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Aman Buzdar, MD

Interview Session Number 01: February 10, 2017

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Chapter 00A
Interview Identifier

T.A. Rosolowski, PhD
[00:00:02]
All right. The counter is moving and so, here's the identifier. It is about eight minutes after one, on February 10, 2017. I am Tacey Ann Rosolowski and today, I am in the Historical Resources Center Reading Room of the Research Medical Library, and I'm interviewing Dr. Aman U. Buzdar, for the Making Cancer History Voices Oral History Project, run by the Research Library at MD Anderson Cancer Center. I'm going to give a few details about your background, so correct me if I've gotten anything wrong. Dr. Buzdar came to MD Anderson in 1974, as a fellow in oncology, and was this in the Division of Medicine at the time?
[00:00:48]

Aman Buzdar, MD
[00:00:48]
Mm-hmm.
[00:00:48]

T.A. Rosolowski, PhD
[00:00:49]
Okay. He joined the faculty, as a Faculty Associate, in the Department of Medicine, in the following year, that is 1975. Today, Dr. Buzdar is a Professor of Medicine and Internist, in the Department of Breast Medical Oncology, in the Division of Cancer Medicine, and since 2017, he has held the Edward Rotan Distinguished Professorship in Cancer Research, and since 2010, he has served as Vice President of Clinical Research, correct?
[00:01:20]

Aman Buzdar, MD
[00:01:20]
That's correct.
[00:01:20]

T.A. Rosolowski, PhD
[00:01:21]
Okay. And that's through the Office of Clinical Research Administration, is that the correct name?
[00:01:26]

Aman Buzdar, MD
[00:01:26]
Yes. The office is called Office of Clinical Research.
[00:01:29]

T.A. Rosolowski, PhD
[00:01:29]
Okay, but not clinical research administration?
[00:01:31]

Aman Buzdar, MD
[00:01:32]
I think it's the same.
[00:01:35]

T.A. Rosolowski, PhD
[00:01:34]
It's the same then, okay. I've seen it both ways, so I just didn't want to make a mistake. Well, you know, this is for the record, so. Today is the first of two planned interview sessions and I wanted to thank you for joining today.
[00:01:49]

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Aman Buzdar, MD
[00:01:49]
My pleasure.
[00:01:50]

Interview Session: 01
Interview Date: February 10, 2017

Chapter 01
A: Educational Path;
A Family Tradition in Medicine; Attracted to the Medical Mentality
13 min

Codes
A: Personal Background;
A: Inspirations to Practice Science/Medicine;
A: Influences from People and Life Experiences

T.A. Rosolowski, PhD
[00:01:51]
I'm really looking forward to talking to you. A number of people have said, Oh, please ask Dr. Buzdar about this and this and this, so I have my list of questions. I wanted to start in kind of the traditional place for oral history, which is if you could tell me where you were born and when, and please tell me a little bit about your family background.
[00:02:10]

Aman Buzdar, MD
[00:02:10]
Actually, I was born in Pakistan, in 1/1/1945. I came to the United States in 1968, as an intern to the University of Hawaii, in Honolulu.
[00:02:27]

T.A. Rosolowski, PhD
[00:02:28]
Now, tell me a bit about your family. When did you come to the -- so you spent most of your young life in Pakistan.
[00:02:35]

Aman Buzdar, MD
[00:02:36]
Actually, I was 22 when I came to the U.S., and so most of my life, actually I have spent here in the U.S. Since 1968, I have been in the U.S.
[00:02:45]

T.A. Rosolowski, PhD
[00:02:01]
But you were a young adult, up to the point when you were a young adult, to the point when you were a young adult.
[00:02:46]

Aman Buzdar, MD
[00:02:47]
Yes, yes.
[00:02:49]

T.A. Rosolowski, PhD
[00:02:49]
So tell me about your family experience and educational experience in Pakistan. What was your family like?
[00:02:54]

Aman Buzdar, MD
[00:02:55]
Let's see. My father was in the banking business, and we were three brothers and one sister. My father, from day one, I think even before we were born, that he wanted his kids to be physicians, and all three of us became physicians. Of course, my sister did not become a physician, but she married a person who was in the irrigation/engineering department. But since his dream, we right now have more than seventeen physicians in our immediate family.
[00:03:35]

T.A. Rosolowski, PhD
[00:03:35]
That's amazing. Why was your father so fixated on the medical field profession for his children?
[00:03:42]

Aman Buzdar, MD
[00:03:43]
I think because it was kind of a respected field, whereas Pakistan was a new country and every aspect it was corruption and bribery and things like that. Whereas when you went to see the physicians, if you are sick, they will help you. It was considered as a noble profession, so I think that was his thinking behind it.
[00:04:14]

T.A. Rosolowski, PhD
[00:04:15]
Now, tell me about your educational path, when did you start -- now tell me, did you buy into your dad's dream? Did you say yeah, I want to be a doctor or oh, this is my father's dream, I'm not sure.
[00:04:28]

Aman Buzdar, MD
[00:04:29]
No, actually the thing, how I got interested into it, because the country was evolving and in the eighth grade, there was a choice for all the students, whether you want to go the science route, or you want to go the engineering route, or public route. I was very impressed, because I studied in some of the science class, and one of the teachers --he was amazing and I still remember him. He took the actual phosphorus, which is a basic compound, and he put it in the water and it catches on fire, and it burns inside the water. And I was amazed. That attracted me towards science, and then the option was, Oh you study science, you study the Pakistani national language. So I studied science from eighth grade onward, and that's how I became very interested in the science aspect of it.
[00:05:28]

T.A. Rosolowski, PhD
[00:05:29]
Now, as you were starting to get into your science courses, was the education organized kind of the way it is in the U.S., where bio is separate from chem, is separate from physics, or was it a different educational organization in Pakistan?
[00:05:43]

Aman Buzdar, MD
[00:05:44]
No, it is very similar to the U.S., but it was more structured towards the British system, which is fairly at the early stage, because Pakistan was what is one time British India and they developed the whole education system for 200 years, when they controlled the subcontinent. So still, the education is very much the British system.
[00:06:11]

T.A. Rosolowski, PhD
[00:06:12]
Now, which of the branches of the sciences did you find yourself most attracted by at the time?
[00:06:18]

Aman Buzdar, MD
[00:06:19]
I think to me, chemistry and biology were the most interesting aspect of it.
[00:06:25]

T.A. Rosolowski, PhD
[00:06:26]
And why was that? What suited itself in those fields, to your thinking?
[00:06:32]

Aman Buzdar, MD
[00:06:32]
Because it is almost like an exact science, because the thing is, it's not like poetry or philosophy or things like that, it's fact. This, you do this and it becomes this. To me, that was very attractive and a very interesting aspect of it.
[00:06:55]

T.A. Rosolowski, PhD
[00:06:56]
Now, did you -- was that something personal, or was that kind of a reaction to uncertainty around you?
[00:07:07]

Aman Buzdar, MD
[00:07:08]
No, I think for me, curiosity was the most amazing thing. Since I started from the eighth grade onward, I was in science, math and biology, and you went through premed, which is like, we had to do two years of college over there. My majors were biology, zoology, chemistry, and physics, those were the five subjects, and even today, I understand Pakistani language literature a very limited way, because I stopped studying it from eighth grade onward.
[00:07:52]

T.A. Rosolowski, PhD
[00:07:53]
Oh, interesting. Now let's see, you attended -- you got your MBBS, and that's the combined undergraduate/graduate, in 1967, and this is from Nishtar Medical College in Multan, in Pakistan, correct?
[00:08:11]

Aman Buzdar, MD
[00:08:11]
Mm-hmm.
[00:08:11]

T.A. Rosolowski, PhD
[00:08:12]
Tell me about that whole educational experience. What was the education like as you look back?
[00:08:17]

Aman Buzdar, MD
[00:08:18]
Because at that time, when I was growing up in Pakistan, there was only a handful of medical schools, and it was very competitive. It was on a merit basis, and so I got into that medical school and it was five years of medical school, in contrast to the U.S., which is the four-year medical school. It was a very unique experience, because that medical school was under the university, which was more than 200-plus years old. At that time, that medical school was affiliated with University of Punjab, and this was, at the time, one of the youngest medical schools.
[00:09:06]

T.A. Rosolowski, PhD
[00:09:07]
Oh, really?
[00:09:07]

Aman Buzdar, MD
[00:09:08]
It was in our hometown, where I went to high school and college, so it was just a few blocks from our house, the medical school.
[00:09:15]

T.A. Rosolowski, PhD
[00:09:15]
So, did you live at home?
[00:09:16]

Aman Buzdar, MD
[00:09:17]
I lived at home, yes. Because only a handful of people who were selected, because the selection process in each medical school is on a national level. So from our area of the town, which is

close to three million people, there was maybe a handful of people who got selected.
[00:09:36]

T.A. Rosolowski, PhD
[00:09:37]
And so I assume there was a national exam or something of that nature?
[00:09:41]

Aman Buzdar, MD
[00:09:42]
It is the full two-year college, so how you scored on that, and it is a national competition, and you applied and then they take the top tiers.
[00:09:55]

T.A. Rosolowski, PhD
[00:09:54]
I see. So, you applied to college. Now, did you have to apply again, to get into the medical school track?
[00:10:00]

Aman Buzdar, MD
[00:09:59]
Medical school, yes.
[00:10:00]

T.A. Rosolowski, PhD
[00:10:00]
Okay, so it was a two-phased process.
[00:10:02]

Aman Buzdar, MD
[00:10:01]
Two, yeah, mm-hmm.
[00:10:02]

T.A. Rosolowski, PhD
[00:10:02]
Okay. So tell me did you feel that this was a really high quality education? Were there certain areas that were better than others? As you look back, how would you evaluate that?
[00:10:15]

Aman Buzdar, MD
[00:10:15]
Well, I think the education at that point was -- because the country was new but still, the resources, since it was limited, the number of colleges or medical schools which were there -- so the standard was very high at that time and it met the global standard. At that time, like if I wanted to go to UK, you didn't have to go to take any extra exams.
[00:10:41]

T.A. Rosolowski, PhD
[00:10:41]
Oh, really? Wow.
[00:10:42]

Aman Buzdar, MD
[00:10:42]
So, you graduate and it will be recognized in all the British system, whereas to come to the U.S., you had to take a separate exam. I took that exam in the fourth year of medical school, one year I still had from graduation. I was maybe fortunate or lucky that I passed, and I still had one more year of medical school. But, I wrote a few hospital essays, saying I'm going to graduate in X, Y, Z time, and I want to come as a postgraduate trainee.
[00:11:20]

T.A. Rosolowski, PhD
[00:11:20]
Gotcha.
[00:11:20]

Aman Buzdar, MD
[00:11:21]
Several places said, Oh, you can come, this and that, because this was in the '60s. Their need of doctors in the U.S., and the University of Hawaii was the one thing we said you are not only selected, but if you go to Pan Am, there is a ticket waiting for you, to come to Honolulu.
[00:11:38]

T.A. Rosolowski, PhD
[00:11:41]
They were very interested.
[00:11:42]

Aman Buzdar, MD
[00:11:43]
They were very interested.
[00:11:43]

T.A. Rosolowski, PhD
[00:11:44]
Now, let me back up just a bit though. How did your interests in medicine evolve during your medical school training?
[00:11:52]

Aman Buzdar, MD
[00:11:52]
Well, I think once you get into it, it is very intriguing. Because the thing is, you have to have a certain mentality to get into the field of medicine or engineering. Some of my cousins, they were in the engineering and things like that. They thought differently. Whereas the medicine, you have to have curiosity and understand why things happen and how you can reverse the things, and so on.
[00:12:25]

T.A. Rosolowski, PhD
[00:12:26]
This is sort of an off the wall question, but did you have kind of experiences with physicians when you were growing up, where you thought oh, that's what I want to do?
[00:12:38]

Aman Buzdar, MD
[00:12:40]
No, actually it was not. I didn't have a specific idol that I said I want to become like this physician.
[00:12:47]

T.A. Rosolowski, PhD
[00:12:47]
So it was more of an intellectual.
[00:12:48]

Aman Buzdar, MD
[00:12:49]
A mostly intellectual challenge, because the key thing to me at that time -- because the country and the medicine was evolving, in the '60s and '70s, there was a few things you could cure,

because antibiotics were still few, anticancer therapies were practically nonexistent, and the surgery was the major thing. So everybody who went into medical field, the majority of them, including myself, wants, once I graduate, I wanted to become a surgeon.
[00:13:08]

T.A. Rosolowski, PhD
[00:13:09]
Oh, really?
[00:13:09]

Aman Buzdar, MD
[00:13:10]
But, during my first year in the U.S., when I came, at that time were what they used to call rotating internship, that you rotated X number of days in medicine, X number of days in surgery, OB/GYN, pediatrics and so on.
[00:13:38]

T.A. Rosolowski, PhD
[00:13:38]
And this was at Kuakini Hospital.
[00:13:40]

Aman Buzdar, MD
[00:13:40]
Kuakini. These were three hospitals where you had a combined program. Kuakini was the main hospital, but other was Queens and St. Francis. You had to rotate through all these three separate systems. This program was under the University of Hawaii, postgraduate program.
[00:13:57]

T.A. Rosolowski, PhD
[00:13:58]
So tell me about what attracted you. What made you turn away from the idea of being a surgeon?
[00:14:03]

Aman Buzdar, MD
[00:14:05]
I think surgery to me looked much more like cutting and sewing things, whereas medicine was evolving and it was more challenging. Eventually, I became interested in oncology, and my family, as I told you before, they were all physicians. My older brother was an ophthalmologist

and he thought well, maybe I must suck, that I couldn't become a surgeon. (both laugh)
[00:14:31]

T.A. Rosolowski, PhD
[00:14:36]
So when did the interest in oncology start?
[00:14:38]

Aman Buzdar, MD
[00:14:39]
Because I switched to medicine, because it was more curiosity and more things you could do once you came to the U.S., because cardiology was evolving, and things like that. Oncology was still at a very young age.
[00:14:50]

T.A. Rosolowski, PhD
[00:14:51]
So you were attracted to the areas where there was more unknown basically.
[00:14:55]

Aman Buzdar, MD
[00:14:55]
More unknown and that you have to look for the things for tomorrow.
[00:14:59]

T.A. Rosolowski, PhD
[00:15:00]
Right. Oh, okay, interesting. Now, do you remember any particular cases or patients that kind of really presented a challenge, that helped you crystallize that view?
[00:15:12]

Aman Buzdar, MD
[00:15:13]
Oh yeah, because I think after I decided I wanted to become an internal medicine doctor, internist, then I was more gravitating towards cardiology. Because at that time, there was a lot of things cardiology was evolving, things like that, but when I was doing my -- as a chief resident, I was doing some elective rotations in hematology oncology. And there was a lady who was kind of comatose, and she had very high calcium, and we gave very primitive medicine according to today's standards, and the next day the lady was wide awake. Her calcium went down and we were able to discharge her, I thought this is amazing. So, that's what actually gravitated me

towards oncology.
[00:16:03]

T.A. Rosolowski, PhD
[00:16:04]
How did that happen? How did that path move towards oncology? Now, did she have cancer?
[00:16:09]

Aman Buzdar, MD
[00:16:09]
Oh, she had breast cancer.
[00:16:10]

T.A. Rosolowski, PhD
[00:16:11]
She had breast cancer, okay.
[00:16:13]

Aman Buzdar, MD
[00:16:13]
She had breast cancer and she had very high calcium.
[00:16:14]

T.A. Rosolowski, PhD
[00:16:14]
Oh, wow, okay. Why did she have the high calcium?
[00:16:16]

Aman Buzdar, MD
[00:16:17]
Because when the breast cancer gets to the bones, it causes destruction of the bones, and it causes a lot of release of the calcium from the bones. So that's how I would come. I spent one year over there, this was -- I was in New England at that time, and I did one year of residency there, and then the next year, I end up at MD Anderson, in 1975.
[00:16:40]

Interview Session: 01
Interview Date: February 10, 2017

Chapter 02
A: Joining MD Anderson/Coming to Texas;
The Advantages of Moving to Texas and to MD Anderson

Codes
A: The Researcher;
A: Joining MD Anderson;
A: Personal Background;
A: Professional Path;
C: Funny Stories;

T.A. Rosolowski, PhD
[00:16:41]
Okay, right, in 1975. So just to kind of get it for the record, you did your rotating internship in Honolulu, and then from '69 to '70, you were a first-year resident in Maryview Hospital in Portsmouth, Virginia. That's a big change, Honolulu to Virginia. Then, you were in Ohio, at Lakewood Hospital, and then in Connecticut, so that was the New England part. So the woman who had the breast cancer was in Connecticut.
[00:17:06]

Aman Buzdar, MD
[00:17:05]
In New England.
[00:17:05]

T.A. Rosolowski, PhD
[00:17:08]
And you were there from '72 to '73. Oh, and then you did a fellowship there. Now, these were research fellowships? When did the whole research piece come in for you?
[00:17:28]

Aman Buzdar, MD
[00:17:29]
Well, the research piece came when I came to MD Anderson, because this was mostly dedicated, state of the art, current standards. MD Anderson, even today, it is required that when you come as a trainee, you have to do at least one research project, which has to be completed.
[00:17:50]

T.A. Rosolowski, PhD
[00:17:51]
Now tell me about how you got here, to MD Anderson.
[00:17:54]

Aman Buzdar, MD
[00:17:56]
I think that is very interesting, I can tell you that, because at that time, my wife loved it. My wife is from Pennsylvania, and when we moved to New England, she loved New England. She didn't want to leave. We even found a first-year fellowship at this Norwalk Hospital, which was in affiliation with Yale. Second year, because the chief who was there, he said oh, you need to go to New Jersey School of Medicine in Norwalk, no Newark, Newark, New Jersey. And I thought the guy is good, so I took his word, I signed the contract, and a few weeks -- just about two months before we were supposed to move, me and my wife -- since we were in Norwalk and this is about maybe less than a two-hour drive -- my wife and me decided to go and let's take a look, see where we're going to live. We go there, this is in '74, and my wife didn't want to get out of the car. She said, "There's no way I'm going to live here."
[00:19:09]

T.A. Rosolowski, PhD
[00:19:09]
Yeah, Newark was kind of a tough place then.
[00:19:11]

Aman Buzdar, MD
[00:19:11]
A tough place to live, and where this hospital was, in the middle of downtown. I said okay, we won't live here, and we have no job.
[00:19:20]

T.A. Rosolowski, PhD
[00:19:22]
What's your wife's name?
[00:19:23]

Aman Buzdar, MD
[00:19:23]
Barbara.
[00:19:24]

T.A. Rosolowski, PhD
[00:19:24]
Barbara, okay.
[00:19:24]

Aman Buzdar, MD
[00:19:25]
So we came back and the next day I told her, I said okay, we are not going to go there. So I wrote a letter, I said for unpredictable circumstances, I am not able to come and join your second year fellowship. Thank you for giving me the opportunity. I looked, started looking for different positions, and at MD Anderson at that point there was the unexpected opening, and I saw an ad. So I sent my papers over here and a few days later, I called the person who was the Department of Internal Medicine and Hematology Oncology, Dr. Shullenberger. I said I am interested, I am doing this. Actually, I was one of the few percent who, within one year, I came over here, I was fully licensed. I took the exam and I was a fully licensed physician. I could have gone to private practice even, as an internist or anything, but I wanted to continue my education. So he said okay, your application looks interesting, let me think around, and I will call you. I didn't hear anything.
[00:20:43]

T.A. Rosolowski, PhD
[00:20:44]
Oh, no.
[00:20:45]

Aman Buzdar, MD
[00:20:45]
A couple of weeks later, we were -- for me, making money is no problem. You were getting $600 as a stipend, working as a fellow, and you could moonlight for two days in a month, you will make more than $600 for eight hours each shift you work. So that was not a concern, but I still wanted to pursue my education, so a couple of weeks later, I called Shully, his name we used to call him, Shully. So I called Dr. Shullenberger back and I said, have you decided? So, after two or three times I called and he said, "You are very persistent and your application looks encouraging, okay, you are accepted." (both laugh)
[00:21:34]

T.A. Rosolowski, PhD
[00:21:37]
Well, what do they say, you can't win if you don't play.
[00:21:39]

Aman Buzdar, MD
[00:21:40]
So that's how I end up at MD Anderson, and at that time, because I needed only one more reel of training to become oncology, because oncology was oh, very young. They didn't have oncology boards or anything, so I needed one more year. And once I completed my one year, even before a few months, I was offered the opportunity to stay, and I've been since then here.
[00:22:04]

T.A. Rosolowski, PhD
[00:22:05]
Now, obviously, I'll have a bunch of questions to ask you about all of this, but before we get to those, let me ask you, if you didn't want to move to Newark, what did you think about moving to Texas?
[00:22:14]

Aman Buzdar, MD
[00:22:15]
Oh, my wife didn't want to do it, and so the thing is, we wanted to -- I said okay, we just need one year and we'll move wherever you want, but once she came over here, after one year, then it took me a lot of courage to tell her that oh, the hospital offered me an opportunity to stay as faculty. She had some reservations but she loves it now. We've been living over here now, 40-plus years.
[00:22:40]

Chapter 03
A: The Researcher;
Undertaking Breast Cancer Research When the Field was Young

Codes
A: The Researcher;
B: Research;
A: Joining MD Anderson;
C: Discovery and Success;
C: Healing, Hope, and the Promise of Research;
B: MD Anderson Impact; C: MD Anderson Impact;
A: Overview;
A: Definitions, Explanations, Translations;
B: Building/Transforming the Institution;
B: Multi-disciplinary Approaches;
B: Obstacles, Challenges;
B: Institutional Politics;
B: Controversy;
D: Understanding Cancer, the History of Science, Cancer Research;
D: The History of Health Care, Patient Care;

T.A. Rosolowski, PhD
[00:22:40]
All right, well tell me about that experience, because you came in, you were in oncology during the fellowship year?
[00:22:50]

Aman Buzdar, MD
[00:22:50]
Mm-hmm.
[00:22:51]

T.A. Rosolowski, PhD
[00:22:51]
Okay. So, tell me, what was your research project, how did all that evolve? Who did you work with?
[00:22:55]

Aman Buzdar, MD
[00:22:56]
Well, I worked, because of my area, and since my interest was, as I told you, what brought me to oncology was that woman with breast cancer. That was my area of interest, and so after spending one year, I wanted to work in the breast cancer area, and I was given the opportunity, by Dr. Blumenschein, who was at that time the section chief, George Blumenschein, who was actually, there is a doctor over here, Dr. Blumenschein, that is his son actually.
[00:23:25]

T.A. Rosolowski, PhD
[00:23:26]
Oh, okay, I didn't realize that.
[00:23:27]

Aman Buzdar, MD
[00:23:28]
I said,Okay, and then I had to tell my wife that I wanted to stay more than a year.
[00:23:33]

T.A. Rosolowski, PhD
[00:23:36]
You had some stressful drives home.
[00:23:37]

Aman Buzdar, MD
[00:23:38]
I know that. But it has been, since I've joined the department and there were so many opportunities, very shortly actually, as soon as I got into it, a number of research projects we started, under guidance of Dr. Blumenschein, and some of them got very goodly published.
[00:24:01]

T.A. Rosolowski, PhD
[00:24:02]
Now, what were some of the areas you were working on, what were the specifics? I mean, I'd like to know about the evolution of your research areas.
[00:24:08]

Aman Buzdar, MD
[00:24:08]
The evolution of the research which we did in the beginning --when I joined, at that time, was

the earliest phase of oncology, especially for breast cancer. Besides surgery and radiation therapy, there was not a whole lot you could do, except maybe remove the ovaries of the women, give them estrogen, high doses, and it will help. Then there were some drugs which were coming. We started to use them in combination --a new compound, like anthracyclines, what we called doxorubicin, and we developed a combination over here which was actually even until today, it is one of the standard treatments for treatment of breast cancer.
[00:24:58]

T.A. Rosolowski, PhD
[00:24:58]
And what is that combination?
[00:24:59]

Aman Buzdar, MD
[00:25:00]
It's called three drug combination. Abbreviation is FAC.
[00:25:04]

T.A. Rosolowski, PhD
[00:25:05]
Oh, FAC. Now, did you work on that with Gabriel Hortobagyi [oral history interview]? Am I remembering that correctly?
[00:25:09]

Aman Buzdar, MD
[00:25:09]
Yes.
[00:25:09]

T.A. Rosolowski, PhD
[00:25:10]
Yeah, okay.
[00:25:10]

Aman Buzdar, MD
[00:25:11]
Actually, I was the PI, the principal investigator, and I wrote the protocol. We published that information, and that is still one of the standard backbone of the therapy.
[00:25:23]

T.A. Rosolowski, PhD
[00:25:24]
Now, tell me about your rationale for combining the three drugs, and this was -- what does the F, A, and C stand for?
[00:25:34]

Aman Buzdar, MD
[00:25:34]
Fluorouracil, it is fluorouracil, which is one of the oldest drugs, and cyclophosphamide, they were around. But anthracycline or doxorubicin, or Adriamycin was the newest drug. Because when it was combined -- Hortobagyi did the first study in patients with metastatic breast cancer, and at that point, when you gave, say, cyclophosphamide alone, or fluorouracil alone, or methotrexate --that was another drug-- they will cause improvement in 10, 15 percent of the patients. But when you combine these three drugs, in combination, when we gave it to the patients with metastatic breast cancer --with Dr. Hortobagyi, and we did the studies together with Dr. Blumenschein-- in more than seventy-five percent of the time, the cancer shrunk.
[00:26:22]

T.A. Rosolowski, PhD
[00:26:23]
Wow.
[00:26:24]

Aman Buzdar, MD
[00:26:25]
The other impressive thing was that in about fifteen to twenty percent of the time, the cancer completely disappeared in patients who had widespread metastatic disease.
[00:26:34]

T.A. Rosolowski, PhD
[00:26:35]
Amazing.
[00:26:35]

Aman Buzdar, MD
[00:26:37]
So, once we established that in metastatic patients, patients with widespread cancer, we said, Why not test it in patients who have cancer, and they are going to, in spite of surgery and radiation, they have a very high risk of recurrence of cancer very shortly. Test this combination in those patients, to see if it will keep more patients alive, free of disease.
[00:27:02]

T.A. Rosolowski, PhD
[00:27:02]
So this was the adjuvant.
[00:27:04]

Aman Buzdar, MD
[00:27:04]
Adjuvant, yes. Of course, at that time, this is again, in the early '70s, and our surgeons, our medical oncologists, they were very much against it.
[00:27:18]

T.A. Rosolowski, PhD
[00:27:19]
I was just going to ask you about this. Tell me, what were their rationales? What was the controversy about?
[00:27:25]

Aman Buzdar, MD
[00:27:25]
Controversy was because, at that time --this is in the '70s-- you don't have good nausea medication. You don't have drugs which will -- because these drugs are, you know cytotoxic drugs that cause nausea, vomiting, a lot of side effects, and there was very little you could do to control that. So the key thing o--ur surgeons, even some of the medical oncologists, like the protocol which I wrote, and for several months, it never made it to the review committees. It had to be reviewed by the committees, including the IRBs, and several months went by. Finally, I had to go to the top administration, Dr. Hickey, who is deceased --and the Hickey Auditorium is in his name. So I went to his office and I said, Dr. Hickey, I can understand people having reservations, but this is not --I am not treating the people by picking them up off the street. This is a research project, and it has to be reviewed and it has to be approved by the Ethics Committee, and I can do this, really. Our surgeons and our radiotherapists, they were blocking this thing. It had not even come up for review. It will be always deferred, deferred. So finally, it was put on the agenda, and I was able to treat a small number of patients on that treatment. Our surgeons -- some of our earlier surgeons, they were very reluctant because of the side effects, it causing nausea and vomiting, but they will not think, Oh, these patients are quite sure they are going to die. We treated a small number of patients and almost in '77, we had already, the data that the majority of the patients we gave this treatment, they are free, without any recurrence of cancer.
[00:29:22]

Interview Session: 01
Interview Date: February 10, 2017

Chapter 04
A Philosophy of Clinical Research (and Its Early Controversies)
A: Overview;

Codes
A: The Researcher;
B: Research;
C: Discovery and Success;
C: Healing, Hope, and the Promise of Research;
B: MD Anderson Impact; C: MD Anderson Impact;
B: Institutional Politics;
B: Controversy;
D: Understanding Cancer, the History of Science, Cancer Research;
D: The History of Health Care, Patient Care;
D: Ethics;
B: Research;

T.A. Rosolowski, PhD
[00:29:23]
Now, this really goes to the heart of an issue about clinical research, and a kind of philosophy about clinical research. I've talked with a number of people about this, you know, where are those ethical lines and what -- so what is your perspective on pretty aggressive studies of this kind, that may throw a patient into a questionable situation? How were you thinking about that at the time and how do you think about that now?
[00:29:55]

Aman Buzdar, MD
[00:29:56]
I think now, because that is one of my -- I am the institutional person who is responsible for all clinical research.
[00:30:01]

T.A. Rosolowski, PhD
[00:30:01]
Right, right.
[00:30:01]

Aman Buzdar, MD
[00:30:02]
My thinking at that time was the same as it is today, because the thing is, as a research participant, you have to be honest with the person who is sitting in front of you. What do we know today? What is their outcome with today's treatment? Why are we testing this, and what we think may happen? You have to also tell the participant, We think that --this is what we think may help, but we don't know. You are -- you have to be very honest with the patient, that you are at the cutting edge of the science. This means that you are going in undefined areas of medicine and you are trying to define the new boundaries of medicine. I still believe, every time I sit with a new patient or a patient who needs treatment or research, -- [Interruption].
[00:31:00]

T.A. Rosolowski, PhD
[00:31:04]
Should I pause the recorder?
[00:31:05]

Aman Buzdar, MD
[00:31:05]
Yeah.
[00:31:05]

[Pause in recording]

T.A. Rosolowski, PhD
[00:31:06]
All right. So, you were talking about the importance of being completely honest, that the patient is on the cutting edge of research.
[00:31:18]

Aman Buzdar, MD
[00:31:19]
And the patient had to make a decision with your help, but you have to give the participant a total picture. What is known, what is the outcome with the standard treatment, why you are doing this research, what are the potential risks, and what we think may be potential positive things if it works out. You have to be very honest with the patients and the participants, that we don't know. If we knew, it will be a known medicine, it won't be research.
[00:31:49]

T.A. Rosolowski, PhD
[00:31:50]
Right, exactly, exactly.
[00:31:51]

Aman Buzdar, MD
[00:31:52]
And that is still the gold standard. We give patients full information and full autonomy of the human subjects, that's the guiding principle for doing research.
[00:32:06]

T.A. Rosolowski, PhD
[00:32:07]
Now at the time, I mean in the mid-'70s, when you were here, it was kind of learning on the job, about all of this. You were kind of establishing all of this framework and what were -- were there other prevailing… Let me just let you look at that. [Interruption from phone]
[00:32:28]

Aman Buzdar, MD
[00:32:28]
Let me just take a look.
[00:32:29]

T.A. Rosolowski, PhD
[00:32:29]
Sure.
[00:32:30]

[Pause in recording]

T.A. Rosolowski, PhD
[00:32:33]
So, how long did it take, you know, starting from that time in the mid-'70s, how long did it take for the controversy about all of this to settle down and for people to come to a shared view of this?
[00:32:48]

Aman Buzdar, MD
[00:32:50]
I think that medicine, since it is an evolving field, because every time you answer one question and produce an answer for that question, that new research raises three new questions. So it is

not something that yes, we established in the '70s, that when you give this FAC combination, that it reduces the risk of recurrence. The question was do you need to give all three drugs? Can you do it with one drug, can you do with two drugs? What is the optimal duration?
[00:33:21]

T.A. Rosolowski, PhD
[00:33:22]
Well, I guess what I was actually asking was really about the controversy about aggressive treatment, you know, sort of the philosophy. Did that controversy die down or did it continue?
[00:33:33]

Aman Buzdar, MD
[00:33:33]
Actually, the controversy, it went to the other extreme. The approach at that time was that if you pushed these drugs more and more, at higher and higher doses, you may be able to cure more and more patients. That's how, in breast cancer, the bone marrow transplant and high dose chemotherapy, in those eras a few years later, became almost like a cult culture -- that everybody-- because you could do it. And there was some successes in other diseases, not in breast cancer.
[00:34:14]

T.A. Rosolowski, PhD
[00:34:15]
Kind of like an analogy of the radical mastectomy; cut away more and more and more, and you'll get rid of it.
[00:34:21]

Aman Buzdar, MD
[00:34:20]
Yes. So, the thing is, then it became almost next to impossible to do a controlled trial, to establish whether very high dose therapy with bone marrow transplant, will result in an improved outcome or not. Everybody thought it's going to result in an improved outcome. We even at MD Anderson --Hortobagyi tried to do a randomized trial, which took a very long time, and we were able to accrue a very small number of patients. We couldn't finish the clinical trial because everybody wanted to get the treatment, because everybody's mind was made up that it is the best way to do it. But, if you move the clock farther, quickly, it became very clear, once the dust settled, that you were not able to increase the response rate. You did not keep patients alive longer, free of cancer. Actually, you unfortunately caused a small number of deaths from the treatment led complications, in that short period of time.
[00:35:28]

T.A. Rosolowski, PhD
[00:35:29]
Wow. Well, I mean it's just interesting, how people respond and get on a bandwagon, you know, and as you said, almost a cult kind of mentality. There are trends in science.
[00:35:45]

Aman Buzdar, MD
[00:35:46]
Oh yeah, because this used to be a trend. It was a challenge, because at that time, I was also chair of the IRB. Everybody will say, Oh, MD Anderson is doing it, and we will get requests that they wanted to look at our IRB minutes.
[00:36:04]

T.A. Rosolowski, PhD
[00:36:04]
Oh really?
[00:36:05]

Aman Buzdar, MD
[00:36:05]
And we had to say that those IRB minutes are not there for public consumption, because those are privileged information.
[00:36:12]

T.A. Rosolowski, PhD
[00:36:13]
So, they wanted to look at the IRB. What information did they hope to gain from the minutes?
[00:36:18]

Aman Buzdar, MD
[00:36:19]
That it is being done even at MD Anderson, things like that.
[00:36:22]

T.A. Rosolowski, PhD
[00:36:21]
I see. Okay, so they wanted, in a sense confirmation to go ahead and do it.
[00:36:25]

Aman Buzdar, MD
[00:36:24]
Confirmation, yeah.
[00:36:25]

T.A. Rosolowski, PhD
[00:36:27]
Okay, interesting, all right. Well, do you want to go back to talking about the evolution of your research, after the fact?
[00:36:35]

Aman Buzdar, MD
[00:36:35]
Yeah, I think the key thing, that became the standard. Subsequently, when the taxanes became available, we were the first institution actually, we incorporated the taxanes with the FAC combination, and it further reduced the risk of recurrence and improved outcome. There was a number of other drugs, but our drug was the smaller drug, but it was first published, which showed that adding taxane into the FAC combination, can further reduce the risk of recurrence and keep more patients alive, free of disease.
[00:37:08]

T.A. Rosolowski, PhD
[00:37:09]
Wow.
[00:37:09]

Aman Buzdar, MD
[00:37:10]
And all these studies were carried out. I was the principal investigator for all these studies at MD Anderson, and became subsequently, the larger studies confirming those things. Those are even standard today.
[00:37:25]

T.A. Rosolowski, PhD
[00:37:25]
Wow.
[00:37:26]

Aman Buzdar, MD
[00:37:27]
Anthracyclines are the backbone. If you add taxanes to that, it further reduces. That is today's

standard treatment and these were -- all the work was done here at MD Anderson. [00:37:38]

Interview Session: 01
Interview Date: February 10, 2017

Chapter 05
IRBs and a Few Words about the Growth of Multi-disciplinary Care
B: Building the Institution;

Codes
A: The Researcher;
B: Research;
B: Overview;
B: MD Anderson Impact; C: MD Anderson Impact;
B: Institutional Processes;
D: Understanding Cancer, the History of Science, Cancer Research;
D: The History of Health Care, Patient Care;
B: Building/Transforming the Institution;
B: Multi-disciplinary Approaches;
C: Patients; C: Patients, Treatment, Survivors;
D: Ethics;
B: Research;

T.A. Rosolowski, PhD
[00:37:39]
Wow. Now, what was kind of the atmosphere? I've heard so many people describe this period of time at MD Anderson, the '70s, as sort of a unique period in the institution's research culture and research history. What do you recall about the spirit or atmosphere of the time?
[00:38:02]

Aman Buzdar, MD
[00:38:04]
I think there is nothing unique in the '70s. The only uniqueness is because of the Second World War and prior to that --the Nazis carrying out all these experiments on the prisoners, without their consent, in the name of science. Subsequently, the Belmont Report and documents which were created, that you have to have ethics board which should review the research, participants should be volunteers, instead of being just coerced into the research. That's why these things came in the late '70s or mid-'70s. So, prior to that, there was still lesser checks and balances in the research, even though at MD Anderson, being a very unique place, the first IRB over here, it was called the Ethics Committee, was in 1966. I have even a slide and I pulled out the record of the first committee. People think that, Oh, we sometimes disapprove. Even in the first committee, there was X number of studies, I think seven, which were reviewed, and one was

deferred.
[00:39:25]

T.A. Rosolowski, PhD
[00:39:26]
Really? Okay. So even then, there was starting to be oversight.
[00:39:30]

Aman Buzdar, MD
[00:39:31]
Oh, there was. MD Anderson was actually in the forefront. They were proud of having voluntarily, before it became mandatory that you need to have these ethics committees or IRBs.
[00:39:41]

T.A. Rosolowski, PhD
[00:39:42]
Why do you think that was?
[00:39:43]

Aman Buzdar, MD
[00:39:44]
Because the thing was, it was evolving through the regulatory processes, but I think had tremendous oversight to bring these things over here.
[00:39:56]

T.A. Rosolowski, PhD
[00:39:56]
Yeah, it's really interesting. Now, your own interest in ethics and -- you're obviously very devoted to this particular dimension of research culture, and I'm wondering, what is it about your own background that's led you to kind of focus on that area?
[00:40:14]

Aman Buzdar, MD
[00:40:15]
I think because I have carried out hundreds of clinical trials, so I have seen what is required. Then I was asked to serve as a member of one of the IRB committees, and subsequently, after years -- it used to have one ethics committee, IRB-- I chaired that committee for almost ten plus years, as chair. People think that, Oh, the chair is the one who decides everything. It is not. The chair is there to moderate the meetings. As a chair, you don't even vote. But, whatever the committee decides, that decision is binding, and the institutional leadership can't overrule that, because these committees are mandated by the federal regulations and they are there to protect

the human subjects and oversee the research.
[00:41:15]

T.A. Rosolowski, PhD
[00:41:16]
Have there been instances when executive leadership has upheld the value of a particular study that the IRB has turned down for a variety of reasons? And I'm not asking you to be specific. I'm just interested if that situation has ever arisen.
[00:41:31]

Aman Buzdar, MD
[00:41:34]
I think that over the years, it is a two-way street. Since I've been involved for a long time, in the beginning, when I was asked, Dr. Hickey was still here, and I had to go and once, I was asked to chair the committee and it was the only committee. The first thing I went, there was a meeting which was being organized by OHRP, which is the Office of Human Risk Protection, under HHS. So I went and attended the meetings and after that, I sat down with Dr. Hickey, I said, Let me just make sure that you and I are on the same page. Administration, at times, feels that they run the institution, I said, but these committees, once you appoint, they are independent and their decisions cannot be revoked. You could say that -- let's say the protocol is approved by the IRB. MD Anderson may decide that we don't want to do that research over here, but if the protocol is rejected by the IRB, administration cannot say, We are going to do it anyway. That is a binding decision and it cannot be challenged.
[00:42:53]

T.A. Rosolowski, PhD
[00:42:54]
Right. Well, I'm just thinking, because you know, I know that there can be many different ways of looking at what the "research protocol" or the research portfolio of an institution should be like, and I could imagine that there might be certain instances when the executive leadership might strongly support a particular research or line of study which needs further review.
[00:43:18]

Aman Buzdar, MD
[00:43:19]
The institution may support it, but still, from the regulatory point of view, they have to go through all the same steps.
[00:43:25]

T.A. Rosolowski, PhD
[00:43:25]
Absolutely.
[00:43:25]

Aman Buzdar, MD
[00:43:26]
Over there --the institution, yes, the institution can decide, we want to address X area. Today, we are looking at biologics and immunotherapy and things like that, but they have their own unique side effects and we have to look at it. We have even set up some committees. Actually, from four to five-thirty today, we sit down and I sit every week with our cancer experts, because some of these therapies cause very unique side effects, including death of the patients.
[00:44:03]

T.A. Rosolowski, PhD
[00:44:04]
Wow.
[00:44:05]

Aman Buzdar, MD
[00:44:05]
And we have developed a unique system to help identify these patients early on and treat these patients early on, so that maybe we can avoid some of these unfortunate incidences of deaths. I think in my opinion and everybody who is in this committee --this is the first within the whole nation, we have set it up, and we have submitted a manuscript which is under review. We have trained --there are only two, three floors within the hospital where these patients can be admitted. All the nurses, all shifts have been trained, how to look for the side effects, who to call, because the thing is, a patient one minute may be saying, Oh, I have a headache, and the patient may become confused. If you do some type of active intervention, a lot of times the patients will come out of it, but if you don't recognize it, a patient may be deceased within a day or so.
[00:45:20]

T.A. Rosolowski, PhD
[00:45:20]
My word.
[00:45:21]

Aman Buzdar, MD
[00:45:21]
Or within a few hours.
[00:45:22]

T.A. Rosolowski, PhD
[00:45:22]
Wow, wow, that's amazing.
[00:45:25]

Aman Buzdar, MD
[00:44:25]
So those are the things again, as the science has advanced, we are now at the cutting edge. This is a committee which is called CAR T Cells Committee which is, even today, I have a meeting, I think at four to five-thirty.
[00:45:45]

T.A. Rosolowski, PhD
[00:45:45]
And I'm sorry, what's the name of the committee again?
[00:45:46]

Aman Buzdar, MD
[00:45:47]
Here, I can show you.
[00:45:47]

T.A. Rosolowski, PhD
[00:45:51]
Oh, Cartox Cell Therapy Group. Thank you.
[00:45:56]

Aman Buzdar, MD
[00:45:57]
So this has been a unique institutional initiative which we started over here, since we had – because here, and at some of the other institutions where this therapy was being done, some of the patients had problems, that we have implemented this. We have in this meeting, all of our cancer specialists who treat these patients; our neurologists, our pathologist, our radiologist, our nurses, and all patients who are in the hospital, we go patient by patient. I have a list today, which we will talk about it. I don't participate in the discussion, but I sit there and help guide if there is anything from the regulatory point of view that my office needs to do.
[00:46:51]

T.A. Rosolowski, PhD
[00:46:53]
So, I mean that's a great illustration of how, in certain ways, things haven't changed so much from those days in the '70s, when you still had a problem that had to be dealt with aggressively, and you had to look for the impact on the patients. Probably, that's a situation that won't ever go away in oncology.
[00:47:12]

Aman Buzdar, MD
[00:47:12]
Well because the thing is, when you have these -- well, just to give you an example of these treatments. These are so new treatments, that we are giving to the patients who have their disease, which is resistant to every known therapy. Unfortunately, if we don't do anything, they're going to die very shortly. But, with these therapies, more than half of the patients, more than half of the patients, going into complete remission, means their disease disappears.
[00:47:46]

T.A. Rosolowski, PhD
[00:47:46]
Gosh.
[00:47:47]

Aman Buzdar, MD
[00:47:48]
But, some of the patients get into very serious complications and we have set up this oversight group to discuss, identify, and see that how can we recognize early on, how can we intervene early on, and prevent the worst outcomes, meaning the death of the patient.
[00:48:12]

T.A. Rosolowski, PhD
[00:48:15]
Very interesting, yeah. Would you like to kind of go back in time and tell me about the next phase of your research?
[00:48:28]

Aman Buzdar, MD
[00:48:29]
Yeah, there are several things. In my research, I think things which I don't consider my research. I think of it as team research, our group research, I think of that as the best way to say it, because there is not one person at MD Anderson who does. This is MD Anderson's unique system: we do everything as a team approach, and what we -- this is our backbone, is multidisciplinary

approach. Even from day one when we came, even in the earliest days, you had patients with breast cancer. Surgeons, medical oncologist, radiotherapist, and the patient, we will see the patient, review the patient, everybody looked after the patient, and we came back, discussed what is the best, and the doctor who is the family doctor, will go and tell the patient. That was when I came in the '70s, and it was even before then, and even it is today, in every discipline, that is our approach.
[00:49:36]

T.A. Rosolowski, PhD
[00:49:37]
And I know that that is something that was really established here. Gabriel Hortobagyi talked about how hard he worked to try to establish that. Why do you think MD Anderson was able to institute a kind of approach like that, which has now become pretty common in other institutions.
[00:49:56]

Aman Buzdar, MD
[00:49:57]
I think on paper it may be common in other institutions, but still it has, in some places, wrong roles. So the thing is yes, a patient is seen by me, let's say as a medical oncologist. Next week, I say, Okay, you need to see the surgeon and radiotherapist, and set up an appointment, the patient will go to other groups. Then, the thing is once, if you are sitting together, looking at the same patient, at the same time, the surgeon looks at it from different angle, medicine people look at it from different angle, radiotherapist looks at it from -- whereas if they are seen in a sequence, without other people's input and a real discussion, you come up with a very narrow slice of tunnel vision. Whereas we do it, see the patient at the same time, discuss it in the same room, make the decision and communicate to the patient at the same time, which is unique, whereas in a lot of other places, that's the way I described it [the sequential way], that's how it happens.
[00:51:03]

T.A. Rosolowski, PhD
[00:51:04]
Now, when you came in the mid-'70s, was it kind of a revelation, for you to sit in on some of these meetings, and were they the same then as they are now?
[00:51:12]

Aman Buzdar, MD
[00:51:12]
Oh, they are the same, because the thing is, it is very candid discussion. The thing is, everybody expresses their opinion, and then it is made, that what is in the best interest of the patient, which modality and what sequence and what modality should be utilized, in which sequence, and what

modality will have very little to contribute.
[00:51:34]

T.A. Rosolowski, PhD
[00:51:35]
Now, were there some ways in which those team meetings had an influence on the shape of clinical trials or on research questions that were asked?
[00:51:48]

Aman Buzdar, MD
[00:51:48]
Oh yeah, there was always the question. The thing is, in the earlier phases, it used to be, I shall do no harm to the patient. Unfortunately when you're doing research, at times you have to accept some of the risks, which may be known, or may be even unknown. I think at times --the example I gave you, because at that time, the FAC combination caused a lot of nausea, vomiting, and patients lost their hair temporarily, that surgeons well, they would tell me point blank, "Dr. Buzdar, you are killing these patients." That's why they were reluctant to send the patients. We had to show them that here is X number of patients which we treated and X number of them are alive, free of disease. It took several years for people to recognize that yes, these things are here to stay and over the decades then, supportive care modality has become available. Now, nausea and vomiting is a very rare problem. In those days, that was one of the major problems.

Interview Session: 01
Interview Date: February 10, 2017

Chapter 06
Research on Hormone-Dependent Breast Cancers
A: The Researcher;

Codes
A: The Researcher;
B: Research;
C: Discovery and Success;
C: Healing, Hope, and the Promise of Research;
B: MD Anderson Impact; C: MD Anderson Impact;
B: Controversy;
D: Ethics;
B: Research;

Aman Buzdar, MD
[00:51:48]+
Other things that I did --other things which my interest was, looking at --because two-thirds of the patients with breast cancer have what we call hormone dependent breast cancer. In that area, our group major contributions was --we were the group which I was fortunate to lead--aromatase inhibitors. The standard treatment, which was more than 120 years old, is that women, if they have breast cancer, you remove their ovaries and the cancer shrinks. But, subsequently, it has become clear that if you give them antiestrogens, give high doses of estrogen to postmenopausal women, that this cancer will shrink. Our contribution was, I was fortunate to lead some of the research studies with aromatase inhibitors. Aromatase inhibitors are a different class of agents. A woman who has gone through change of life and her ovaries are not producing the estrogen but still, estrogen is being produced in the muscle, in the skin, connective tissue and in the fat, and there is these compounds, aromatase inhibitors. They block that estrogen production by 99 percent, so if you take it today, a 60 year-old female, you measure their estrogen level, it will be anywhere from ten to fifteen pica moles, whereas you give these agents for a few days, that level will drop less than two to three. So these were unique compounds at that time, and I was fortunate to test this. Up to then, they either removed the ovaries of the patient, you give them antiestrogens are in older women, high dose estrogens or antiestrogens, they have similar efficacy, but their safety profile was different. Like say you have to remove the ovaries, you have to take the patient to the operating theater, so on, whereas the antiestrogen was giving a pill.
[00:55:45]

T.A. Rosolowski, PhD
[00:55:46]
Okay.
[00:55:46]

Aman Buzdar, MD
[00:55:47]
But with these new compounds, when we compare to the older compounds, these were the first compounds which showed that their anticancer activity is better. They keep more patients alive, free of disease, for a longer period of time, control their disease, and now they are standard treatments. There are three of them now. They are all off patent, but we did with all three of them, different studies.
[00:56:13]

T.A. Rosolowski, PhD
[00:56:14]
Now were these -- were you approached by pharmaceutical companies, to test these? How did you get connected with these compounds?
[00:56:22]

Aman Buzdar, MD
[00:56:23]
Because, I was doing some hormonal agents, so I was asked to lead these studies, and I led the studies with aromatase inhibitor, Anastrozole. First, we did studies in patients with metastatic disease, where we showed --again, you have to start in a step wise fashion, so the first we showed that the patient's tumor already is resistant to antiestrogens. We give them progestins. So we show that these new compounds are better than progestins, and in randomized trial, we showed that they control the disease for a longer period of time and patients live longer. That was again, the first time we showed, and I was the one who had to stand in front of it, and after that, then there was tremendous skepticism, even in the whole U.S. they said oh yeah, everything works at MD Anderson. But, because I was standing in [?] and showed that here, aromatase inhibitor given to the patients, they are living longer.
[00:57:32]

T.A. Rosolowski, PhD
[00:57:33]
Now why was there so much skepticism?
[00:57:35]

Aman Buzdar, MD
[00:57:35]
Because for 75 years, as I described a few minutes ago, a hormone is a hormone is a hormone. They may have a better safety tolerance, but their control of the disease is similar duration, so longer control of the disease, whereas here, for the first time you show a new class of agent has longer control of the disease and keeps patients alive for a longer period of time. Subsequently, I had the privilege of doing a large study, which I was the North American investigator, where we had 9,000 women, randomized in a simple study; antiestrogen, which was tamoxifen, new drug, which is anastrozole, or we give the third, a combination of both. In that 9,000 women, it showed that this newer agent kept more patients alive free of disease.
[00:58:42]

T.A. Rosolowski, PhD
[00:58:43]
Now, was this multi-institutional?
[00:58:45]

Aman Buzdar, MD
[00:58:45]
This was a global trial.
[00:58:46]

T.A. Rosolowski, PhD
[00:58:46]
A global trial, wow.
[00:58:47]

Aman Buzdar, MD
[00:58:48]
It was a global trial and it resulted in approval of this drug practically globally, once the data became available.
[00:58:54]

T.A. Rosolowski, PhD
[00:58:55]
That's amazing, wow. Now, who are some of the individuals who you collaborated with? You mentioned the importance of recognizing a team. Who were the people that became your primary collaborators and why did you work so well together?
[00:59:10]

Aman Buzdar, MD
[00:59:11]
I think because the research, especially if we had to treat 9,000 women, we'd be still doing the same study, whereas this was a global effort. Industry led the studies, but it was more than 25, 30 countries together. We used to meet every month or every two months, to look at the safety reports in a blinded manner. There was independent committees which looked at it and very quickly, once the study was complete, within less than three years, it became clear that the new approach is better and it became standard of care, FDA approved it.
[00:59:51]

T.A. Rosolowski, PhD
[00:59:52]
Wow. I was thinking, when I asked about the collaborators, I was thinking about individuals within the institution that you kind of --
[01:00:04]

Aman Buzdar, MD
[01:00:05]
The institution is very simple, because the thing is, as I said, that even though you may have difference of opinions and everybody thinks -- but in our breast group-- which Hortobagyi and me came the same day to MD Anderson.
[01:00:19]

T.A. Rosolowski, PhD
[01:00:20]
Oh, really?
[01:00:20]

Aman Buzdar, MD
[01:00:21]
Yeah, on July first 1974, both of us came on the same day. He was a fellow in the -- there used to be two separate departments. I was in the Department of Medicine. We have two separate training programs in medical oncology. One was in the Department of Medicine, which I was a fellow, and then the other one was led by Dr. Freireich [oral history interview]. It used to be called Developmental Therapeutics, and Dr. Hortobagyi was in that department. So, once we -- after Blumenstein left, Hortobagyi was the section chief and subsequently department chair, we developed a very collaborative effort. We would sit down, everything, we discuss it as a group, and once it is agreed upon by the group, that became our standard approach, if it was an already established therapy or it would be our priority for research point of view, that we're going to offer those approaches to the participants, to see if they want to be part of research.
[01:01:28]

T.A. Rosolowski, PhD
[01:01:29]
Now, I mean this is kind of a qualitative question, but I'm wondering, is there a certain mentality or a certain set of intellectual skills, that a researcher has to have in order to really collaborate productively? So much of science is based on the individual researcher, and is there a change that has to take place in order for someone to really work effectively in a team?
[01:01:57]

Aman Buzdar, MD
[01:01:58]
Well, I think the first thing is that you have to be willing to accept the challenge. Because the thing is, when you accept a responsibility, it requires that you have to spend a lot of time, effort into making sure that it is going to succeed. It's just not that oh, you are the principal investigator. You have to work very closely with your colleagues, this is why you are interested in this and why they should be doing it, and constantly working together, and bringing it, all of us, keeping it on the same page.
[01:02:39]

T.A. Rosolowski, PhD
[01:02:40]
What are some of the challenges that arise with a team effort like that?
[01:02:43]

Aman Buzdar, MD
[01:02:45]
I think the team effort, which we manage very effectively, is that you don't want to create -- say, if you are looking at a research question in certain subset of patient population; you should have two or three same subset addressing and questioning, and doing studies in the same population at the same time, because that way the results get diluted. You need to complete that one study.
[01:03:20]

T.A. Rosolowski, PhD
[01:09:20]
Interesting.
[01:09:20]

Aman Buzdar, MD
[01:09:21]
Unless there is a different certain criteria which don't fit into one protocol, those other subjects can go into the next protocol. So if you do this, then you have less of a bias in the results of the

study. If you have two, three, four studies running in the same population, you don't know why subjects went into study number one, versus two, versus three.
[01:09:54]

T.A. Rosolowski, PhD
[01:09:55]
Does it become difficult to actually achieve that when you have different investigators who want to run primary and secondary trials? Does that mean people have to make decisions about where to focus their research energies?
[01:04:08]

Aman Buzdar, MD
[01:04:09]
It becomes challenging, but the thing is we really have addressed the same situation even today. We ask the department chair to put in their priority list. They have to say this subgroup, this is our priority number one, this is our priority number two, this is our priority number three, in the second group, so on. So that is required, every department chair has to submit that, and with me now being responsible for clinical research, I look at it every Tuesday, when the new protocol comes.
[01:04:42]

T.A. Rosolowski, PhD
[01:04:42]
Interesting.
[01:04:43]

Aman Buzdar, MD
[01:04:43]
I look at it, to see that there is no conflicts and there is appropriate justification there.
[01:04:50]

Interview Session: 01
Interview Date: February 10, 2017

Chapter 07
VP of Clinical Research
B: An Institutional Unit;

Codes
B: Building/Transforming the Institution;
B: MD Anderson History;
B: MD Anderson Culture;
D: Ethics;
D: Understanding Cancer, the History of Science, Cancer Research;
D: The History of Health Care, Patient Care;
B: Education; D: On Education;

T.A. Rosolowski, PhD
[01:04:51]
Do you want to talk more specifically about your role kind of overseeing clinical research at this time? I mean it's come up a lot. Do you want to just talk about that?
[01:04:59]

Aman Buzdar, MD
[01:05:00]
Well, I think that is not a huge area of interest to somebody, but the key thing which I --
[01:05:06]

T.A. Rosolowski, PhD
[01:05:07]
It's going to be of huge interest. It's of huge interest to me, actually. I mean, because this is, in many ways, one of the two backbones, or well three backbones in research here, at the institution.
[01:05:21]

Aman Buzdar, MD
[01:05:22]
When this office was set up, when I was the IRB chair, do you know how big the office was? The office was much smaller than this desk.
[01:05:22]

T.A. Rosolowski, PhD
[01:05:22]
Right, so like ten-by-eight.
[01:05:22]

Aman Buzdar, MD
[01:05:23]
That was the whole office.
[01:05:34]

T.A. Rosolowski, PhD
[01:05:35]
And when was it established?
[01:05:36]

Aman Buzdar, MD
[01:05:38]
This is when I took over, this was in the '70s.
[01:05:41]

T.A. Rosolowski, PhD
[01:05:41]
In the '70s, okay.
[01:05:42]

Aman Buzdar, MD
[01:05:42]
Yeah. So at that time I had one secretary, since we have one IRB, one secretary who will be taking the minutes of the IRB, and she had one other half-time person who will be the coordinator, that's it. Now, since the research has expanded, now we have, instead of one committee, we have five committees, IRBs, in the institution. We have more than close to 300-plus people who work under my office.
[01:06:11]

T.A. Rosolowski, PhD
[01:06:11]
Wow.
[01:06:12]

Aman Buzdar, MD
[01:06:12]
Regulations have not increased, but people think that all regulations have increased. Interpretation of regulations and implementation of regulations has become more, not a challenge, but I think we have to… Because research is highly regulated, these things actually return in the Code of Federal Regulations, that govern how we do research, how we inform the subjects and so on. All these things are in the Code of Federal Regulations. So the office, my office responsibility is, as the institutional official, I assure the Federal Government, not just on behalf of me, but on behalf of all the investigators, that the institution, faculty, will comply with the federal, state, and international regulations.
[01:07:18]

T.A. Rosolowski, PhD
[01:07:19]
Yeah, and if you didn't, then MD Anderson would lose its comprehensive cancer center designation.
[01:07:25]

Aman Buzdar, MD
[01:07:25]
That is -- it is called a Federalwide Assurance document.
[01:07:29]

T.A. Rosolowski, PhD
[01:07:29]
That's right.
[01:07:30]

Aman Buzdar, MD
[01:07:30]
So I signed that Federalwide Assurance document and it is actually under which all the research which we carry out.
[01:07:37]

T.A. Rosolowski, PhD
[01:07:38]
Now, in the '70s, when you were offered or cajoled into taking on this role as being head of the IRB, and had your tiny office, why --
[01:07:51]

Aman Buzdar, MD
[01:07:51]
That was not in the '70s, that was actually in the mid-'80s.
[01:07:54]

T.A. Rosolowski, PhD
[01:07:54]
Mid-'80s, okay, okay.
[01:07:55]

Aman Buzdar, MD
[01:07:55]
Look at my CV. I came in the '70s over here, but that was much later.
[01:08:02]

T.A. Rosolowski, PhD
[01:08:02]
Okay, so in the mid-'80s. Now why were you asked to do this, why do you think?
[01:08:07]

Aman Buzdar, MD
[01:08:07]
Because I eventually was asked to serve as a member. The thing is, it is a very challenging job and it requires again, you have to go to the meetings and when you make decisions, people think that oh, you are against their research, and not a lot of people want to stay. But I, subsequently, being a member, I moved to vice chair, and subsequently, the previous chair didn't want to function, I was asked to step in (phone rings) to be the chair of the committee.
[01:08:46]

T.A. Rosolowski, PhD
[01:08:46]
Should I pause for a second?
[01:08:48]

Aman Buzdar, MD
[01:08:48]
Yes.
[01:08:49]

[Pause in Recording]

T.A. Rosolowski, PhD
[01:08:51]
Okay, so we were just looking at your CV, and for the record I'll just say, this was the Surveillance Committee, and you were vice chair from 1991 to 1994.
[01:09:00]

Aman Buzdar, MD
[01:09:01]
And even before that, for several years, I was a member.
[01:09:04]

T.A. Rosolowski, PhD
[01:09:03]
You were a member, okay, okay. So you were talking about the challenges. You kind of had to be the bad guy or the heavy, or whatever, but somehow were able to do that job.
[01:09:14]

Aman Buzdar, MD
[01:09:15]
Because the thing is, it is always, because the thing is, things get approved, things get disapproved. (phone rings)
[01:09:18]

T.A. Rosolowski, PhD
[01:09:19]
Right. Whoops, another one.
[01:09:21]

[Pause in recording]

T.A. Rosolowski, PhD
[01:09:27]
Okay, so we're back on again.
[01:09:28]

Aman Buzdar, MD
[01:09:29]
So, the thing is that I was vice chair for that, but before that, I served for several years as a member, so once you get familiar and as we talked about, that it is always a challenging responsibility, because you make decisions and the decisions, if studies are disapproved, people think that it is your personal things, making that. So that's why even today, it is a challenge to

find the faculty to commit the time and resources to do these jobs. These are high stress jobs.
[01:10:09]

T.A. Rosolowski, PhD
[01:10:10]
Right. Now, I'm curious, because you mentioned how you have meetings with department chairs, to talk about the way they prioritize the different trials they want to run. Is that also part of what your office does, is to work with chairs on creating that research portfolio for each department?
[01:10:30]

Aman Buzdar, MD
[01:10:31]
No. That is -- my office responsibility is to oversee research from a regulatory point of view. We do not interfere in what research a department carries out, how they carry it out, and how they run the departments, but we request that they present the priority list --what research is their highest priority, and rank it in every category.
[01:11:01]

T.A. Rosolowski, PhD
[01:11:02]
Now why do you need to know that to do what you do?
[01:11:04]

Aman Buzdar, MD
[01:11:05]
That's required, because the thing is, we want to make sure that they have appropriately thought through the appropriate resources, because that means it is a commitment from the leadership of the section of the disease entity that they want to carry out the research.
[01:11:26]

T.A. Rosolowski, PhD
[01:11:26]
I see. So has that been a question, that there are kind of pipedreams presented but not a real intention to follow through?
[01:11:33]

Aman Buzdar, MD
[01:11:34]
Well, that is a problem even not just at MD Anderson, but even in clinical research in the U.S.

and globally.
[01:11:41]

T.A. Rosolowski, PhD
[01:11;42]
Really?
[01:11:42]

Aman Buzdar, MD
[01:11:43]
People put a lot of research which gets approved, but a number of those research protocols never accrue enough patients to answer the question, so that's why we ask them to do this.
[01:12:00]

T.A. Rosolowski, PhD
[01:12:04]
What are the obstacles to getting enough patients for a particular clinical trial?
[01:12:10]

Aman Buzdar, MD
[01:12:11]
Because, either the disease may be rare, or those type of patients, there are other therapies which are available in the community and the patients don't come over here to MD Anderson, or there may be other competing studies at the national or international level, which are running, that the patients are being channeled into those directions and they are not coming to us.
[01:12:38]

T.A. Rosolowski, PhD
[01:12:39]
Okay. So how -- you know, I'm kind of thinking about just the way that clinical research has evolved and become more complicated since you came to the institution. Then, on the other side, how the transformations in regulation have moved ahead, and how these things come together, because I mean, I've talked to so many people who complain about regulations, but then acknowledge that they're valuable. But as the whole environment for research becomes more complex and more competitive, what are those connections? How can the regulations sort of help foster?
[01:13:26]

Aman Buzdar, MD
[01:13:27]
I think the key thing is that my office has a dual role. One is to make sure that the research is

being done according to all the rules and regulations and that it is being approved. Other is to educate our faculty and research personnel. We have a training program. Every person who is faculty here has gone through a training program. They understand the basics of research, what is their responsibilities. Without that, they cannot submit a protocol, including anybody, it doesn't matter if you are the youngest person or you are on the top of the pyramid, that has to be done. We also -- (phone rings).
[01:14:11]

[Pause in recording]

T.A. Rosolowski, PhD
[01:14:17]
There we go, we're back on.
[01:14:18]

Aman Buzdar, MD
[01:14:18]
We also make sure, because there is some changes in the regulations or interpretation of these regulations, so we make sure that faculty remains fully informed, so we have ongoing education where I don't know, since you are not in the clinical side, there is what we called EEE. It is like an educational team for all the MD Anderson employees. It used to be every year. Now we changed it to every two years, where we ask if they are doing research, and the human subjects, there are questions, multiple choice questions, which bring them up-to-date of what has changed in the past 12 months or 24 months. That way, we can continually educate our faculty. In the same way, we have a research approach for education of the research nurses, data coordinators, anybody who does any research with human beings. This is human beings, that's what my office does, but there are actually similar and stringent rules to do research with animals, which I'm sure you are aware of it because there is separate, like we have IRBs, they are IACUCs, [Institutional Animal Care and Use Committee] the other side.
[01:15:44]

T.A. Rosolowski, PhD
[01:15:45]
I'm nodding because I interviewed Peggy Tinkey [oral history interview], of course, is very involved with all of that.
[01:15:48]

Aman Buzdar, MD
[01:15:50]
So what else can I tell you?
[01:15:51]

T.A. Rosolowski, PhD
[01:51:52]
Well, you know, this is all very interesting, and I had let's see, a number of other questions about the research side. Are we good so far?
[01:16:04]

Aman Buzdar, MD
[01:16:05]
Yes, I think we have still 30 minutes we can do.
[01:16:07]

T.A. Rosolowski, PhD
[01:16:06]
Yes, okay. This is a more general perspective, from the clinical research side. I'm just wondering how the whole environment for doing this kind of research has intensified or become more complicated, certainly, with the shrinking of funding, but also with competing pressures that clinicians have to deliver more time in the clinic and then sustain a research career. What are some of the challenges and any of the solutions that you see, as you watch clinical researchers kind of try to negotiate this environment?
[01:16:47]

Aman Buzdar, MD
[01:16:48]
I think this is what brings patients to MD Anderson, is not our fancy buildings, but what is newest research approaches or most current approaches to the patient care, which includes offering them the research studies which are ongoing. That's why we see so many patients. And yes, we need to see X number of patients to maintain a financially viable -- but research remains one of the leading aims of MD Anderson, to define, refine the new treatments. It is and it will always remain, I think, one of the forefront missions of MD Anderson. Yes, faculty at times are being asked to do a number of things, but still, even you see X number of patients or Y number of patients, still we want to make sure that the patients who come over here, we inform them what is the current state of the art and what is doing over here. Now, MD Anderson, being even at the more forefront, where we are some of the new drugs, new approaches, which are actually being discovered and being evaluated at MD Anderson. My office also works very closely to oversee those things, and we have developed very appropriate checks and balances, that those type of research, other IRBs don't review it.
[01:18:44]

T.A. Rosolowski, PhD
[01:18:45]
Are you referring to kind of the Moon Shots model?
[01:18:47]

Aman Buzdar, MD
[01:18:18]
Not Moon Shots. Even the drugs, which I say, there are drugs which we have financial interest. We have developed the drugs over here, so those drugs are -- those research studies are not reviewed by my office IRBs. They are sent to an external IRB, and to monitor those studies, there is external Data Safety Monitoring Committees. If there are questions to address, if the participants have any questions, we have ethicists at MD Anderson, but we have an ethicist who has nothing to do with MD Anderson, and that ethicist, we give their phone number and they can ask the questions and get the address. So these are the things which are new, because we want to make sure that maintaining the transparency is extremely important, because the participants, we have to tell them that MD Anderson, these things are successful and we make money. Some of the investigators may get financial benefits, and these things are in public domain actually, and these things are set up and approved by our UT system. These things are going through the UT system, through the chancellor's office, then we put it on the public page.
[01:20:15]

T.A. Rosolowski, PhD
[01:20:16]
Interesting. There are all these new situations that have arisen, you know with intellectual property, and so it's interesting to hear how you've addressed that. Now what about situations that are arising with Moon Shots, and you know, the kind of close relationship between pharma and researchers, both clinical and basic. Are there some interesting situations that have arisen there for your office?
[01:20:44]

Aman Buzdar, MD
[01:20:45]
I think yes, because the thing is over there, we have to again, the same way. If there is mutually, something is being developed with pharma, they go through the same mechanism which I just described. But if it is an intellectual property of industry and we are just doing the evaluation, then they can go through all the regular process and things like that. Like, my office overseas, any given day, I just met with my team today, we have more than 200-plus INDs, which means new drugs, investigational new drug applications. These are the agents which are being evaluated either in a new indication, new ways where there is no data, and these drugs, some of them may be available on the market, but most of them are not on the market, they are still in very developmental phases. My office takes the responsibility to completely oversee and work

with the investigators, to have all the Is dotted, Ts crossed, so that the FDA regulatory agency issues are addressed. My office coordinates that.
[01:22:04]

T.A. Rosolowski, PhD
[01:22:05]
I see all of these issues as being so key to the reputation of the institution, and you talked about transparency. How do you inform the public about what the role of your office is? Do you have mechanisms that sort of make this public, to kind of contribute to the reputation of integrity of the institution?
[01:22:32]

Aman Buzdar, MD
[01:22:33]
What we just described, actually that is on a webpage through the compliance office.
[01:22:37]

T.A. Rosolowski, PhD
[01:22:37]
Oh, it is?
[01:22:38]

Aman Buzdar, MD
[01:22:38]
Because my office works with compliance to develop these things. All these things which we just talked about, a lot of them are visible in the webpage outward in compliance, today.
[01:22:54]

T.A. Rosolowski, PhD
[01:22:54]
Interesting, wow, wow.
[01:22:56]

Aman Buzdar, MD
[01:22:57]
Because the whole thing is to meet transparency, so that people and participants fully understand.
[01:23:04]

T.A. Rosolowski, PhD
[01:23:05]
What have been some of the most challenging situations that have arisen, with kind of new

research connections with the institution?
[01:23:15]

Aman Buzdar, MD
[01:23:16]
I think the challenges, which is always from day one, is that everybody wants their study approved and ready for approval today and maybe yesterday, but they have to go through appropriate regulatory evaluations, and neither my office, not IRB chair, can approve a study. There are set federal guidelines that have to be reviewed, approved, in a set committees which meet on set days, and all their issues have to be addressed before a study is ready to be enrolled for patients' activation. The things which are worked out very smoothly is that things from the submission of a new proposal for research, and getting it approved by all these committees, is a very short period of time. They get approved within 40 to 45 days, but after that, to make sure all the legal documents, financial agreements, and the drugs are here, and we have all the Is are dotted. That takes somewhat longer time, and we're working very closely with all the people involved, and most of those are not under my office, but we work as a team to try to shorten those times. The major thing is faculty feels and they want to do the things starting yesterday, but it requires that all the Is are dotted, Ts are crossed, before they can get these studies open for participants to be asked to be part of research.
[01:25:10]

T.A. Rosolowski, PhD
[01:25:10]
Now, have you kind of undertaken initiatives within your office, to shorten those workflow times? Is there a sort of self-review that you do, to refine that?
[01:25:22]

Aman Buzdar, MD
[01:25:23]
Yes, we have looked at it a number of ways, and Dr. Wilding, who is our new Vice Provost, he is taking the lead on this, to see that whether we can even further shorten these things. We are working very closely with our legal team, our contract people, and industry. Because the thing is, if it was one issue, we would have fixed it a long time ago. For each agreement, there is something unique which somewhat delays it. It is very few things have a common thread, which we could say that we fixed this, those have been addressed.
[01:26:03]

T.A. Rosolowski, PhD
[01:26:06]
I understand that. Okay, is there anything else you'd like to say at this point, about that part of

your activity?
[01:26:14]

Aman Buzdar, MD
[01:26:17]
I think we will just say that in spite of our faculty at times being stressed, that all this is delaying this, but I think the faculty understand that we are doing the job to meet all the federal requirements, and we are also working with our administration to try to get these studies activated for patient accrual. But there's always room for improvement and it is always difficult to compete with a small group, like say a group of private practitioners whom have five, ten doctors, and they get a commercial IRB to approve it in one week. Whereas we have a state institution where you have to comply with all these regulations and make sure that all the Is are dotted, Ts are crossed.
[01:27:20]

T.A. Rosolowski, PhD
[01:27:20]
Right, right. Well, I wanted to shift gears at this point.
[01:27:25]

Aman Buzdar, MD
[01:27:25]
Sure, please.
[01:27:25]

Interview Session: 01
Interview Date: February 10, 2017

Chapter 08
The Clinical Effectiveness Committee and the MD Anderson Algorithms of Care
B: Building the Institution;

Codes
B: Building/Transforming the Institution;
B: Multi-disciplinary Approaches;
B: Growth and/or Change;
C: Discovery and Success;
C: Healing, Hope, and the Promise of Research;
C: Patients; C: Patients, Treatment, Survivors;
B: MD Anderson Impact; C: MD Anderson Impact;

T.A. Rosolowski, PhD
[01:27:26]
And I wanted to ask you about your role on the Clinical Effectiveness Committee. I know that you were part of that activity, where there was the creation of various algorithms of care, to kind of systematize it.
[01:27:42]

Aman Buzdar, MD
[01:27:42]
Yeah, actually, I was the first person who was asked to chair that committee.
[01:27:46]

T.A. Rosolowski, PhD
[01:27:46]
Neat, okay.
[01:27:47]

Aman Buzdar, MD
[01:27:28]
I was the one who led the committee for, I don't know, you can look in the CV for how long.
[01:27:55]

T.A. Rosolowski, PhD
[01:27:57]
You were on that committee from 2007 to 2014, and how long were you a chair of that?
[01:28:03]

Aman Buzdar, MD
[01:28:03]
From day one.
[01:28:04]

T.A. Rosolowski, PhD
[01:28:05]
Oh, okay, so you chaired it the entire time?
[01:28:06]

Aman Buzdar, MD
[01:28:06]
Yeah.
[01:28:06]

T.A. Rosolowski, PhD
[01:28:07]
Wow.
[01:28:07]

Aman Buzdar, MD
[01:28:08]
The approach of that thing was that as we talked about it, that the research, everything is spelled out. We wanted to make sure that patient care --care means that how you evaluate a patient with say lung cancer, what is your first treatment, second treatment, and things like that. (phone rings)
[01:28:32]

T.A. Rosolowski, PhD
[01:28:32]
Let me just pause real quick.
[01:28:34]

[Pause in Recording]

T.A. Rosolowski, PhD
[01:28:34]
Let me get it back on. Okay, there we go.
[01:28:36]

Aman Buzdar, MD
[01:28:36]
So the idea of Clinical Effectiveness Committee responsibility was that you need to develop MD Anderson approach for disease management. Disease management means how we evaluate the disease, how we stage the disease, how we treat the patients, how we follow up once the treatment is finished, and how we follow after say the patient is successfully managed, survival, what are the things, you look at it. So we then, disease site by disease sites, just say example, take it for breast cancer, since I worked. So, you have when to do mammograms, how frequently, what are the things you need to look at. If the patient has stage one breast cancer, what are the tests you do, what are the treatments you do, what are the options and what is the evidence behind it? So all these things, and what are the treatments for all these things. There is appropriate reference, with today's -- even when we started it in 2000, questions were that we need to provide the third party, i.e. the insurance companies. If they question, Why are you doing this, here is the rationale, that why it is. Approach was to define what is the standard of care for MD Anderson. So what have we done for this --not only in those six or seven years I was chair of this committee-- for every disease category, from evaluation to treatment to supportive care to long-term follow-up, there is algorithms which were developed by the disease centers, not by us, by the disease experts. They are presented in that committee which I chair, Clinical Effectiveness, discussed, reviewed, approved, are modified. And once they are approved and modified, they become the institutional standard, and they go through the whole review process. They are presented first, approved in the committee, then they go to the Medical Practice Committee, which is the committee which oversees the other practice approach. Then it goes to Executive Committee of the Medical Staff, it means it becomes the institutional standard. So all those things which are now available, if you go to Mdanderson.org, they are available to anybody in the whole world to see, that how things are done at MD Anderson for X disease.
[01:31:45]

T.A. Rosolowski, PhD
[01:31:46]
Was there pushback against doing this? Were there certain individuals or departments that said wait a minute, you know?
[01:31:57]

Aman Buzdar, MD
[01:31:59]
I think there was not pushbacks, but there was, in the beginning, since we could see how the

things are evolving, and the faculty at times didn't see the need, that why do you need to do it? And now everybody sees the advantage. If you are giving treatment X, even understand standard treatment X, it says reference number this exactly. So if the third party refuses to pay it, you send them, here is the appropriate evidence behind it. So now it is in the beginning, some of the people who were late adopters, came to stand up, that oh, we want our things to be reviewed.
[01:32:54]

T.A. Rosolowski, PhD
[01:32:56]
Now, this --
[01:32:58]

Aman Buzdar, MD
[01:32:59]
And the same way like we did, -- this is like another committee which I led, which is called Medical Evaluation Committee, means that as you know, that a lot of these tests, genomic tests, molecular tests and things like that, they started. So John Mendelsohn [oral history interview] asked me to lead a committee which is called Molecular Evaluation Technology Committee, called METC, M-E-T-C, you can see it in my CV. I'm still co-chairing it with Stan Hamilton. There we did the same thing. What are the tests from disease diagnosis, treatment, prognosis, or selection of therapy, which there is enough evidence that they can be considered as a standard of care? This is a committee that we sit, review the evidence. Again, we don't create the evidence. Disease centers come, they present it in front of the committee, the committee reviews it, approves it, and it becomes institutional standard. The impact of that, when we started it, there was even some reservations within the institution, but what is its impact today? A few years ago, Medicare used our model to adopt those things as a national standard.
[01:34:26]

T.A. Rosolowski, PhD
[01:34:26]
Wow. Now, the Clinical Effectiveness Committee convened in 2007. I'm curious about the timing of that. You know, was that -- what was going on that made that the time to create a committee to focus on algorithms of that sort?
[01:34:50]

Aman Buzdar, MD
[01:34:50]
The idea was that if a patient is not on a research protocol that is well defined, everything is spelled out, what tests you do, seeing that, we wanted to harmonize that if a patient came to MD Anderson… So the thing is, if a patient came to MD Anderson, just using me as an example, if the patient saw me, Dr. Hortobagyi or Dr. Valero or Dr. X, if the patient is not on a protocol, as a

standard approach, there should be a consistent, uniform approach, which would be MD Anderson approach. It shouldn't be that the patient saw Dr. Buzdar or Dr. Hortobagyi or Dr. Valero, the patient gets a different opinion.
[01:35:30]

T.A. Rosolowski, PhD
[01:35:30]
Right.
[01:35:30]

Aman Buzdar, MD
[01:35:31]
And it has to be discussed. That's why it was not the Clinical Effectiveness [Committee] which developed those guidelines [ ], it was the disease centers. They agreed, they discussed, they said this is our standard. And that was the whole purpose, that it should be an MD Anderson approach. And subsequently, what we have done actually, took it one step further. Synopsis of these things is already on the website, but we actually published a series of monographs which Dr. Ralph Freedman [oral history interview] and me, who used to be here, I think you must have talked with him.
[01:36:08]

T.A. Rosolowski, PhD
[01:36:08]
I did, yes.
[01:36:08]

Aman Buzdar, MD
[01:36:09]
We published a series, it was Cancer Care Series, which had several volumes published, which was let's say, "Breast Cancer: MD Anderson Approach." The whole monograph is how the patient is managed with breast cancer at MD Anderson, from A to Z. Same way for lung cancer, for GYN malignancy. These are monographs which were published, describing all these childhood tumors, brain sarcomas, and so on.
[01:36:46]

T.A. Rosolowski, PhD
[01:36:46]
Now, I can tell from the way you're speaking about this, that you're pretty proud of it.
[01:36:50]

Aman Buzdar, MD
[01:36:52]
Well I think I am not only proud of it, but the institution, it puts the institutional approach, we put it in a context. It is not in my mind. It is on a piece of paper. Anybody can touch and feel it and see it, how the cookies crumble at MD Anderson.
[01:37:13]

T.A. Rosolowski, PhD
[01:37:14]
And what's the larger significance for MD Anderson? Have other institutions done this with their standards of care, I mean is this an unusual thing for a cancer center to do, to systematize everything?
[01:37:28]

Aman Buzdar, MD
[01:37:29]
I think not only it helped us to harmonize it at MD Anderson, but as you know, MD Anderson has what we call MD Anderson Network. One of the criteria of MD Anderson Network, or being a member, that they have to follow all the guidelines outside the context of research, the way the cookie is spelled out.
[01:37:50]

T.A. Rosolowski, PhD
[01:37:51]
Right.
[01:37:51]

Aman Buzdar, MD
[01:37:52]
And also, we provide this to all our sister institutions. So it has a global impact and not just within the walls of MD Anderson. That's why we make it so that people don't have to pick up the phone, talk to doctor X or Dr. Buzdar, that how you do it. Here.
[01:38:11]

T.A. Rosolowski, PhD
[01:38:14]
Did this come about as part of the global expansion initiative and the -- I mean, was it part of the rationale that putting everything down in black and white in this way would help disseminate the MD Anderson standard to the sister institutions across the network? It seems like an important thing.
[01:38:33]

Aman Buzdar, MD
[01:38:34]
I think that came later on, but mainly in the beginning was that we should have consistent approach to a disease and every disease, that how we manage it at MD Anderson.
[01:38:49]

T.A. Rosolowski, PhD
[01:38:50]
Now, have there been -- what are the challenges that have arisen in transferring this standard of care to the sister institutions or across the network? Have you been involved with that, kind of overseeing that?
[01:39:05]

Aman Buzdar, MD
[01:39:05]
I'm aware of it, but I am not involved with it. They have to meet those standards, they have to comply that they are providing care that is similar to what is our standard of care approach.
[01:39:15]

T.A. Rosolowski, PhD
[01:39:15]
What are some of the challenges that arise if another institution across the country or across an ocean is deciding to adopt the MD Anderson standard of care? What might make it difficult for that to happen?
[01:39:30]

Aman Buzdar, MD
[01:39:32]
I think that question, you should ask Amy Hay [oral history interview] or -- they can give you a lot better weight and depth.
[01:39:40]

T.A. Rosolowski, PhD
[01:39:39]
Sure, fair enough.
[01:39:39]

Aman Buzdar, MD
[01:39:40]
The thing is that since we have everything now spelled out, that these network affiliations and so

on, you could put the microscope and see, what is their compliance rate.
[01:39:57]

T.A. Rosolowski, PhD
[01:39:58]
Oh, okay, yes.
[01:39:58]

Aman Buzdar, MD
[01:39:59]
So you can see that whether is it just our name, or are they following it. And it is required and you can see the metrics rate that, yes, they are complying with it very high frequency, with approaches as MD Anderson is doing.
[01:40:13]

T.A. Rosolowski, PhD
[01:40:14]
Who convened the Clinical Effectiveness Committee? Was that something that John Mendelsohn requested?
[01:40:19]

Aman Buzdar, MD
[01:40:20]
It was during John Mendelsohn, through Dr. Burke's [oral history interview] office, and Dr. Alma Rodriguez [oral history interview].
[01:40:24]

T.A. Rosolowski, PhD
[01:40:25]
Yeah, I remember Dr. Rodriguez talking about this too. Is the committee still in existence?
[01:40:44]

Aman Buzdar, MD
[01:40:44]
Oh yeah, the committee meets every month.
[01:40:45]

T.A. Rosolowski, PhD
[01:40:46]
It does, okay.
[01:40:47]

Aman Buzdar, MD
[01:40:47]
I stepped out of it because of the responsibilities, but the committee still meets and these things are -- all these things are not just written in stone. It is any evidence, as it evolves, these things are modified in real time, and as policies have changed, things are deleted or added as the knowledge evolves.
[01:41:16]

T.A. Rosolowski, PhD
[01:41:17]
I assume that the committee relies on the disease sites to bring changes to the attention of the committee. So what's the mechanism for keeping that communication going? Are there timelines or how does that all work?
[01:41:35]

Aman Buzdar, MD
[01:41:35]
Everything is reviewed, even though it is approved. Every year it is re-reviewed. That is the minimum requirement, but we encourage that if there is some evidence, say tomorrow there is a meeting or some paper gets published, that here is now this thing has tremendous impact. Usually the disease site, they will bring the evidence and it will be again, discussed, reviewed, either approved or not adopted. And the committee has representation from every discipline, the Clinical Effectiveness Committee, so it is not just a handful of people, but every discipline is represented on the committee.
[01:42:25]

T.A. Rosolowski, PhD
[01:42:26]
What a fascinating thing to have done, yeah. Well, would you like to close off for today? This feels like a good time.
[01:42:33]

Aman Buzdar, MD
[01:42:31]
Yeah, I think that's it, thank you.
[01:42:34]

T.A. Rosolowski, PhD
[01:42:34]
Sure. Well, thank you very much for your time.
[01:42:36]

Aman Buzdar, MD
[01:42:37]
Okay. Good to see you and I will see you again, hopefully, maybe.
[01:42:40]

T.A. Rosolowski, PhD
[01:42:40]
Yes, next week. We are due next week, next Thursday.
[01:42:41]

Aman Buzdar, MD
[01:42:43]
Okay.
[01:42:43]

T.A. Rosolowski, PhD
[01:42:43]
Do you want to come here or do I come to your office?
[01:42:46]

Aman Buzdar, MD
[01:42:46]
No, this is fine. It depends. Let me see, is it already scheduled?
[01:42:50]

T.A. Rosolowski, PhD
[01:42:50]
It is already scheduled.
[01:42:51]

Aman Buzdar, MD
[01:42:51]
So I didn't even know that this -- I don't look at it in my -- I just look at what is the next meeting I have going.
[01:42:57]

T.A. Rosolowski, PhD
[01:42:57]
That's right, of course. Let me just say for the record, I'm turning off the recorder at about three minutes of three.
[01:43:03]

Aman Buzdar, MD

Interview Session Number 02: February 16, 2017

Chapter 00B
Interview Identifier
About 30 seconds

T.A. Rosolowski, PhD
[00:00:01]
Okay, we are starting and let's see, it is nine-oh-eight, on February 16, 2017. I'm Tacey Ann Rosolowski, and today I'm sitting in the Historical Resources Center Reading Room with Dr. Aman Buzdar, for our second session together. Thank you very much for coming in.
[00:00:23]

Aman Buzdar, MD
[00:00:23]
My pleasure.
[00:00:23]

Interview Session: 02
Interview Date: February 16, 2017

Chapter 09
Early Research: Changing the Natural History of Breast Cancer
A: The Researcher;

Codes
C: Discovery and Success;
A: The Researcher;
B: MD Anderson Impact; C: MD Anderson Impact;
B: Devices, Drugs, Procedures;
B: Multi-disciplinary Approaches;
B: Controversy;
C: Controversies;
B: Research;
B: Survivors, Survivorship; C: Patients, Treatment, Survivors;
D: Understanding Cancer, the History of Science, Cancer Research;
D: The History of Health Care, Patient Care;
D: Ethics;

T.A. Rosolowski, PhD
[00:00:24]
Well, we strategized a little bit before we turned the recorder on, and you had wanted to address a subject related to research activities, which I wanted to return to that story. You wanted to speak about the impact that you and team members had on the natural history of the disease of breast cancer, so if you could talk to me about that.
[00:00:52]

Aman Buzdar, MD
[00:00:53]
I think there are several areas which we feel very proud that we were on the frontline to change the biology of the disease. The first example, I think we briefly talked about it the other day, that combination chemotherapy with Dr. Hortobagyi and his team initiated in patients with advanced disseminated cancer, that not only you were able to control the disease in 70-plus percent of the patients, but 15-plus percent of patients went into completely remission. The thing which was amazing is that some of those patients who went into remission, they are still alive in unmaintained remission now.
[00:01:42]

T.A. Rosolowski, PhD
[00:01:42]
And that's since the '70s.
[00:01:43]

Aman Buzdar, MD
[00:01:44]
Since the '70s.
[00:01:45]

T.A. Rosolowski, PhD
[00:01:45]
Oh my heavens, wow.
[00:01:46]

Aman Buzdar, MD
[00:01:46]
So I think that is one thing. At that point, when we tried to publish this information, there was quite a bit of healthy skepticism, because it was not feasible, they thought oh, these patients didn't have cancer, but it is reality that there are patients in which we had biopsy proven evidence of disseminated disease and they, with treatment, went into remission and remain in remission. Even though it is a small subset of patient population, but it was the first time that we could show that. So the next step which we did was, that there are patients in which cancer, after initial treatment, recurs at one place or at two places, and in those one or two places, you may be able to remove the cancer and do even radiation therapy to that area. But the natural history is that in spite of removing that spot of cancer or doing the radiation on top of it, 80 to 90 percent of these patients recur within a year, somewhere else, and they will eventually die of the disease. Since we're sure that the chemotherapy worked in patients with disseminated cancer, we wanted to test, in this subset of patients, which had very limited, one or two sites of recurrence, that after removing these sites of recurrence, giving the same therapy, whether we could keep these patients alive free of disease. To our amazement, that about 25 to 30 percent of these patients are alive, free of cancer, 20, 30 years later, which was another subset of patients, the natural history of the disease was dramatically changed. It was again, because we did not do a randomized trial. We did just a single phase two study, that it took like 40 years for cooperative groups to do the randomized trial, to show what we had shown 30-plus years ago, that you could keep certain patients in unmaintained remission if they have very limited disease burden.
[00:04:05]

T.A. Rosolowski, PhD
[00:04:06]
Now, why didn't your teams do a randomized trial at the time?
[00:04:14]

Aman Buzdar, MD
[00:04:14]
Because, the thing is, at that point, we looked at our own data. Consecutive series of patients, I looked at it and showed it to other colleagues, that within a year, 80-plus percent of patients have recurring disease somewhere else, in spite of surgery, radiation therapy and everything. We felt that it was inappropriate to offer no therapy to these patients, because the outcome, we know from our experience. So this is what we call historical controls. We had historical control information from our own institution, patients who were treated at MD Anderson. That's why we thought that it was not appropriate, in the best interests of the patient, to just not offer therapy.
[00:05:06]

T.A. Rosolowski, PhD
[00:05:06]
Absolutely, absolutely. Now, these results were published?
[00:05:11]

Aman Buzdar, MD
[00:05:11]
Well, they were published. These are now considered standard.
[00:05:13]

T.A. Rosolowski, PhD
[00:05:13]
Standard, right.
[00:05:14]

Aman Buzdar, MD
[00:05:15]
But it was us, and I wrote those protocols, and we got it out of those studies.
[00:05:20]

T.A. Rosolowski, PhD
[00:05:20]
Yeah, that's amazing.
[00:05:22]

Aman Buzdar, MD
[00:05:22]
That was in the mid-'70s.
[00:05:25]

T.A. Rosolowski, PhD
[00:05:25]
In the mid-'70s, that's amazing. I know Gabriel Hortobagyi had mentioned that the work that you were doing was really -- I mean that all of you were doing was really on the forefront, and for some reason it didn't coalesce in my mind, you know a kind of way in which one study proceeded to the other and continued to reinforce.
[00:05:46]

Aman Buzdar, MD
[00:05:46]
These things actually changed the same day. There was a subset of patients, what we call inflammatory carcinoma of the breast. Inflammatory carcinoma of the breast, it was a long time ago. If you picked up the textbooks which were written in the '60s or '70s, the textbook authors will say you should not do surgery on these patients because they cannot be cured, and just offer them palliative care. Since we have this chemotherapy available, surgeons did mind to operate on them, our radiotherapists were willing to radiate them, but still, over 90 percent of these patients were dead within a year to 18 months. So what we did was, that instead of doing surgery or radiation therapy, these are the patients with inflammatory carcinoma, we gave the same combination chemotherapy to these patients and to our amazement, a lot of patients, the cancer shrunk. Then, still, our surgeon didn't want to operate on it, and the first cohort of patients, we convinced our radiotherapy colleague to radiate the breast, and some of those patients are still alive, free of cancer 30, 40 years later.
[00:06:58]

T.A. Rosolowski, PhD
[00:06:59]
That's amazing.
[00:06:59]

Aman Buzdar, MD
[00:07:00]
That was another subgroup of patients in which the natural history was changed, and what is the fraction which can remain alive, free of disease? It's about 25 to 30 percent of the patients. The natural history, without the systemic therapy upfront, is less than 1 to 2 percent of these patients

will be even alive at two years.
[00:07:21]

T.A. Rosolowski, PhD
[00:07:21]
That's amazing, that's amazing.
[00:07:23]

Aman Buzdar, MD
[00:07:23]
So that was when we showed this, again, it was from our historical experience. We knew that you -- but, when we initially did this study, I was the one. I had to sit down and convince our radiotherapy colleagues. We sat down and went, chart by chart, Dr. Montague, Eleanor Montague was at that point the breast radiotherapist. I said Eleanor, here is the data, that these are the patients who are alive, free of cancer. Initially, she was very skeptical. They wrote a paper, they said oh, chemotherapy does not help. I had to sit down and go over all this data with her, and then we republished the same patient information in *Cancer*. A year later, after discussing with the editor, that here is a subset of patients which we treated and there are, a sizeable fraction of these patients are alive, free of disease. That was published in *Cancer*.
[00:08:21]

T.A. Rosolowski, PhD
[00:08:22]
And that was in the mid-'70s, late '70s?
[00:08:24]

Aman Buzdar, MD
[00:08:24]
It was in the late '70s.
[00:08:25]

T.A. Rosolowski, PhD
[00:08:25]
The late '70s. So even Eleanor Montague was skeptical.
[00:08:30]

Interview Session: 02
Interview Date: February 16, 2017

Chapter 10
Research in Breast Medical Oncology: Pushing Against Medical Conservatism
B: MD Anderson History;

Codes
C: Discovery and Success;
B: MD Anderson History;
B: MD Anderson Snapshot;
B: MD Anderson Culture;
B: Controversy;
B: Research;
D: Understanding Cancer, the History of Science, Cancer Research;
D: The History of Health Care, Patient Care;
C: Portraits;

Aman Buzdar, MD
[00:08:30]
They were skeptical, very skeptical.
[00:08:32]

T.A. Rosolowski, PhD
[00:08:32]
Right. That's amazing. Well, you're really pushing, doing something totally new, and pushing against that entrenched mindset that there wasn't anything you could do about these diseases at all.
[00:08:43]

Aman Buzdar, MD
[00:08:42]
Oh yeah, because the thing is, the mentality at that point was, as I told you, that even you pick up the textbooks in this era, that thou shall not harm these patients. So their approach was that here, we're giving them the chemotherapy. Their hair will fall out, they are vomiting, some can end up with a fever in the hospital, and you are making their life much more miserable, but we had to show them that a proportion of these patients are alive, free of cancer, with this approach, and it took major act.
[00:09:17]

T.A. Rosolowski, PhD
[00:09:18]

Now, what was special about the environment in Breast Medical Oncology? Obviously, there was a group of people who were willing to do this. What was that about?
[00:09:11]

Aman Buzdar, MD
[00:09:11]
When I came at that point, at that point there were two departments. It was one department, it was called Medicine, which was the chair at that point was Dr. Shullenberger, C.C. Shullenberger, he was the chair of the Department of Medical Oncology. Dr. Freireich [oral history interview] and Dr. Frei had come a few years prior to that and they had developed a department, what was called Developmental Therapeutics, and they were very much into this newer approaches, that we need to evaluate these newer drugs, to see whether we can change the biology of the disease. Whereas in the Medicine Department, people were much more conservative, and our Surgery Department was much more conservative, that they didn't want to do. Their approach was that I shall do no harm first. But the reality was that these patients were dying. And we, in collaboration with a person --he has unfortunately died a few months ago, Dr. George Blumenschein-- he was a person who was the section chief, appointed. Prior to that, there was Dr. Nylene Eckles, and some of the other people, they were very conservative. They were just giving palliative treatment to these patients. And do no harm, that was their approach. Then I and Dr. Hortobagyi came as a fellow and Dr. Blumenschein, from the other side, came as a section chief. That was the nucleus of Breast Medical Oncology. We wanted to evaluate and offer these therapies to the patients, to see whether we can favorably change the outcome of the disease. I think it took us a while to convince it, but it became -- it was even not just within the walls of MD Anderson. Even when you went and presented some of this data in the national or international meeting, people will at times tell you to your face, oh yeah, everything works at MD Anderson.
[00:11:58]

T.A. Rosolowski, PhD
[00:12:02]
What did they mean by that?
[00:02:04]

Aman Buzdar, MD
[00:12:05]
It means that this is just BS, in other words, for lack of a better word, that they had to carry out their own clinical trials to confirm that. Because at that time, the national studies which were ongoing, when we were giving these fairly --what we called and our colleagues used to call-- aggressive therapy, the national studies were giving melphalan. This is a drug which has -- if you give it to the patient with metastatic disease, the very occasional patient will get any benefit. And they were giving it to the patients to see that it will prevent the cancer recurrence. Even

Betty Ford was given that.
[00:12:46]

T.A. Rosolowski, PhD
[00:12:49]
Wow. So, when did you really start to see a change within the institution, you know that the conservatism started to shift? Obviously, the evidence was coming out, you're talking to people saying yes, this is a reality. Were there other things that had to happen in the culture, to kind of move the institution away from this more conservative approach?
[00:13:10]

Aman Buzdar, MD
[00:13:11]
I think that once they saw walking, talking, living patients who, in their books would have been dead, then things started to change within our own group. In the beginning, our surgeons will operate and they will send the patients home.
[00:13:27]

T.A. Rosolowski, PhD
[00:13:28]
Oh really? So no collaboration.
[00:13:30]

Aman Buzdar, MD
[00:13:31]
Very little collaboration. We will get patients who were operated outside, and the surgeons outside recognize that they were doing poorly, they will send it to us. But then once we showed them, and I published the first data, then the ball started to turn, that patients started to come who had surgery at MD Anderson.
[013:52]

T.A. Rosolowski, PhD
[00:13:53]
Interesting, okay, okay. Now, when did you start holding, in Breast Medical Oncology, the kind of conference style?
[00:14:03]

Aman Buzdar, MD
[00:14:04]
Well, that was even before we came, that was a long time. Even in those conferences, Hortobagyi and me, and Blumenschein will go and sit there, and I will be the only one, because I

was doing these adjuvant drugs. I said we need to give them the chemotherapy. And the people --surgeons and the radiotherapist-- tell me to my face, they will say, "Dr. Buzdar, I am sick of you talking about this chemotherapy." I said, "This is here to stay and we need to offer this, to change the natural history of the disease."
[00:14:33]

T.A. Rosolowski, PhD
[00:14:34]
So you had to just keep hammering that message.
[00:14:35]

Aman Buzdar, MD
[00:14:36]
Oh, yeah.
[00:14:36]

T.A. Rosolowski, PhD
[00:14:37]
Wow, that's amazing. When did you notice a change in those meetings, you know people opening up their minds?
[00:14:45]

Aman Buzdar, MD
[00:14:46]
I think it didn't take very long. Two, three, four years later, because we had at least a small number of patients, more than 100-plus patients. We published those data.
[00:14:56]

T.A. Rosolowski, PhD
[00:14:56]
Right, right.
[00:02:04]

Aman Buzdar, MD
[00:14:57]
And there was a group which was in University of Arizona, in Tucson, and they started a meeting which was called adjuvant therapy of cancer. So, first meeting, me, and Dr. Blumenschein, presented our own experience in patients with breast cancer, who were at a very high risk of recurrence after local therapy. And Dr. Blumenschein presented the patients who had one isolated recurrence and were given chemotherapy after removing the isolated recurrence,

that here, we have natural history, and that book was published in, I think 1977.
[00:15:38]

T.A. Rosolowski, PhD
[00:15:38]
Wow.
[00:15:38]

Aman Buzdar, MD
[00:15:40]
After that, we published it also in the peer review journals, all this information, that slowly, things started to change.
[00:15:49]

T.A. Rosolowski, PhD
[00:15:51]
How did that affect, I mean just in a very practical level, you're talking about what was going on in Breast Medical Oncology and how small it was, and I'm dying for you to tell again, how small Breast Medical --
[00:16:02]

Aman Buzdar, MD
[00:16:02]
Well, Breast Medical Oncology, when I came as a fellow --even as an attending-- the Breast Medical Oncology was these two tables put together. They were actually not even tables. These were like these things which were hinged to the wall. In the morning, they will come down, in the evening, because it was a hallway, there was no room, they would put it up, and we would stand over there and then you had a little dictation room where you went and dictated all your notes and chemotherapy orders.
[00:16:34]

T.A. Rosolowski, PhD
[00:16:37]
I love the look on your face, it's like oh wow, those were the days.
[00:16:40]

Aman Buzdar, MD
[00:16:41]
I could even show you where it was. It was a hallway in which you go to the library, that hallway which is now nothing but offices, closed. That's where these desks were.
[00:16:50]

T.A. Rosolowski, PhD
[00:16:50]
That's amazing.
[00:16:51]

Aman Buzdar, MD
[00:16:51]
That's where our desk was, and then there was Developmental Therapeutics. Frei --they had one room which was about the size of [gestures] maybe, if you put a wall over there. That was the whole department.
[00:17:01]

T.A. Rosolowski, PhD
[00:17:00]
So like 12'-by-12'.
[00:17:01]

Aman Buzdar, MD
[00:17:02]
Yes. It was a whole Department of Developmental Therapeutics.
[00:17:06]

T.A. Rosolowski, PhD
[00:17:06]
In a 12'-by-12' room. A smaller institution, but of course, demonstrating the value of the work and the paradigm that you were bringing changed that pretty quickly.
[00:17:18]

Aman Buzdar, MD
[00:17:19]
But the thing is, it has to change. The whole [field of] oncology has changed. And now you could see that so many patients with so many disease --at that point, we were not even telling a woman with breast cancer that we may be able to keep you free of disease, until we showed the data. But now, you look at it, it's 80 to 90 percent of the patients with breast cancer can remain alive, free of disease, if appropriate therapy is done, unless a small number of patients unfortunately have de novo resistant disease. So that is a dramatic shift of the natural history of the disease. Actually, we published -- there is a book called *What Has Been the Natural History of Cancer Treated at MD Anderson Hospital*. I can show you, just use this piece of paper.
[00:18:05]

T.A. Rosolowski, PhD
[00:18:06]
Sure.
[00:18:06]

Aman Buzdar, MD
[00:18:07]
This paper actually, even you can look at the book, Dr. Alma Rodriguez is one of the co-authors of that, and editor of the book. MD Anderson is a very unique place, where you could look at the patients who were treated in the '40s, '50s, '60s, '70s, '80s, '90s, 2000s. So what we looked at? Patients' outcome'. [draws] This will be the '40s, '50s, '60s, '70s, '80s.
[00:18:41]

T.A. Rosolowski, PhD
[00:18:41]
Wow. So, just the increase in the number of patients.
[00:18:43]

Aman Buzdar, MD
[00:18:44]
Yeah, these data are published. I can even give you the whole book monographed.
[00:18:49]

T.A. Rosolowski, PhD
[00:18:50]
Yeah, that's amazing, that's incredible, and Alma Rodriguez edited that book for publication?
[00:18:56]

Aman Buzdar, MD
[00:18:56]
It is just looking at -- this is in breast cancer. We looked at patients even with metastatic disease. Metastatic means disseminated cancer. You saw the shift this way.
[00:19:07]

T.A. Rosolowski, PhD
[00:19:07]
That's amazing.
[00:19:08]

Aman Buzdar, MD
[00:19:08]
And in early stage breast cancer, like say operable breast cancer, this same way. These are graphs and when I saw these things, because these are the data from our -- we have very -- you can look at the patient number one chart, pull it out today and look at it, what happened to the patient. Because one thing which Dr. Clark --and they had tremendous amount of vision, that we have the most comprehensive data on patient follow-up. If a patient comes once to MD Anderson, every attempt is made to get follow-up until the patient is deceased, we have follow-up on the majority of these patients. So this is how we can say that what has happened from the '50s, '60s, '70s, '80s, '90s.
[00:20:00]

T.A. Rosolowski, PhD
[00:20:01]
Wow, that's an amazing tool. I'd never really heard anyone say that, and it was Dr. Clark who insisted on that.
[00:20:07]

Aman Buzdar, MD
[00:20:08]
It was under his vision, because that has been there from when I came, in the '70s, and Clark was alive at that time.
[00:20:18]

T.A. Rosolowski, PhD
[00:20:18]
Right, sure. What did you think of Dr. Clark?
[00:20:20]

Aman Buzdar, MD
[00:20:21]
He was a very down to earth person. Actually, this is a very interesting story because a year before we came --at that point, because oncology was still evolving, mostly surgery and radiotherapy, so the medical oncology was in its very infancy. So there was --even though fellows were there, trainees, they didn't have anybody who was in the hospital if something happened. It was just a year before that, they started that --Oh, we need to have somebody on call 24 hours, seven days a week. They had no place for us. I remember sleeping on a little cot, which would be put in Dr. Clark's office at night. You went and slept there, and every 15 minutes the phone will ring. And Dr. Clark, being a surgeon, usually the phone quits ringing about four or five o'clock in the morning, because the shift of the nurses is changing. At that

time, Dr. Clark will show up and you have to get out of there. [both laugh]
[00:21:27]

T.A. Rosolowski, PhD
[00:21:32]
That's pretty great, he let you sleep in his office.
[00:21:34]

Aman Buzdar, MD
[00:21:34]
It was a unique thing. Things evolved and they have evolved dramatically.
[00:21:42]

T.A. Rosolowski, PhD
[00:21:42]
Yeah, yeah, that's pretty incredible.

Interview Session: 02
Interview Date: February 16, 2017

Chapter 11
Endocrine Treatments for Breast Cancer
A: The Researcher;

Codes
C: Discovery and Success;
B: MD Anderson History;
B: MD Anderson Snapshot;
B: MD Anderson Culture;
B: Controversy;
B: Research;
D: Understanding Cancer, the History of Science, Cancer Research;
D: The History of Health Care, Patient Care;
D: Technology and R&D;

T.A. Rosolowski, PhD
[00:21:42]+
Now have you covered all of the areas in which there was an impact on the natural history of the disease? Were there other advances?
[00:21:52]

Aman Buzdar, MD
[00:21:52]
The other thing, I don't know if we talked about it or not, is the endocrine treatment. Endocrine treatment, like tamoxifen, was the first treatment which showed that you could reduce the risk of recurrence in patients who have hormone-dependent breast cancer. Subsequently, aromatase inhibitors --which I led the effort at MD Anderson, we evaluated these drugs, first in metastatic breast cancer, then in early stage breast cancer. This was the first time --I think we talked about it the other day, that up to that point, there was hormones of different degrees. Like you removed the ovaries, you gave the patient progestins or you gave them endogens. Their anti-tumor activity are the percent of patients who got benefit and the survival were very similar. For the first time --when these aromatase inhibitor anastrozole, which I was working with one of the pharmaceutical companies, we did a blinded trial, a national trial, blinded national trial in which I was the principal investigator. It showed that you were able to control the disease in a higher number of patients. A couple of years later, we showed that patients who received the newer therapy, they lived longer compared to the patients who were on the previous. So that was another evidence which was in disseminated cancer patients. Subsequently, there was a 9,000-women trial, which I was the North American principal investigator from the U.S. and Canada,

where we showed that in 9,000-patient population, the standard was tamoxifen. So either women were given tamoxifen or this new drugs, aromatase inhibitor anastrozole, or a third of the patients were given both pills, but neither the patient or the doctor knew what the patient is receiving. There was a matching placebo, so every patient took two pills. After only 33 months follow-up of this 9,000 patient study, it became very clear that the women who were getting the newer drug, after surgery, had much lower risk of cancer coming back, compared to the patients who were receiving the previous FDA approved drug, tamoxifen.
[00:24:22]

T.A. Rosolowski, PhD
[00:24:23]
Wow, amazing.
[00:24:22]

Aman Buzdar, MD
[00:24:24]
FDA approved the drug based on that data, and that pivotal study, which was a global effort, resulted in approval of that drug globally, in all the European countries and some of the Asian countries.
[00:24:40]

T.A. Rosolowski, PhD
[00:24:41]
The name of that drug again?
[00:24:44]

Aman Buzdar, MD
[00:24:44]
Anastrozole.
[00:24:45]

T.A. Rosolowski, PhD
[00:24:45]
Anastrozole. Wow.
[00:24:48]

Aman Buzdar, MD
[00:24:50]
Subsequently, there was two other drugs, which are now very similar efficacy. One is called letrozole, one is called exemestane. Anastrozole was the first one to show these things.
[00:25:06]

T.A. Rosolowski, PhD
[00:25:07]
Now, what was the rationale when, in Breast Medical Oncology, when you're deciding, you know what are the drugs we're going to put together, what are the drugs we're going to try, how did you make those decisions?
[00:25:20]

Aman Buzdar, MD
[00:25:20]
Well, I think drug development is a very complex process, so first you have to understand what is the mechanism of cancer cell growths. Like how the anastrozole, are these drugs hormonal therapies? Because it was almost observed, more than 110 years ago, by a surgeon who was actually a medical student working in the farms, that at that time in the sheep in the UK, they used to remove the ovaries, [and] after they will continue to lactate for a long period of time. He became a surgeon and when looking at the lactating breast and the beast cancer, they looked to some degree similar. The cells are growing, there's dying, and then it becomes milk. This is looking under a crude microscope. So he was intrigued. He wrote a paper in *Lancet* more than 110 years ago, he says --at that point-- the whole concept was that there are infectious agents which cause disease and kill the patient. But at that point there was no concept of endocrine agents or the hormones. He wrote, in that paper, testes in the male and the ovaries in the female, send signals which are very potent, and we don't understand how they work. He was convinced, after seeing that in the farm, that --when he became a surgeon-- that women, a handful of women who had disseminated breast cancer, that undergo ovarian ablation, remove the ovaries and when the ovaries were removed, some of the patients, the cancer dramatically improved.
[00:27:12]

T.A. Rosolowski, PhD
[00:27:13]
So there was the parallel.
[00:27:14]

Aman Buzdar, MD
[00:27:15]
This is how, I mean there is pre-clinical data, then you want to do clinical studies.
[00:27:21]

T.A. Rosolowski, PhD
[00:27:24]
That was 110 years, with 60 years before you began exploring this, so pharmaceutical companies

were picking up and sort of exploring hormones at that time?
[00:27:39]

Aman Buzdar, MD
[00:27:40]
Exploring, they were exploring, because it was explored, unfortunately, the ovarian ablation which we just talked about it. In metastatic disease it was thought that it works. But then, because we were unable to identify why certain patients respond and why a lot of patients don't respond, it became then looking at these cancer cells. We were able to identify that these tumors which respond, they are hormone-dependent. They have receptors, and these cells require estrogens for growth, so depriving the estrogen will cause regression. Otherwise, that observation, which was observed by a surgeon --his name was Beatson, more than 100-plus years ago-- almost became not a major finding, until it became clear that you could identify who are the women who will benefit from these hormonal changes. We have to have a hormone-dependent tumor. That's how these subsequently --estrogens, progestins, androgens, and a whole bunch of the drugs and aromatase inhibitors came [about]. [And] why aromatase inhibitors are better than the tamoxifen. Because aromatase, if you look at it postmenopausal women, they produce estrogen still, in the muscle, in the fat tissue, and even some of the cancer cells, stromal, the cells which are around there, able to produce estrogen. So these aromatase inhibitors selectively block that pathway of estrogen production. So in a postmenopausal woman, you measure the estrogen --it may be ten to fifteen, or twenty pica moles-- when you give this one pill per week, the estrogen level drops to less than detectable level, less than two to three pica moles.
[00:29:42]

T.A. Rosolowski, PhD
[00:29:43]
Now did you have basic scientists that you worked with as well?
[00:29:46]

Aman Buzdar, MD
[00:29:47]
Yes, because a lot of -- not specifically me, but we have basic scientists in the industry and within our own institutions-- that a lot of this is data developed pre-clinically. Then you do animal experiments, then you have to do the phase one clinical studies.
[00:30:08]

T.A. Rosolowski, PhD
[00:30:09]
There's all the machinery and translational research, yeah. I was curious if there were specific

basic scientists within the institution that you worked with, collaborated with.
[00:30:17]

Aman Buzdar, MD
[00:30:18]
Yes, there was one person, who actually, he is deceased, Dr. Samaan, Nagjib Samaan. He used to run the endocrine. He was the chief of the [Section of] Endocrinology.
[00:30:27]

T.A. Rosolowski, PhD
[00:30:28]
And how do you spell his last name?
[00:30:29]

Aman Buzdar, MD
[00:30:29]
I think S-A-M-A-A-N. Najib Samaan.
[00:30:33]

T.A. Rosolowski, PhD
[00:30:34]
I'm sorry, he was head of the department of…?
[00:30:37]

Aman Buzdar, MD
[00:30:38]
He was not head of the department. He was the section chief of endocrinology, and we published some of the first papers from MD Anderson, describing those receptors and the patients. Of course, it was done long before by somebody else too, but we showed it on our patients that yes, it is a -- the thing was again, the technology evolves gradually. In the beginning, to measure these cells, breast cancer cells, hormone-dependent or not, you needed a fresh tissue removed from the cancer. Assays have to be either run right away at that point, or it has to be put in minus-70 degrees, frozen, and run the assay when you have the time. If you let the specimen sit at room temperature for a while, these measurements were nothing. There was a lot of controversy for a long time. They would say, Oh, in the -- especially in England, they will say that, Oh, these hormone receptors mean nothing, this is just… But, because the technology was not there until subsequent assays were developed --that it was not dependent-- that you have to immediately either have the assays fresh, or you needed frozen specimens.
[00:32:05]

T.A. Rosolowski, PhD
[00:32:05]
What were the assays testing, that they needed the tissues?
[00:32:08]

Aman Buzdar, MD
[00:32:08]
The receptors.
[00:32:08]

T.A. Rosolowski, PhD
[00:32:09]
Just the receptors. So the receptors, something happens to the receptors with time.
[00:32:12]

Aman Buzdar, MD
[00:32:11]
Yeah, they degrade very quickly.
[00:32:13]

T.A. Rosolowski, PhD
[00:32:13]
They degrade, okay, okay.
[00:32:15]

Aman Buzdar, MD
[00:32:16]
So subsequently, these immunohistochemistry assays were developed, which even could look at-- even the paraffin fixed tissues, that, yes it is positive or no, it is not. Then everybody started to believe. Otherwise, offering these endocrine therapies to unselected patients, you will get a very small noise, not a signal, and people will say that, Oh, these agents don't work.
[00:32:44]

T.A. Rosolowski, PhD
[00:32:44]
They don't work.
[00:32:44]

Aman Buzdar, MD
[00:32:45]
But once you identify those patients whose tumor is hormone-dependent, these agents work in 50

to 60 percent of the time.
[00:32:53]

T.A. Rosolowski, PhD
[00:32:54]
That's amazing.
[00:32:55]

Aman Buzdar, MD
[00:32:58]
So, Najib Saaman was the one who, working with our surgeons, will collect the specimens at the time of surgery. He kept this data because it was a research thing he was doing. Subsequently, once this knowledge became a little more available, he was able to share that here, in this patient, I had done these assays, and this was hormone-dependent tumor, and we then published our experience. I was with Dr. Saaman.
[00:33:31]

T.A. Rosolowski, PhD
[00:33:32]
Wow, that's amazing. Does Breast Medical Oncology have a tumor bank or a tumor registry at all?
[00:33:41]

Interview Session: 02
Interview Date: February 16, 2017

Chapter 12
The Evolution of Tumor Registries at MD Anderson
B: Building the Institution;

Codes
C: Discovery and Success;
B: MD Anderson History;
B: Controversy;
B: Research;
D: Understanding Cancer, the History of Science, Cancer Research;
D: The History of Health Care, Patient Care;
D: Technology and R&D;
B: Institutional Processes;
B: Devices, Drugs, Procedures;
B: Building/Transforming the Institution;

Aman Buzdar, MD
[00:33:42]
There are a lot of tumor registries. Actually, this is another issue in which I am very passionately involved. There are -- in MD Anderson right now, there are more than 26-plus banks, tissue banks. But, a few years ago, when Dr. DePinho came, we wanted to have institutional banks, so we actually started, now there are two banks. One --is every patient who comes over here. This just started, it took me and the administration about close to four years to get this thing done, but it was just activated beginning of this month, actually on the 31st of January. Every patient who comes, we ask them, Can we look at your clinical data? Can we use your residual tissue for future, undefined research? Previously, we were saving these things and asking this, but these tissues were not being saved in what we call a 'clear environment.' Clear environment means that it has to stay in pathology custody, where they can vouch that this tissue is kept in an appropriate environment. If it is in a clear environment, you can run the tests, say five years from now or two years from now, and say this is a valid test and valid result, and you could make a decision about that patient.
[00:35:22]

T.A. Rosolowski, PhD
[00:35:23]
Yeah, it's the integrity of the sample.
[00:35:24]

Aman Buzdar, MD
[00:35:35]
But, the other banks which we have, 25, they are not in a clear environment. So this is the one large clear bank which we have started. Another one is for patients who have, say metastatic disease, or widespread disseminative, any type of cancer. What we ask them is that --we're treating these patients. We want to see that what is unique about their tumor, that they either responded or they didn't respond, and subsequently, if we treat the patient with celontins, they respond, but then they may progress. The question is, What happened? What changed in the tumor biology? So we started another bank, which is called Apollo protocol, which is we're collecting the specimens on patients sequentially, as the disease evolves, to understand why the disease responded or why the disease didn't respond, why the disease which responded became resistant. In some patients, when the patients respond, why did they remain in remission for a long period of time? So these --we are doing these, and getting the genomic information, so this is a huge initiative. Apollo has been active a few years, two or three years, but the other protocol which Dr. George Wilding, our vice president, I mean the vice provost, he is the principal investigator, and we wanted to have it as an institutional resource. This has been started and it is moving forward.
[00:37:18]

T.A. Rosolowski, PhD
[00:37:21]
I think I spoke with, I know I spoke with John Mendelsohn, about this sequential sampling of tumors. I mean this was a few years ago. What was that like to implement, because obviously it means additional workflow and activities. What's been involved in making that a reality for the institution?
[00:37:43]

Aman Buzdar, MD
[00:37:44]
The reality is human nature. Always in the beginning, people think that institution wants to dictate everything, because people had their own banks, and then starting an institutional bank. That's why the institutional bank --the one I just described, we just started-- the person who is in charge is the vice provost. He does not have any interest. And this is all patients, different kinds of cancer; lung, breast, ovaries, melanoma, anything, you name it, is there. But, then we're developing appropriate ways, how the tissues will be analyzed, how they will be able to access the tissues. There are appropriate subgroup oversight subcommittees designed to make sure that the process is transparent. But it helps the patient if you save the tissue in a clear environment.
[00:38:57]

T.A. Rosolowski, PhD
[00:38:58]
What are some of the issues about processing these samples? I don't know anything about it, so just, you know, what are the discussions about in terms of running the analyses on these?
[00:39:10]

Aman Buzdar, MD
[00:39:11]
The thing is that there is American College of Pathology and also, there is federal regulations. Any tissue which is removed from the person has to go to pathology, and it has to stay in a pathology controlled environment. If a tissue is removed and you take part of that tissue before it goes to pathology, for research purposes, and you run some tests on that in say, Dr. Jones's lab, you can't use those test results because it is not an appropriately accredited laboratory to carry out that research. Yes, you could publish the data for research purposes, but you can't make the decision for that patient whose specimen you are looking at.
[00:40:09]

T.A. Rosolowski, PhD
[00:40:11]
Interesting.
[00:40:11]

Aman Buzdar, MD
[00:40:12]
This is the law of the land.
[00:40:14]

T.A. Rosolowski, PhD
[00:40:16]
Just so I'm clear, you can't use that information to treat the patient if the study has not been conducted in an accredited environment.
[00:40:28]

Aman Buzdar, MD
[00:40:27]
In an accredited pathology and clear environment.
[00:40:30]

T.A. Rosolowski, PhD
[00:40:30]
Wow, okay. So obviously, you know, there's an interesting network assuring the integrity of the

sample, the safety of the patient, the integrity of the research protocol, it's all connected.
[00:40:43]

Aman Buzdar, MD
[00:40:45]
And then the challenge was to make sure that these things are saved in an appropriate environment, that if a patient has a problem, say next week or ten years from now, that we are able to pull the tissue out and do as the technology evolves, the tests on a tissue which is in a clear custody.
[00:41:09]

T.A. Rosolowski, PhD
[00:41:11]
So, the benefit for the institution is you not only can go back and essentially do more in-depth research on an individual, the natural history of an individual's cancer, but then obviously, you can use all that information in terms of more population based studies, on how cancer behaves in general. Is that the logic, that it can be used as a more general resource for research?
[00:41:32]

Aman Buzdar, MD
[00:41:33]
The number one aim is that you need to have the tissues saved in a place where, if the patient has a challenge of cancer recurring, you are able to run tests on that specimen if new tests come up, and the tissue is appropriately saved in a clear environment.
[00:41:48]

T.A. Rosolowski, PhD
[00:41:48]
Okay, so really the first benefit is the individual patient.
[00:41:51]

Aman Buzdar, MD
[00:41:50]
First is for the patient. It is firs. The foremost is always the patient. Second is that let's say that six months or six days from now, somebody comes up, Oh, I have this test which I have done, in a non-clear setting it tells this thing can happen to this. You can then, if you have 2,000 or 20,000 specimens, you can identify and run this test in a clear environment, to see if it stands on its two feet or not. Then it is a test which is run in an accredited lab, under clear environment. You run any test –if there is known positive tumors which are showing-- when you run the test, positives always turn out positives. If there are specimens which are negative for that marker, they should be always negative, and then in-between is the tumor of the patient, whether it goes

this way or this way.
[00:42:51]

T.A. Rosolowski, PhD
[00:42:51]
Oh, I see, okay.
[00:42:52]

Aman Buzdar, MD
[00:41:53]
Whereas when you are doing the research, you're just running the test and interpreting the test.
[00:42:59]

T.A. Rosolowski, PhD
[00:42:00]
Interesting, okay, so you basically have a standard to run.
[00:43:91]

Aman Buzdar, MD
[00:43:02]
Where there is a control, concurrent positive, concurrent negative control, also running in these patients.
[00:43:07]

T.A. Rosolowski, PhD
[00:43:08]
Because I was going to ask you, what really is involved in a clear environment. It's not simply storage.
[00:43:13]

Aman Buzdar, MD
[00:43:14]
No, it's not, like that closet [gesturing] doesn't have-- there is a lot of checks and balances. These tests in the regions, and everything which is utilized, they meet standards which are set by the American College of Pathology.
[00:43:27]

T.A. Rosolowski, PhD
[00:43:27]
Interesting. What kind of training does somebody need to maintain a clear environment? Is it

special?
[00:43:33]

Aman Buzdar, MD
[00:43:34]
A whole department. A whole Department of Pathology gets accredited. There is a license.
[00:43:40]

T.A. Rosolowski, PhD
[00:43:40]
Okay, wow, that's pretty amazing. So this has been in existence for two or three years at this point.
[00:43:47]

Aman Buzdar, MD
[00:43:48]
The residual specimens, two or three years, but the hospital has been clear certified for a long time.
[00:43:56]

T.A. Rosolowski, PhD
[00:43:56]
Oh, okay, yeah, yeah. So, how has the existence of this resource changed the way that physicians or researchers practice? Is it being called on regularly? Do people still need education about it, what's been going on?
[00:44:12]

Aman Buzdar, MD
[00:44:13]
We make sure that everybody understands how to access the tissue. What are the mechanisms? The tissues are patient's property and the institution property, but if you have a research, it has to be reviewed according to the regulations. Again, my office is responsible for those regulations. If somebody wants to run ten specimens --they want to run, of human X tumor, A, B, C-- they have to write a research protocol. It has to be reviewed by the institutional review board, it has to be approved before they release that specimen. In a number of cases it depends. If it is an archival tissue, the specimen is already there, IRB, they have the consent, but if it is a new person you are going to contact, it will require that participants understand and voluntarily agrees that you could look at their tissues for research purposes. So there are a lot of checks and balances which have to be done.
[00:45:33]

T.A. Rosolowski, PhD
[00:45:33]
Right. Just, I mean there is a really basic question. How big are these samples, you know how much tissue is actually taken?
[00:45:39]

Aman Buzdar, MD
[00:45:40]
Sometimes, tumors may be large, but as our early detections effort increases -- I can give you an example. Breast cancer, which we used to see in the '70s and the '60s, used to be very large. Now these cancers are detected by mammograms, and a number of times, you may not even feel anything when even you are looking at the patient, after looking at the mammogram. So the volume of tumors is very variable. Sometimes it may be generous volume, sometimes it may be just a few-millimeters tumor. So you have to be very cognizant that you don't want to utilize the tissue for totally research out of your own curiosity, that you need to -- there is a requirement that you have to save these tissues for X period of time, which is a minimum of ten years, for patient care.
[00:46:35]

T.A. Rosolowski, PhD
[00:46:41]
And so there are times when you actually have, in the tissue bank, an entire tumor that's been taken, or do you only take part of it?
[00:46:50]

Aman Buzdar, MD
[00:46:49]
No. We try to make sure that there is pathology on that. Our Pathology Department, Dr. Stan Hamilton and his team's responsibility is to make sure to not deplete the whole specimen.
[00:47:07]

T.A. Rosolowski, PhD
[00:47:11]
That's really amazing. Is this a usual practice in cancer centers at this point?
[00:47:19]

Aman Buzdar, MD
[00:47:20]
I think it's becoming increasingly, because this is --as technology is evolving, markers are evolving, assays are evolving, that we're starting to understand, what are the mechanisms of disease resistance, what is the mechanism of even the disease? I'll give you an example, say lung

cancer. Lung cancer, a few years ago, there were very few things which you could do, and the majority of these patients unfortunately died, unless you did surgery and you detected the cancer very early. But now, there are a whole bunch of specific targets which have been identified on lung cancer, and there are whole, specific --you see the TV ads every day, sitting at home, and those are real, they are not somebody's imagination.
[00:48:08]

Interview Session: 02
Interview Date: February 16, 2017

Chapter 13
Additional Research Studies: HER2/neu Breast Cancer; Taxanes
A: The Researcher;

Codes
C: Discovery and Success;
A: The Researcher;
B: Research;
D: Understanding Cancer, the History of Science, Cancer Research;
D: The History of Health Care, Patient Care;
B: Devices, Drugs, Procedures;

T.A. Rosolowski, PhD
[00:48:10]
Now, within the span of your career, there was this changing, understanding, that cancer was not one disease but in fact it was many diseases. How did that affect you as an intellect, you know getting your head around that concept? How did that change your perspective, change your work?
[00:48:35]

Aman Buzdar, MD
[00:48:36]
I think it makes the life -- in the beginning, it becomes a challenge, because the thing is, when we started, breast cancer was breast cancer. Some of them were premenopausal, some were postmenopausal. Now we understand that breast cancer is a whole bunch of diseases. One aspect which we didn't talk about, the newest thing is the15 to 20 percent or 25 percent of the tumors, breast cancer tumors, what we call HER2/neu positive. These tumors --before the current technology and the treatments which are available-- these patients will have very poor prognoses. Previous treatments were very, either modestly effectively or totally ineffective, until anti-HER2/neu therapies were developed. Another amazing thing is that --we were not at the forefront. Those studies were carried out in California, by Dr. Dennis Slamon, where he took the patients, measured around the tumor, to see if they are HER2/neu positive or HER2/neu negative tumors. HER2/neu positive tumors, when he gave these antibody treatment, some of the patients went dramatically into remission, and it was amazing that when you combined with chemotherapy, that you were able to change the history of the disease. Our contribution into that was that this was in patients who had disseminated widespread cancer. You were able to control their disease for a longer period of time, but you were not able to cure many patients. So what we did was in the late '90s, we took those women who came to us with intact breast cancer, but it

was HER2/neu positive. We knew that the current therapies were suboptimal in this patient. So what we did was before surgery, we gave them --half of the patients-- our best standard chemotherapy, which we talked about it earlier. In other half of the patients, we give this anti-HER2/neu therapy for 24 weeks, and then we did the surgery. We were going to do a fairly large study. It became absolutely clear to me and Dr. Hortobagyi --we had not even treated about maybe a handful of patients-- that the patients who are receiving anti-HER2/neu therapy, when the surgeon went in there, there was no cancer left in a number of patients, not even microscope cancer left, and some of these patients had had cancers which you could put your hand around it [gesturing].
[00:51:29]

T.A. Rosolowski, PhD
[00:51:29]
Huge, yeah, oh my gosh.
[00:51:32]

Aman Buzdar, MD
[00:51:32]
So after we became aware of it, that we had treated about maybe 42 patients, half of them were getting standard best chemotherapy and the other half were getting this chemotherapy with anti-HER2/neu therapy. In patients who are getting anti-HER2/neu therapy with chemotherapy, in more than half of the patients, at the time of surgery, there was not a single microscopic cancer cell left in the breast or in the lymph node.
[00:512:03]

T.A. Rosolowski, PhD
[00:52:04]
That's amazing.
[00:52:04]

Aman Buzdar, MD
[00:52:06]
We had to stop the study, and drug company was very paranoid. They said, Why did you stop the study, was there unusual toxicity? The drug company came and looked at every chart. We had to show them that, yes, this is not because of the failure. It is because of unexpected extreme success that we stopped the control arm. The patients who were just getting chemotherapy, we started to offer the chemotherapy with anti-HER2/neu therapy to everybody, and that became the standard of care. One of the other major achievements of MD Anderson; we published those 40 patients' experience, and that was, I think it was maybe 2005 or something like that, and that paper has been cited more than a thousand times in the literature.
[00:52:58]

T.A. Rosolowski, PhD
[00:53:00]
Wow, that's amazing.
[00:53:01]

Aman Buzdar, MD
[00:53:02]
And now those therapies are established. At that point, it was not even -- studies were done, that were ongoing, that after surgery, you gave chemotherapy or chemotherapy with this anti-HER2/neu therapy. There were several trials ongoing. It was a couple of years before we had already shown this, then the data of those studies became available and the FDA approved the drug for those early stage disease. That was another area which MD Anderson played a very pivotal role.
[00:53:38]

T.A. Rosolowski, PhD
[00:58:40]
It must have been so exciting.
[00:53:44]

Aman Buzdar, MD
[00:58:45]
Oh, it was amazing. The thing is, even -- the thing which I heard, that one of our -- this was when the word had gotten out, because it's small. MD Anderson is a big place but it is a small place, because you consider --if the surgeon, a few times they operated and there is nothing left, the word gets around. One day, there was one of our MD Anderson employees getting an unfortunate diagnosis of breast cancer, and she said, "I hope that my tumor is HER2/neu positive." The thing is, that's how things can change quickly. We were able to show the efficacy of this drug with less than 50 patients. Why were we able to show it? Because the cancer was still there, whereas the other studies, surgery was done first, then they gave the chemotherapy or chemotherapy with the anti-HER2/neu. Those were close to seven, eight, nine thousand patient studies, and they showed the same thing. The patients who got chemotherapy alone had a poor outcome, whereas when you added this anti-HER2/neu therapy, it dramatically kept a large number of patients alive free of disease. That is now the standard of care.
[00:55:11]

T.A. Rosolowski, PhD
[00:55:13]
Do you have cases of champagne, you know, on hand, to keep celebrating all these successes? There have been a lot of them.
[00:55:19]

Aman Buzdar, MD
[00:55:20]
There are a lot of these successes. These are not just my successes.
[00:55:23]

T.A. Rosolowski, PhD
[00:55:23]
Oh, sure.
[00:55:23]

Aman Buzdar, MD
[00:55:24]
But I think I feel that this is -- it is a group effort and subsequently, this concept was tested in cooperative group studies and it is valid, that this is -- but this was the first cohort, handful of patients randomized. Actually, we asked the NCI to support us early, they didn't want to do it.
[00:56:46]

T.A. Rosolowski, PhD
[00:56:46]
Why?
[00:56:46]

Aman Buzdar, MD
[00:56:48]
They said oh, it's far too short in [metastatic?], I said [metastatic?], already they have shown it, that patients live longer. They said oh, the safety is not known, they said that. Again, we went ahead and did it, after getting the IRB approval.
[00:56:04]

T.A. Rosolowski, PhD
[00:56:09]
That's an amazing story, it really is. I can only imagine the satisfaction that you must feel, you know to have participated in this.
[00:56:17]

Aman Buzdar, MD
[00:56:16]
Oh, it is amazing. These are the things, because the thing is, there is MD Anderson breast group has been on the forefront, defining some of the newer therapies which are today considered

standard, but when we started, these things, these were totally investigational.
[00:56:38]

T.A. Rosolowski, PhD
[00:56:39]
Aren't you glad that you and your wife decided not to go to Newark?
[00:56:43]

Aman Buzdar, MD
[00:56:41]
That's right. (both laugh) Now I know, that area has improved a lot. I have gone back and even given some talks there.
[00:56:55]

T.A. Rosolowski, PhD
[00:56:55]
I don't mean to dis Newark, but I mean that was sort of the pivotal moment, when you decided all right, we're going to --
[00:57:01]

Aman Buzdar, MD
[00:57:01]
Oh, yeah, I think it was destiny.
[00:57:05]

T.A. Rosolowski, PhD
[00:57:05]
Really? Yeah, amazing, amazing career. Are there any other pieces in this kind of research arena, that you want to talk about?
[00:57:16]

Aman Buzdar, MD
[00:57:19]
I think the other thing, which we talked about, and here we played some also, to some degree, pivotal role, was in taxanes, which was not me, but Dr. Holmes. She's a practicing physician. She used to be in our group, where paclitaxel --which was the drug—actually, we did the first study in humans. She was the principal investigator. It was the NCI sponsored study and it showed a very high response rate in patients with disseminated cancer. She took all the x-rays of patients who responded, took it to NCI, because NCI wanted to look at it themselves. They looked at it. Then she submitted the abstract to ASCO. The abstract was not even accepted for

publication in that presentation.
[00:58:13]

T.A. Rosolowski, PhD
[00:58:15]
Wow.
[00:58:15]

Aman Buzdar, MD
[00:58:16]
They thought well, this is too early and it shouldn't be presented. Now it is, actually it is one of the backbones of the treatment in disseminated breast cancer and in early breast cancer. Beside the anthracyclines, doxorubicin, epirubicin, and the taxanes, these are now standards. Patients have to receive those both therapies to get maximum benefit from chemotherapy. That was discovered over here.
[00:58:52]

T.A. Rosolowski, PhD
[00:58:53]
That's amazing. Now, you've used the word disseminated cancer a number of times and is that a synonym for metastatic disease?
[00:59:01]

Aman Buzdar, MD
[00:59:01]
Yeah, disseminated, yeah.
[00:59:02]

T.A. Rosolowski, PhD
[00:59:02]
So why is there a new term now? I'd never heard that term, disseminated cancer.
[00:59:07]

Aman Buzdar, MD
[00:59:07]
Well, I am just using it, the term, which is if somebody listens to it down the line, they might not understand metastatic breast cancer.
[00:59:16]

T.A. Rosolowski, PhD
[00:59:16]
Oh, okay, I just wasn't clear if there was a change in the terminology.
[00:59:19]

Aman Buzdar, MD
[00:59:19]
No, no. It's stage four on metastatic breast cancer.
[00:59:22]

T.A. Rosolowski, PhD
[00:59:23]
Right, right. Any other areas of research that you feel you want to acknowledge?
[00:59:29]

Aman Buzdar, MD
[00:59:29]
So the same thing when -- so, this, didn't publish it, they didn't want her to publish it, so we put it in the adjuvant setting. In the new adjuvant setting, we showed again the same thing. The patients, if you just continue giving the same three-drug combination with fluorouracil, doxorubicin and cyclophosphamide, for say a longer period of time, which was eight cycles of chemotherapy --whereas the randomized study we did actually at that time, half of the patients we gave only four cycles of the three-drug combination, and the other four cycles were given Taxol-- and it showed that there was fewer recurrences in the patient population who received the Taxol in sequence with the anthracycline. Now that is considered standard. But we were again, the first ones to show, from our group, not only in metastatic breast cancer, but in early stage breast cancer two.
[01:00:37]

T.A. Rosolowski, PhD
[01:00:44]
This proliferation of drugs is really pretty amazing. I mean suddenly, the availability of these drugs.
[01:00:49]

Aman Buzdar, MD
[01:00:50]
Oh yeah, there are so many. The anti-HER2/neu therapies, there are a whole bunch of anti-HER2/neu therapies which are available. Now the challenge is what -- to identify the patients in which current therapies, --if you give it in the new adjuvant setting before surgery, more than half of the patients go into complete remission. There is no residual disease left. The question is

to identify who are the patients for whom the current therapy can cure the disease. The thing is we know already now, that the patients who have no residual disease left at the time of surgery, you look at the natural history, at ten, fifteen, twenty years later, over 90 to 95 percent of these patients will never have cancer again. So they are cured. So the thing is, you can't cure somebody twice. We need to identify where the current therapies are effective, and you don't want to add more therapies on top of it because you don't need to cure them twice. Find those patients in which current therapies are ineffective and offer them the newer therapies and newer drugs which we are evaluating.
[01:02:12]

T.A. Rosolowski, PhD
[01:02:14]
I hadn't realized that that was now something that could be said. Because it used to be if you had cancer once, you were always waiting for it to come back, and now that's not the case.
[01:02:24]

Aman Buzdar, MD
[01:02:25]
No, it's not. Actually, we can say, with reasonable certainty, that if a patient has a pathological complete remission with any systemic therapy, you will remain alive, free of disease, the rest of your life. There is less than 10 percent chance of cancer coming back.
[01:02:48]

T.A. Rosolowski, PhD
[01:02:49]
Wow, that's really something. Any other areas of research we need to acknowledge?
[01:02:57]

Aman Buzdar, MD
[01:02:58]
I think we talked about ity. Any other things which are on your list?
[01:03:01]

Interview Session: 02
Interview Date: February 16, 2017

Chapter 14
Research Nurses at MD Anderson
B: Building the Institution;

Codes
C: Discovery and Success;
B: Building the Institution;
B: MD Anderson History;
B: Research;
B: Education; D: On Education;

T.A. Rosolowski, PhD
[01:03:02]
Well, I had wanted to know more about kind of the general environment for clinical research at the institution, not necessarily from the regulatory perspective. The institution has grown, it's changed, they're shifting emphases. I'm wondering how, if things change, do people need to be trained differently, do they need to think differently?
[01:03:27]

Aman Buzdar, MD
[01:03:27]
Oh yeah, that is a very important area, because the thing is, it has evolved that there are rules and regulations. So the persons who are interacting with the patients, who police that point of view, they have to understand that when you approach a patient, patients have to understand that this is research. We talked about it briefly before. You are participating as a volunteer on the cutting edge of the technology. It is now required that all the people who are interacting with the patient or patient material, they have to understand what are the rules and regulations. Every faculty member, every research nurse, all the data coordinators, we train them, so that they understand that what are the requirements. They have to follow the rules and regulations. That is a must. And the same way, what we have started actually, about now less than -- about eight months ago. The research nurses play a very pivotal role with the physicians, it's a team approach. So the nurses, it used to be you asked a nurse, Can you work with me and we will support your salary, and they will help you to carry out the research. But now, that thing has evolved. We have a totally structured, research nurse training program, first in the country, at MD Anderson. It just stated about six months ago. The first batch of nurses will come out in the next few months, in about a few months they will graduate. Before, it was just you did education and made a bare effort, what are the minimum rules and regulations which were mandatory. We did that, but now we have made it a very formal structured educational program.
[01:05:39]

T.A. Rosolowski, PhD
[01:05:40]
And how is research nurse training different than regular nurse training, or oncology nurse training?
[01:05:48]

Aman Buzdar, MD
[01:05:49]
The regular nurses are providing support and nursing care, whereas research nurses have to understand the research aspect of it; how to obtain a consent. As I explained to you, they have to tell the patient what are the risks, what are the benefits, and you are being asked to participate, and you have to volunteer. Do you want to be in the standard treatment? Even though it is a responsibility of the physicians, the physicians explain to them in the beginning, but a lot of times nurses sit down: patients have sometimes, concerns. They may visit with the research nurse once, twice, or three times, and in the end, the patient may say, No, I don't want to be part of this, I want to take the standard treatment. Then the physician has responsibility to communicate. But research nurse id also responsible. If the patient is under treatment, I see the patient. Let's say if the patient --I put the patient on the research treatment. I see the patient but also, the research nurse sees the patient. So, I collect the safety information and also, the research nurse collects the safety information. Did you have nausea, did you have vomiting, did you lose your hair, did you have any diarrhea? All the side effects, they are required to be captured and arrayed, because when you're carrying out arrays, it's a very structured thing. There is actually --all these things are required according to what we call the CTCAE, which is actually NCI-mandated classification of all the adverse events, from your hair loss, from your nail changes, to fever, to cough, everything.
[01:07:37]

T.A. Rosolowski, PhD
[01:07:38]
Now, and is there the double collecting, the kind of provided checks and balances?
[01:07:43]

Aman Buzdar, MD
[01:07:44]
Most of the time, because the thing is, physicians will look at it maybe from the efficacy point of view on a lot of things, whereas a nurse has a little more time. They will sit down, and at times, it is human nature. When I work as -- even the patient may be in a difficult situation, you ask the patient how are you doing? I'm doing great. But if a nurse goes, they will say, Oh, my hip hurts and my neck, this and that. It's human nature, to put the best front in front of the doctor. So

when the research nurses sit and go in a lot more depth, to collect that information.
[01:08:25]

T.A. Rosolowski, PhD
[01:08:26]
Interesting. Now you said that this is the first training program of its kind in the nation. When was the idea for this program first floated at MD Anderson? How long had it been in planning?
[01:08:42]

Aman Buzdar, MD
[01:08:41]
Research nurses have been around at MD Anderson, I would say that maybe since the research became far more structured, in the late '70s, early '80s. At the present time, we have close to maybe 400 research nurses at MD Anderson, and we have over a thousand plus nurses. Thirteen hundred nurses who are providing nursing care. But the research nurses provide support to the investigator and interacts with only those patients who are on research studies.
[01:09:17]

T.A. Rosolowski, PhD
[01:09:19]
When was the idea that there should be a formal training program, though?
[01:09:22]

Aman Buzdar, MD
[01:09:23]
The idea was actually when Dr. DePinho came. At that point a subgroup of investigators met with Dr. Ki Hong, who was the Division Head of Cancer Medicine. He was appointed as a vice provost. He set up an advisory committee and one of the recommendations was that it was a difficult and constant challenge, to find nurses who can work as a research nurse. It was recommended to the institution, to initiate a research training program and it took us until the middle of last year, that we started it. Now every four months, we have a new batch, and it is a one-year structured program.
[01:09:16]

T.A. Rosolowski, PhD
[01:09:20]
Now, what was your involvement in this, Dr. Buzdar?
[01:09:23]

Aman Buzdar, MD
[01:09:24]
I played a very pivotal role working with Dr. Wilding and with Dr. Ki Hong. My office actually coordinates most of this work with our vice president of nursing. Before, we were talking with Barbara Summers, who was here, in fact when we were still in the process of developing it. Now, it is fully structured and it is ongoing, and our Division of Nursing plays a very pivotal role, because we have our education system over here which did train oncology nurses. When a nurse becomes a registered nurse, then there is an oncology training, but this is on top of it.
[01:11:12]

T.A. Rosolowski, PhD
[01:11:13]
Who is in charge of the nursing program, the research nurse program?
[01:11:17]

Aman Buzdar, MD
[01:11:18]
Her name is Debbie Klein, who is in the Division of Nursing. The person who, in my office, her name is Jan Yungglas, Y-U-N-G-G-L-A-S. She's the Director of Clinical Support Services, so she plays a pivotal role in that.
[01:11:42]

T.A. Rosolowski, PhD
[01:11:42]
Okay, cool. I hadn't heard about that, that's really interesting. I spoke with, interviewed Barbara Summers, and such a good focus on research, and so I'm not surprised that this emerged out of -- you know, she was part of this conversation.

Interview Session: 02
Interview Date: February 16, 2017

Chapter 15
Electronic Medical Records at MD Anderson, Yesterday and Today
B: Building the Institution;

Codes
B: Building the Institution;
B: MD Anderson History;
B: Research;
B: Devices, Drugs, Procedures;
B: Multi-disciplinary Approaches;
C: Patients; C: Patients, Treatment, Survivors;
D: Technology and R&D;

T.A. Rosolowski, PhD
[01:11:42]+
Can you tell me, what are sort of the, in your mind as you're looking at your committee work, your administrative work, you know what are some of the areas you've worked on that you feel have had the most impact on the institution, something that really changed care, changed perspective.
[01:12:18]

Aman Buzdar, MD
[01:12:21]
I don't think I can say that I did anything which had major impact, because the institution is huge, and most of the things require a huge team effort to make things.
[01:12:33]

T.A. Rosolowski, PhD
[01:12:31]
Sure. Well then, you know, what are the things that you participated in. I mean obviously, the research nurse initiative is huge. What are some other things that you've participated in, that you felt made an impact? We talked about the algorithms, the Clinical Effectiveness Committee last time.
[01:12:49]

Aman Buzdar, MD
[01:12:53]
I don't know. I think the thing which we're trying to do is now, we have electronic medical

record system, which I was involved from day one in that.
[01:13:07]

T.A. Rosolowski, PhD
[01:13:09]
When did you start getting involved with that? What is day one, what year was day one?
[01:13:13]

Aman Buzdar, MD
[01:13:13]
Day one, it was almost like close to now, four years ago, when it started, because we had homegrown electronic health record system which was called ClinicStation, and we went into this, what we call now Epic. So we used to have these meetings every two weeks or every week, until the program went live, and even after that, and I am still leading some of the subcommittees. We made sure now, all the previous electronic records which were on a homegrown platform which was started in the '90s, have been moved into this new Epic. And, on day one, we also made sure that we have over a thousand plus research clinical trials that on day one, when the switch was flipped, it identified who are those thousands of patients on research studies, and which research study they are on. Also, we made sure that their consents are electronic, means that you don't throw a piece of paper in front of the patient, that we implemented it about more than four years before the current electronic system. It was even the previous old system, it was working very well. We made it totally electronic, that patient will -- you could print it out, a blank consent, which was protocol specific, that this is your cancer, this is what the standard treatment is, this is the research, these are the potential harms which can happen and these are maybe potential benefits. I played a very pivotal role. So the thing is, we have now, close to over 50,000 women, and not women, but I mean patients, have been consented totally electronically. We have gotten rid of all the paper. That has been a combined effort with our information technology and my office, and we made sure that all the protocols, key elements, when you are sitting on a computer terminal, you want to see that this patient, first it automatically shows that here, the patient is on a research study, it will show. If a patient is participating in four, five, six different studies, it will show five, six different icons, and you can click on that, it will take you to what study the patient is on, and you can open that study information.
[01:16:01]

T.A. Rosolowski, PhD
[01:16:02]
Now, tell me why. What are the various ways in which that information is important?
[01:16:07]

Aman Buzdar, MD
[01:16:08]
Important is you need to know exactly when, let's say that I am the doctor, you are the patient, that the patient sitting in front of you, what study, because this is a team approach. If I treated that patient on a research study, I am out of town and you are seeing that patient on my behalf, you should be able to, as you open the patient screen, it should tell, this patient is on this. And if you are not familiar with that, you click on another icon, it will take you to the protocol, it shows what is the detail of the protocol. You want to see whether the patient has agreed to consent. You click on a little, it's called iConsent, it shows, here is the whole consent and here in the patient's signature.
[01:16:59]

T.A. Rosolowski, PhD
[01:17:00]
Now, when a patient is on multiple studies of this kind, do all of the PIs, or representatives from these different studies, they're all part of the individual's care team, is that the case?
[01:17:12]

Aman Buzdar, MD
[01:17:13]
Yes. Each aspect of it. Let's say that a patient is getting chemotherapy for prevention of cancer recurrence, but the patient may be having, say some side effects like tingling or numbness and things like that. The patient may be on a study, to see whether we could modify that, so that is another group where our symptom management may be having that patient on that study. Or a patient might have had significant nausea, vomiting, and patient may be in another study where we're evaluating different nausea medication which will help the patient better than that. So that's why the patients could be on multiple studies.
[01:17:57]

T.A. Rosolowski, PhD
[01:17:58]
But everybody needs to know what everybody else is doing.
[01:18:00]

Aman Buzdar, MD
[01:18:00]
And you could see it exactly as you open the screen, it tells.
[01:18:04]

T.A. Rosolowski, PhD
[01:18:04]
Yeah, interesting, wow. Now, when you said you were involved in the electronic medical records, was it from this perspective, of your role as VP of clinical research, or was it more in general?
[01:18:17]

Aman Buzdar, MD
[01:18:18]
I played both roles, because I was asked to be on the executive committee oversight. So, not only just from being a physician who treats the patient in and outside the clinical trials. Also, the most important thing from my point of view was that I wanted these things integrated into the system.
[01:18:44]

T.A. Rosolowski, PhD
[01:18:45]
Absolutely.
[01:18:46]

Aman Buzdar, MD
[01:18:46]
And we are still working on trying to refine it even better.
[01:18:49]

T.A. Rosolowski, PhD
[01:18:50]
So, I mean obviously, the electronic medical records has been a huge subject of conversation for a while. I had a one basic question, is a number of people who have come here from other institutions have said that MD Anderson was kind of slow in adopting something that was more comprehensive. You know, and I'm wondering if you agree with that or if you do, what you think the hesitation was about going to a more comprehensive system. It's funny, the siloing in this institution, you know there's a lot of smaller people doing their -- you know, they're doing their own thing, like with the tissue banks. So I'm curious what your perspective was on that vis-à-vis the electronic medical records.
[01:19:37]

Aman Buzdar, MD
[01:19:37]
Because the thing is, our homegrown electronic system started here. At that point, there was no national standard, electronic health record. When we started our own electronic records, we

were at the forefront of it, but once IT from outside got involved, they were outpacing our capabilities and it became fairly clear to us, even though we were spending sizeable resources, but we were not Microsoft, Google company, that we are going to be able to catch. This is a cancer center. So it became very clear that we need to get an out-of-the-box solution, so that decision was made about four years ago, and we sunset our own system and everything which was previously from patient one, has been transferred into the new system. It was a huge thing, but we were somewhat, I would say, as you pointed out, late getting into this, but we actually now, our system is fully integrated. Even though there are a number of other cancer centers which are using the electronic medical record, Epic, which we are using. But we have almost all of their capabilities fully integrated in ours, whereas in a number of other places, they may have parts of it integrated.
[01:21:28]

T.A. Rosolowski, PhD
[01:21:28]
Now, what are these elements of integration that you're referring to, that are so powerful?
[01:21:34]

Aman Buzdar, MD
[01:21:34]
Powerful is to be able to see orders written. Having a single source of the document, patient financial information, consenting. Even the consent tool which I described to you --each protocol has to have a specific consent-- the current electronic medical record which we have, Epic, it doesn't have that. We developed this, so if a patient has ten pages consent, it is electronically downloaded into the system with the interface with Epic. If the patient says yes, you click there, that consent shows up on the screen, the patient signs it, it goes into Epic. That is integration of a separate system. Now, Epic is thinking of -- a few days ago, me and Dr. Wilding and eight, nine of our senior other leadership people, that they are thinking of it maybe in 2018, they may come out with an electronic research consent document. So a lot of these things, even though we had it over here and we have a lot of things which are interfacing with our Epic, which is very unique, it is maximum so that we have one source of truth.
[01:23:01]

T.A. Rosolowski, PhD
[01:23:02]
One source of truth you said?
[01:23:04]

Aman Buzdar, MD
[01:23:04]
Mm-hmm. Because that's the source document.
[01:23:04]

T.A. Rosolowski, PhD
[01:23:06]
Yeah, absolutely, absolutely, and you know, very complex too. I've seen, in the archives, some of the early patient records, and they're pretty amazing to read, not only from the limitations of what could be done, but just the way in which they're kind of a baggy mess.
[01:23:29]

Aman Buzdar, MD
[01:23:30]
A patient chart could be all those things sitting, and some of the patients who were [gestures]--
[01:23:33]

T.A. Rosolowski, PhD
[01:23:34]
Yeah, ten notebooks.
[01:23:34]

Aman Buzdar, MD
[01:23:35]
It will be this thick. The patient will be carrying those things in a little go-cart in front of them.
[01:23:41]

T.A. Rosolowski, PhD
[01:23:42]
Yeah, exactly. Well, and that was radical too, when a patient could actually carry their chart from one part of the institution to another, to make things go faster.
[01:23:50]

Aman Buzdar, MD
[01:23:52]
That is one thing which has been very unique. In a lot of places, outpatient and inpatient information is separate, whereas from over here, from day one, our medical record has been only one medical record, even during the time when it was a paper medical record. Inpatient, outpatient, it was the same record.
[01:24:13]

T.A. Rosolowski, PhD
[01:24:13]
Why is that significant?
[01:24:14]

Aman Buzdar, MD
[01:24:15]
Because they don't have to look for another piece somewhere else, hidden, because usually, --
[01:24:21]

T.A. Rosolowski, PhD
[01:24:23]
Because an inpatient can also move back and forth between inpatient and outpatient.
[01:24:26]

Aman Buzdar, MD
[01:24:27]
All the information is in one chart.
[01:24:28]

T.A. Rosolowski, PhD
[01:24:29]
So it's just a patient, not an inpatient, not an outpatient.
[01:24:32]

Aman Buzdar, MD
[01:24:31]
It's not an inpatient, outpatient.
[01:24:32]

T.A. Rosolowski, PhD
[01:24:33]
Yeah, okay. Yeah, I hadn't really thought about that but that's…
[01:24:37]

Aman Buzdar, MD
[01:24:38]
That means there is everything which is being done to the patient, the disease is causing that, it's in one source document.
[01:24:47]

Interview Session: 02
Interview Date: February 16, 2017

Chapter 16
The New Committee on Drug Side Effects
B: Building the Institution;

Codes
B: Building the Institution;
B: MD Anderson History;
B: Research;
B: Devices, Drugs, Procedures;
B: Multi-disciplinary Approaches;
C: Patients; C: Patients, Treatment, Survivors;
D: Technology and R&D;
C: Leadership;
C: Discovery and Success;

T.A. Rosolowski, PhD
[01:24:49]
Very interesting. Are there other committees that you've worked on, that have kind of created these sorts of changes? That's really fascinating.
[01:24:58]

Aman Buzdar, MD
[01:24:59]
Our other committee, which is still a work in progress, is as the therapies are evolving, there are unique side effects which are happening. Some of these biologic therapies, what we call CAR T-cells, these are the T-lymphocytes which are especially programmed, and they are now able to identify cancer and kill the cancer when you infuse it after programming these lymphocytes. But, sometimes, and I think we talked briefly about it, sometimes these cells can also attack the normal tissue, and there is some of the side effects which became clear to us in rare patients. Patients having massive side effects in their brain, and unfortunately, we lost a couple of patients. We have now set up a separate system that it puts a huge red flag. I have to work with the IT people and with the committee. We meet every Friday from four to five-thirty, every week. We have made it so that every doctor knows, who touches the patient, that this patient is receiving this specific CAR T-cell therapy. Sometimes these patients can be -- things can change on a dime. The patient could be sitting like you and I are talking, and the next minute the patient may be comatose, or have a massive seizure and need to be intubated. There are ways we could reverse it if we identify it. So now what we do is we do these therapies and we have a total plan of action, which is again, first in the nation. We are actually submitting, and it is -- our approach

has been so much streamlined, that there is a manuscript which we wrote on it. It is being -- it is under review in a journal, where we have how to evaluate these patients. We admit the patients on specific floors, where every nurse --because there are three shifts of nurses, every shift works for eight hours-- all the nurses working on those floors, all three shifts, we have to educate them that you need to be aware of this and here is the phone number and here is the red banner, who to contact and what to do in the meantime. There are specific steps that is just done, it's a work in progress, and it is already done, so that if a patient receives the therapy, they stay in the hospital. There are appropriate floors where they are monitored, the nurses are educated, doctors are educated, we meet. All the doctors who are treating these patients, we meet and review every patient who is on these therapies, every week.
[01:28:21]

T.A. Rosolowski, PhD
[01:28:22]
Wow. And how long has that program been in effect?
[01:28:25]

Aman Buzdar, MD
[01:28:26]
It has been less than six months, because we had unfortunate incidents over here and in other places, where some of the patients very quickly went downhill and died.
[01:28:39]

T.A. Rosolowski, PhD
[01:28:40]
Wow, amazing.
[01:28:41]

Aman Buzdar, MD
[01:28:42]
So we have put this and I think we are now able to save a number of patients who would have otherwise, without this, could have been -- not survived. Now, by treatment, (snaps his fingers) they recover.
[01:28:58]

T.A. Rosolowski, PhD
[01:28:59]
That's amazing. You know, and I'm just connecting this kind of process, with the process that you described with creating the algorithms. It seems that was such valuable experience, to kind of put everything in paper, get it all down to a system that you could kind of adopt that approach.
[01:29:16]

Aman Buzdar, MD
[01:29:16]
This is the same.
[01:29:18]

T.A. Rosolowski, PhD
[01:29:19]
It's the same thing.
[01:29:20]

Aman Buzdar, MD
[01:29:20]
It is the same thing. Now there is who to contact, call the neurologist, here, document the side effects.
[01:29:25]

T.A. Rosolowski, PhD
[01:29:25]
But did the experience of going through and putting in place, those algorithms, sort of give everyone the valuable experience, that they knew quickly, how to approach something like this?
[01:29:36]

Aman Buzdar, MD
[01:29:37]
I think how this thing evolved is because every unexpected event is reported to my office, that is my responsibility. My responsibility after that is that if these unexpected events are totally not previously observed, we have to report it to the regulatory agencies. Once the first event came up, we became alarmed and I, with the help of our leadership, Dr. Dmitrovsky and Dr. Wilding, we met, together with the division heads of Cancer Medicine. We set up a committee, we said we need to sit together, talk about it, how to manage these patients, identify these problems early on, and how can we maybe possibly prevent it. And it was with this effort as a team again, that that's how this thing evolved, that very quickly, we were able to not only get a handle on this, but set up a system which is again, unique. Now, the drug companies want to know how we manage these things. It is becoming… My role is just as an administrator, to provide the support, but the science behind it and all the thinking behind, it is the people who are actually disease experts.
[01:31:18]

T.A. Rosolowski, PhD
[01:31:19]
Sure. But I think also, I mean what I'm seeing is a really consistent, organized mindset of how to

organize this as a workflow and bring all these different people together. That seems to be something that's been repeated over and over at this institution, based in that multidisciplinary care, you know how do we not work piecemeal but bring these teams together to bring different perspectives and expertise.
[01:31:47]

Aman Buzdar, MD
[01:31:48]
Well, yeah, it was a challenge, because just to put this red banner, that this patient is on CAR T-cells, it was --
[01:31:54]

T.A. Rosolowski, PhD
[01:31:53]
Not enough.
[01:31:53]

Aman Buzdar, MD
[01:31:54]
No, it was a major act of God, because in Epic, Epic is a very structured medical record. I say I want to have this thing, it should be you click on it and it should hit you in the face. So, we are to go and meet with -- I said, I will meet with anybody and everybody. We had to go and convince everybody that why it is important and it is in the best interests in enhancing the safety of the patient.
[01:32:23]

T.A. Rosolowski, PhD
[01:32:26]
So the minute the record comes up, bang, there's that red there.
[01:32:29]

Aman Buzdar, MD
[01:32:29]
It shows. It is a red banner. The patient is on CAR T-cells. Then, if you click on it, it tells who is the doctor to call, what are the things which you can't do, and what are the things, if things happen, then there is a whole things. It's almost like a dominos stand up, then you can…
[01:32:47]

T.A. Rosolowski, PhD
[01:32:49]
So you had to really convince people to put that red banner on there.
[01:32:54]

Aman Buzdar, MD
[01:32:56]
Oh, it was a challenge, because the thing is, human nature is that you don't want to change, we want to keep it this way. We had to go and meet with the teams, to convince them that this is in the best interest and the safety of the patient.
[01:33:10]

T.A. Rosolowski, PhD
[01:33:10]
And these were people in IT that were kind of pushing back?
[01:33:14]

Aman Buzdar, MD
[01:33:17]
Everybody wants to keep the box as it is. (both laugh)
[01:33:18]

T.A. Rosolowski, PhD
[01:33:18]
Yeah, yeah. Well tell me, Dr. Buzdar, what are some things -- do you have plans to retire?
[01:33:28]

Aman Buzdar, MD
[01:33:30]
I enjoy it but I think yes, I am thinking of it.
[01:33:33]

T.A. Rosolowski, PhD
[01:33:34]
Yeah? And what are you going to do after you retire?
[01:33:36]

Aman Buzdar, MD
[01:33:37]
I have a lot of things to do. We have family, we have a place in Galveston, we like to travel, but I have traveled a lot, because I have been around, so I have seen practically every part of the

globe I wanted to see.
[01:33:52]

T.A. Rosolowski, PhD
[01:33:54]
So you have no big -- you're not going to learn French or, you know? (both laugh)
[01:33:56]

Aman Buzdar, MD
[01:33:57]
No. Nothing like that.
[01:34:00]

T.A. Rosolowski, PhD
[01:34:03]
Well as you think about what legacy, what would you like people to carry on doing once you've decided to…?
[01:34:13]

Aman Buzdar, MD
[01:34:14]
I don't want any legacy. I think the thing is, my outlook at life is I am here, I am fully committed. Once I am gone, my name should be erased, then as if there was nobody here, because I'm not looking for any legacy.
[01:34:30]

T.A. Rosolowski, PhD
[01:34:30]
But is there something that you've put in place, not necessarily the people attached your name to it, but are there things that you've put in place that you want to see continue?
[01:34:42]

Aman Buzdar, MD
[01:34:42]
I think a lot of things which we talked about, that they have now become things we talked about, the treatments, the standard of care, things which we did as an institution, these are things here to stay.
[01:34:53]

T.A. Rosolowski, PhD
[01:34:53]
Right.
[01:34:54]

Aman Buzdar, MD
[01:34:54]
Of course, as the knowledge evolves, things change, and medicine is evolving at a dizzying pace, that things are going to change. What is today's standard, in a year it may be a historic treatment and there may be new therapies.
[01:35:13]

T.A. Rosolowski, PhD
[01:35:14]
What has -- we've talked about the various ways in which you've worked for this institution and worked with the institution, to make it more effective. What has the institution done for you?
[01:35:27]

Aman Buzdar, MD
[01:35:28]
I think the one thing, you hear different things from different people. I think this institution is very unique. Institution will provide everything if you are trying to do something for the good of the patient, for the group goodness. At times, human nature is that we always want to see what is my best interest. I look at it, what is in the best interest of the institution, what is in the best interest of the patient, and how can we advance the science and how can we stay in compliance with the regulations. That is my current responsibilities and I take it very seriously.
[01:36:15]

T.A. Rosolowski, PhD
[01:36:18]
Is there anything else that you'd like to add?
[01:36:19]

Aman Buzdar, MD
[01:36:20]
No, I think it was a pleasure talking to you, thank you very much.
[01:36:22]

T.A. Rosolowski, PhD
[01:36:23]
Well, thank you, it was a pleasure talking to you too, and I've learned about a lot of things I

didn't know before, so thank you for that. Well, I wanted to just say for the recorder that I am turning off the recording at quarter of eleven. Thank you so much.
[01:36:35]

Aman Buzdar, MD
[01:36:35]
Thank you, thank you, good to see you.
[01:36:36]

T.A. Rosolowski, PhD
[01:36:37]
Yeah, it's good to see you too.
[01:36:38]

[End of Interview]