the new stuff that is going on which is very exciting, especially with a lot of technological advances happening. Let's go over to Ken now. Dr. Miller, lets talk a little about your job description.

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Miller: I see many women with breast cancer, which is one of my interests and specialties. I see people with sarcoma, which are tumors that arise usually on the bone or soft tissue, and people with hematologic blood cancers as well, though small in number. That is how I spend a good part of my day, seeing patients, which I really enjoy. I also help run the cancer survivorship program. This is a new program that offers support services for patients, which I think makes a huge difference.

Barber: What does running that entail? Is it speaking with other physicians or overseeing the general program?

Miller: One of the things I really like about the Yale system in general is the sense of being multidisciplinary. We see this echo throughout all parts of the cancer center. It also applies to cancer survivorship and to supportive oncology. What does multidisciplinary mean? In our setting it means having a nutritionist, physical therapist, a nurse practitioner who has special training in supportive oncology related issues, a medical oncologist like myself, and a social worker.

Barber: You both have what we can be described as pretty big jobs. You do not get here without doing a lot of work. Let's stay with you for just a second Ken. Where did you train and where did you go to school?

Miller: I am from Connecticut originally and I did my medical school training at Tufts in Boston. But I came to Yale a long time ago, I guess I can say the date, in 1982.

Barber: That is okay, you are among friends.

Miller: I was here almost 20 years ago approximately, and then went on to John Hopkins in the NIH for my training in oncology and hematology. I practiced in the community setting in Maryland for about 18 years and then came back.

Barber: Dr. Chu, how about you?

Chu: I actually have my roots here in Connecticut as well. Interestingly both my parents were here in the pharmacology department back in the 50's and early 60's. I grew up here in New Haven but my parents were recruited away to become the founding members of the Brown Cancer Center. I pretty much grew up right outside of Providence and went to medical school at Brown University, that other University up north before you get to Harvard.

Barber: Don't even say that word.

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Chu: I did my internal medicine training at Brown University then went down to the National Cancer Institute in Bethesda to do my oncology fellowship and about 12 years ago was recruited to come to Yale.

Barber: Wow, this is so interesting. I think it is a great story because it is probably very rare that you would find someone who is in your position, Deputy Director and Chief of Medical Oncology at Yale Cancer Center, who can also say that they are in the family business.

Chu: It is true, and it is interesting because many of the very senior faculty here at the Yale Cancer Center, I have known since I was a baby. In fact, still in a number of meetings, I cannot call them by their first name. I have always known them as uncle so and so, but I guess that is part of the oriental Chinese custom as well, but I still find it a bit awkward to call them by their first name.

Barber: That is great and this is exactly what we wanted to do. If you have just joined us, what we are doing today as part of Yale Cancer Center Answers is talking to the hosts, Dr. Ed Chu and Dr. Ken Miller. We are getting to know them a little better which I think provides an interesting context for the show. Ken, let's go back over to you. We covered your background and your training, I would like to jump back even a little further and find out what it was that made you want to become a doctor.

Miller: It is a nice opportunity to thank my parents on the radio. We had, unfortunately, a number of very close family friends and relatives die of cancer and to my parent's credit, they did not shelter the 3 children in my family from that experience. My parents would drive a friend to radiation therapy or take them for chemotherapy, and from the age of 10 or 11 I just had a feeling that it was the right thing to do and that cancer was a horrible disease. At the age of 13 I started working in hospitals and I did not know the word oncologist, but I had a feeling it's what I should be doing.

Barber: Obviously it is so competitive, were you always a good student?

Miller: Yes. I have worked very, very hard at it. I enjoy science and I enjoy psychology. I like a lot of things that go into oncology, but I really had to work very, very hard at it in terms of doing well in high school and college, etc.

Barber: I find it interesting, and my wife is a physician as well so I observed her trip through medical school, but for awhile she was thinking about one speciality and as a medical student you rotate through different specialties so she would become interested in another, did you experience the same thing or did you pretty much know throughout the whole the process what you wanted to do?

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- Miller: Very good question. When I was at Yale a long time ago, pretty much everything that I did I found interesting, whether it was GI or cardiology. I thought, "Maybe I will be a cardiologist. Now I really want to be an oncologist." And eventually I found my way back there. I think I knew what I wanted to do and fortunately it has remained an incredibly interesting and satisfying career.
- Barber Ed you obviously have always known. Did you ever waver at all and if you did, I bet that your parents got very nervous.
- Ed: It is interesting because I was exposed almost from birth, in utero even. Obviously all of my parent's close friends and colleagues were in the business and involved in basic research, taking care of patients as oncologists, and so I think, like Ken, I had a pretty good idea that I was going to be involved in cancer research oncology. Early on I put more focus on basic research, but as I entered medical school and was exposed to patients, I realized that one of the things that I really liked was to be involved with and take care of patients. I think that is one of the special gifts that all of us who are involved in taking care of patients experience. We develop very, very close relationships with the patients and their families. It is a kind of relationship that is different than probably any other speciality because obviously, in many cases, one is dealing with life and death issues. As I try to tell our students and fellows, sometimes the best thing that we can do is to be able to communicate and have the patients and their family members understand what they are dealing with. We can offer them new treatments which are terrific, but I think communication and developing those relationships is really special. As I went to medical school and during training, those feelings were really reinforced.
- Barber It is an interesting situation because Ken, you are interacting with people at, I would say probably in almost every instance, the most vulnerable point in their lives. That is obviously a great responsibility. It sounds like you are both able to tap into that very special relationship that bonds you.
- Miller: A lot of times people will ask how I'm able to do this work, how I can be an oncologist. I want to point out that a lot of the people that we see are doing very well even though they've had cancer. We are giving preventative therapy called adjuvant therapy to prevent the cancer from coming back. It is obviously a time of stress, but it also holds great hopefulness and positivity. We share that positive approach. There are other times when the people are doing poorly and the discussions are different. Again, with a sense of hopefulness and a sense of a common mission, it is really an honor in many ways to be able to communicate with people about very tough topics and important topics and work with them in sorting out what the right path is going to be.

Barber Is it a constant learning experience?

Ed: Yes absolutely, because I think every patient is unique. I have been in the business for almost 20 years and every time I see a patient, every time I am attending our inpatient service, it is a different experience. The good thing is that we take advantage of all the other experiences that we have had and it helps shape us. But our learning keeps on going.

Miller: This is a quote from a doctor friend of mine who said, "Why do they call it the practice of medicine? Is it that we are practicing?" This is an interesting concept. As Ed was saying, I continue to learn and it is a very enjoyable aspect.

Barber For both of you, as I mentioned, your other major role being faculty members at Yale is teaching residents; medical students. What have you noticed over your years of doing that job? I see both of you smiling. We are obviously dealing with a time where our young people are exposed to things that are much different than when we were coming up. What has that been like for you?

Ed: We have seen an evolution in the whole process. There is no question, for instance, that the students here at Yale are tremendous. They are extraordinarily bright, very gifted and very hard working. The one thing that I have noticed is that perhaps, because there is so much learning going on, there are so many more resources that are available to students these days than when Ken and I were in training. In some ways it has become a little too easy and one of the things that I try to stress to the students and fellows is that they have to continue to think like they need to continue to grow and continue to work hard. One of the challenges that we face in education these days is that when we were in training we would work extraordinary hours which would sometimes lead to our inability to take good care of patients, but now there is this thing called the 80 hour work week where a lot of training is done in shifts. I do worry about that because in the real world responsibility does not punch a clock. Our responsibility for patients is 24/7, at least in my view. I think that is what we need to continue to foster and emphasize to our students.

Barber And it used to be that you were called a resident back in the day because you actually lived at the hospital, correct?

Miller: The generation before us, actually my wife's grandfather was a doctor here at Yale and lived at the hospital. I lived in Hamden at the time of my residency, but I was not home as much as I wish I was, but I agree with that especially after having been in practice. The patients that I'm taking care of and giving

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chemotherapy to are my responsibility that night they get treated and the next day. The best part of my responsibility is the enjoyment I get in the responsibility I choose to take on. Taking care of patients in shifts has a different feeling to it.

Barber You are listening to Yale Cancer Center Answers on WNPR and wnpr.org, Connecticut public radio. We are meeting our hosts and we are finally getting a chance to get to know Dr. Ed Chu and Dr. Ken Miller a little better. Ed, you specialize in colorectal cancer and are always very modest, but you are very highly regarded in the international community. I like the way you talk very casually about being at some very large conference and delivering a key note. If I can put you on the spot, can you pick out one area that you would say you really excel in? What would it be within the study and the treatment of colorectal cancer?

Chu Well all modesty aside, I guess I am probably best known for my laboratory's work, and it is not just my work, it is every member within my laboratory that I've had over the last 20 years trying to understand how colon cancers become resistant to chemotherapy. We have actually made some very interesting and novel discoveries in terms of basis mechanisms by which the tumor cells can become resistant to the standard cancer drug that we administer. Now we are actually taking advantage of the understanding of the biology and trying to develop new approaches that we hope to bring in to the clinic. For instance, right now our lab is working very closely with the chairman of biomedical engineering here at Yale, Mark Saltzman, and his team. We are trying to develop a novel packaging formulation system to be able to bring to patients over the next couple of years.

Barber I've wondered about this before, lab work must be arduous and very slow. Are there like high five moments when there is a breakthrough, or are those very few and far between?

Ed: As I tell everyone who enters the lab, students in particular, they should expect 99.9% failure negative results and if they are lucky they might have 1% positive reinforcement, but I think that is what keeps us in the game and what keeps us excited. When you do have one of those AH-HA moments it is pretty neat. Especially for us right now, we are really excited and energized because there is a very strong possibility that we might be able to bring something from our laboratory into the clinic.

Barber Ken, one thing I have always noticed in producing and hosting this show is your obvious empathy. You mentioned that in your formative years you knew a good number of people who were cancer survivors, and also through the course of the show you have been open about the fact that your wife is a

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cancer survivor. Where would you say you get your inner strength from? Maybe I've just answered it, but do you agree I guess is the question.

Miller: That is the part of medicine that I enjoy. I enjoy the communication. I enjoy working directly with patients, with people who have had cancer. My wife was treated for acute leukemia eight years ago. As a child my great uncle, who was like a grandfather to me, had acute leukemia and died from that disease. Eight years ago my wife was sick and thankfully now she is well, so we went through this as a family and I really learned a lot from the experience. I learned what it is like to go through cancer for the patient and as a family. There really is a lot of fallout during both experiences and years later as well. It was tough on my kids and me and tough on my wife. A family sort of has to restructure itself afterwards.

Barber Those moments when you get a diagnosis like that, I don't think anybody can understand it until they go through it. It is one of those things that occupies a portion of every healthy persons brain. As we talk about both of your experiences in medical school, I hear a lot about the fact that when you are in medical school every time you are learning in depth about a new disease, you're sure that you have it. It is your worst nightmare come true, but what did you do after that moment, what was your process?

Miller: I am glad to share a story. When my wife Joan was first diagnosed I literally called the lab late that night to get her blood results and as they read them to me I knew she had leukemia. I remember thinking, as I am sure a lot of people do, that it was just a virus. We were going to see an oncologist the next day, someone I know at John's Hopkins, and I was sure he was going to say it was not leukemia. It is the same process that I think anyone would go through and for the next few days after we found out, there is a sense of letting go. I was worried about all the side effects and what could happen. I realized that I had to let those go. There is a sense of faith and spirituality in that things would turn out okay, I had to let go of some of the worries and let her be treated.

Barber As we get close to the end of our time here, what would you two say about prevention and then maybe we can wrap-up with the notion of what one goes through when one receives such a diagnosis. Let us talk about preventative measures, and I know you are going to be repeating stuff which you say all the time, but let us go through it again.

Ed: Probably the best preventive measure for a lot of the common cancers is to go have your annual physical check up. For instance, the disease that I know the best is colorectal cancer, if you have no family history of colon cancer, go get your colonoscopy starting from the age of 50. I mean it is remarkable to me that just last week I saw a couple of patients in the clinic who were in their

60s and the first colonoscopy that they had was, unfortunately, once they had symptoms. It does not mean, necessarily, that they would have picked it up, who knows, but there is no question that for detecting colon cancer, colonoscopy is the key. For breast cancer, physical exam and mammography are critical. There are good screening tests and early detection methods, and individuals out there really need to take advantage of that.

Barber And Ken let us conclude with you, and you've only got about a minute, but when someone gets a diagnosis what is the process? What is going through their mind?

Miller: Probably the biggest lesson that I have learned, and one that I share with patients, is that cancer is treatable and for many people their disease is curable. One of the prescriptions we can give our patients, that I try to give, is one of hope. Hope is free, hope does not have a lot of side affects and I think incorporating some of that positive thinking and hope is part of getting well.

Barber Dr. Ken Miller, wonderful words. It was great getting to know both of you a little better this week on Yale Cancer Center Answers. It has been a real pleasure and for me it is a pleasure and an honor to be working with both of you. I always say that if you are sitting in a restaurant and you see a performer or an entertainer, you know who they are and whether or not they do great things, it makes you feel better. Often times I think that physicians, who work so hard and are so dedicated, do not get the kind of accolades that they deserve; may those accolades flow in large quantities to both of you.

Miller: Thank you.

Ed: Thank you. And it is great working with you and Ken on this show.

Miller: Thank you.

Barber The other wonderful thing about this opportunity that we have every week is that if you have questions, comments or want to get the podcast to keep up to date on what is going on, you can visit the website www.yalecancercenter.org. You will also find transcripts of past broadcasts in written form. I am Bruce Barber. Thanks for being with us.