

A portrait of John Mendelsohn, an older man with white hair and glasses, wearing a dark suit, light blue shirt, and patterned tie. He is smiling slightly and looking towards the camera.

Making Cancer History Voices®

Oral History Collection

Interviewee:

John Mendelsohn

Dates:

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Place:

Houston, Texas

Interviewer:

Tacey A. Rosolowski, PhD

Historical Resources Center
Research Medical Library
The University of Texas
MD Anderson Cancer Center

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Making Cancer History®

MD Anderson Presidents and Sustained Institutional Growth

Tacey Ann Rosolowski, PhD

I'm Tacey Ann Rosolowski interviewing Dr. Mendelsohn at the University of Texas MD Anderson Cancer Center in Houston, Texas. This interview is being conducted for the Making Cancer History Voices Oral History Project run by the Historical Resources Center at MD Anderson. Dr. Mendelsohn was first interviewed in 2005 by James Olsen and Leslie Brunet. Between 1996 and 2011, Dr. Mendelsohn served as MD Anderson's 3rd president. He continues to serve the institution as a professor of experimental therapeutics and as director of the Sheikh Halifa bin Zayed Al Nahyan Institute for Personalized Cancer Therapy. I wanted to start off with a general question before I turn to personal background. MD Anderson was founded in 1941, and it has only had 4 presidents. Ronald DePinho is still in the very early phase, just a year into his presidency, and there seems to be an unusual stability in leadership. Could you comment on how that has had an impact on the institution?



John Mendelsohn, MD

I think the 1st leader, Lee Clark, was an exceptional pick. He was young, he was vigorous, and he was well trained at some of the top institutions in the country and very ambitious to create something special. As I remember, he was the leader of MD Anderson for 28 years. And I'm told that when he began it was a small place, that he kept all the receipts in his desk drawer. He knew everybody on a first-name basis. I think by the time he stepped down, what was needed was a broader management team, which I think Dr. Mickey LeMaistre brought in. Again, Dr. Clark was someone who knew cancer inside out, and the main treatment for cancer when he took his position was surgical. It's still a very important treatment for cancer, and he was an excellent surgeon, but he also understood where medical oncology and radiation and science were going, and he hired some fabulous people to come here and start up the different programs that linked in with surgery.

Dr. LeMaistre's strength was more in organizing and leading a medical operation. He was not an oncologist, but he knew a lot about cancer. But he'd had a lot of experience running a hospital and running medical programs, and he greatly expanded our interactions with the community. He set up the pattern of growth which we've continued both in research and patient care. He stayed as president for 18 years.

Now, I was the 1st outsider to be appointed; technically, Lee Clark had to be an outsider. My own interest had been fo-

cused all my adult life on taking science and bringing it to the patient. It's called translational and clinical investigation. I was able to stand on the shoulders of these 2 individuals, and it was a wonderful time to be the president of a major medical academic institution; there was economic prosperity in our country in most of this period, the budget of the National Institutes of Health doubled, and the public awareness of the complexity and the sophistication required to manage cancer increased tremendously, so there was demand for our services. When I walked into this institution in 1996, ironically, there was a downsizing going on, in spite of what I just said. The managed care impetus in this country was taking hold, and there was great concern that specialty hospitals like a cancer hospital wouldn't be getting patients. They would all go into managed care operations that would control their destinies. We had very strong advice from at least 2 different consultants with large notebooks of information in them suggesting that we cut back from about 450 beds to 250 beds and reduced our scope. To me and to the faculty, this didn't make sense. We knew where



Dr. LeMaistre and Dr. Mendelsohn

cancer was going. We knew about the exciting developments that were occurring. We knew that this couldn't be led and pioneered in an average hospital. It had to be pioneered in a place that had the kind of assets that MD Anderson had, a large faculty with protected time to do research and a total commitment to the very best standard of care. After a series of meetings with faculty and with the Board of Visitors and the regents, we decided to ignore these consultants and to take advantage of the demand for our services and to grow, and we didn't stop.

-- end audio segment--

Tacey Ann Rosolowski, PhD

Did you feel that the management team that was giving you that advice was erring on the side of caution, because they didn't understand the science or where the science was going? What was the reason for their advice?

John Mendelsohn, MD

I really can't say. Like today, there was a lot of uproar in this country about how healthcare should be handled, and man-

aged care was the big buzzword then in 1993. There were large insurance plans that were enrolling doctors and enrolling patients and setting controls and limits. It's a good thing to remember today as we go through a similar exercise. What wasn't realized is the American public, when they get a disease like cancer, want to go to the best, and they're willing to pay and co-pay, and they pushed these plans to allow for access to MD Anderson. They had to pay a little more to do that, but there were enough people that wanted that. This fear that everybody would be locked into a plan and go to their hospital because their plan was going to legislate that was not well founded, because it wasn't accepted. That's my explanation for it.

Tacey Ann Rosolowski, PhD

Is there anything more you'd like to say about that now before we turn to more general background issues or this particular issue of the stability of leadership? You were here for 15 years, and you had your vision. What did that stability allow you to achieve?

John Mendelsohn, MD

When you take over leadership of an organization this size, it takes a year or so to figure out what makes it special and where to grow and to enlist the trust and the vision and the counsel of the people here so that when you plan growth, it's not a top-down thing. It's an institution planning its growth, and I spent a lot of time doing that. There was a period of over a decade when growth went on just in a phenomenally unperturbed way,



again, because of some of these circumstances, like the demand and the excellent state of the economy and the availability of research grants from the government plus tremendous philanthropy from the community in Texas. That all takes time, and I think the institution was fortunate. I don't think it was planned that we'd only have 3 presidents in our first 70 years, but the institution was fortunate that each president had the energy and the ambition, had the teamwork of the people with whom they were working at MD Anderson and could develop action plans that didn't have to be executed in a few years. They could have a 5- and 10-year span. When you build a new building, it takes 4 years. You decide you want to expand something; you can't do it tomorrow. We doubled the size of our patient base, so we had to have twice as many doctors and twice as many nurses and twice as many X-ray machines. You've got to design the plans to accommodate, recruit, and put in place all those people. That takes time.

Tacey Ann Rosolowski, PhD

The early leaders of MD Anderson certainly were smart to buy as much space.

John Mendelsohn, MD

We're blessed with access to space, and we really used it the past 15 years.

-- end audio segment--

Tacey Ann Rosolowski, PhD

I'd like to turn now to some questions about personal back-

ground. I wanted to do this from the perspective of looking at your own mission of institution building. As I was reading background, it began to strike me that you almost approach cancer research and leadership in a cancer institute as a public service. Am I on track with that at all?

John Mendelsohn, MD

That's an interesting way to put it. I think you are on track. I think everybody has different goals in life and different things that they do that give them satisfaction. I certainly enjoy science, and I certainly enjoy working one-on-one with people as a physician. Equally exciting to me is the opportunity to create new programs and take a vision and put it into practice. I've had opportunities now 3 different times in my life to do that, so I've been very fortunate.

Role Models

Tacey Ann Rosolowski, PhD

I'd like to ask you about where you think that particular approach came from and what experiences. First, when and where were you born?

John Mendelsohn, MD

I was born in 1936 in Cincinnati. I went to public school for 12 years, but the high school I went to was more like a prep school. We had to pass a test to get into it, and it took in students from all over Cincinnati. I think 97% of the graduates of that high school went to college. It was a wonderful education, like you'd get at an eastern prep school. I grew up in a relatively normal environment. My dad ran a company and was what's called a middle man, selling menswear. My mother was the head of the PTA and active in the Sunday school. We had many friends. I had 9 cousins who all lived within a mile and a half away, and both grandmas within a mile away. It was a

very warm, friendly environment among family and friends in Cincinnati.

Tacey Ann Rosolowski, PhD

I read in the interview that you did with Dr. Olsen, how you look at people and then you try to absorb some of their characteristics and build your own personality. As you look back on those early years, who are the role models that were really formative for you in your family life and your educational experience?

John Mendelsohn, MD

I did discuss that with Mr. Olsen, and it's true. I figured out at a relatively young age, maybe in high school, that you can mold yourself; one's personality and one's interests are not just a passive accumulation of sentiments, but rather you can look at different opportunities and see what fits. The fit is very important. As I grew up in Cincinnati and in college, there were people that helped me mold into what I would be. One example is my father's approach to his relationships. He was born in Baton Rouge. I remember at his funeral, the rabbi said, "You know, Joe Mendelsohn was a real southern gentleman." I thought about that, and I'd never put it that way. He was caring. I watched him at work with the people that work for him. He was a very friendly, polite, and thoughtful human being about others, and I incorporated some of that, I think.

My mother was very active in community affairs. I mentioned she was head of the PTA and the sisterhood at our temple. I could see that she got a lot of pleasure out of organizing things

in the community for the benefit of the community and her family and her children, and I thought that made sense too, so I think I was ready for that.

Tacey Ann Rosolowski, PhD

Did you help her at all? Did you get involved with that kind of thing when you were younger?

John Mendelsohn, MD

No, not very much. I could see the feedback it gave her that made life meaningful for her, and I was proud of it. I was proud of both of those attributes, just for example. Now, my girlfriend Judy's father and mother had a little different lifestyle than I had in my home; they loved to have people over for dinner and talk. I used to be invited to sit in, and they'd solve all the world's problems. I found it really interesting. I found that it stimulated me to read the newspapers and think and that it was fun to see how divergent opinions could be about things like politics and whether it was right or wrong for the country to do this or that and whether this recent bestselling book was a good book or not, and my wife and I have that lifestyle. We enjoy book clubs. We enjoy evenings where there's just no agenda, just a few couples sitting around and talking. I go to movies twice a year. I don't watch any television.

That's another thing from my dad. My dad should have been a professor, but he needed to go to work because the family needed money. He never finished college, and his library was incredible. You talk about picking up things. I remember get-

ting advice from him about what to read. Now, when I got to college, pretty soon I was heavily involved in laboratory research, and I didn't get to take the course on Proust, Joyce, and Mann that I wanted to take. When I was 40, partly because of what I'd learned from my father and partly because it was built into me, I made a point of beginning to read the things that I wanted to read. I did read *A Remembrance of Things Past* by Proust and I read *Ulysses* by Joyce and I read the *Magic Mountain* by Thomas Mann over a period of 3 or 4 years. I think I was lucky in a way, because when you read them when you're 40, you enjoy them in a different way than when you're 19 trying to do it at college. My dad gave me advice on what to read, and I still do that with my book club. So he thought that Conrad's best book was *Nostramo*, and not many people knew about *Nostramo*. They knew about *Lord Jim* and other books. We read *Nostramo*. It's a fabulous book. Jane Austen's best book he thought was *Emma*, so we read *Emma* in our book club. I picked up that and it fit and that's what I did, in part, because of my dad.

The other influence was probably my best male friend, Alan, and his parents had that same lifestyle. Alan's dad was a member of the World Federation. It was pro-UN and pro-international corporation. They used to have great political discussions at his house; again, I sat in on those.

Tacey Ann Rosolowski, PhD

This is really all about the excitement of new ideas, broadening horizons and vistas and then having conversations about how individuals might have an impact.



John Mendelsohn, MD

Right. Then I had an uncle who manufactured gloves, and he had run an imaging company during the World War and did a lot of important work for the military. He was a frustrated doctor, and he was an engineer. He went to MIT. He had a metal machine shop in his house. He moved out in the country and built a telescope, and he built heart valves. I remember visiting his workshop and meeting the head of cardiology from the University of Cincinnati, and they were putting heart valves into sheep. His heart valve was not the one finally accepted, but he was designing heart valves at the same time that Mike DeBakey and Denton Cooley were doing that kind of work here. I could see he really enjoyed applied scientific research, but he was sort of reclusive. He was very different from these other people that I'm talking about. I decided that was exciting, too, so I learned something from him.

-- end audio segment--

Tacey Ann Rosolowski, PhD

When I was reading about your academic background, as you shifted definitively into medicine, I noticed that you studied hematology and oncology, immunology, biochemistry, and molecular biology. There were all these different areas.

John Mendelsohn, MD

They converge on what I've done the past 40 years.

Tacey Ann Rosolowski, PhD

Did you put them together as a collage and then find what you were going to focus on in terms of your research? I'm trying to get a handle on this person sitting here who is so interested in literature and science and applied things and ideas and politics and just seems like an omnivore.

John Mendelsohn, MD

I guess I'm curious, and I like the stimulus of new things. I don't think I would want to run the same operation for 2 or 3 decades. I want to do something new. I was very lucky in what happened in my life. Just to put it in perspective, I was born in 1936. In 1944, it was determined that the genetic material is DNA, so I'm already 8 years old before they knew DNA was the genetic material. In 1953, the structure of DNA was published. I was 17. Three years later, I was working in the laboratory of the man who made that discovery. What an incredible, lucky opportunity to be at Harvard College, to do research and switch into pre-med. I was in physics and chemistry, and it was very clear to me that that wasn't "people" enough for me.

Working with Dr. James Watson

Tacey Ann Rosolowski, PhD

You talked about working with Dr. Watson as a defining moment for you. Do you still feel that, and what exactly was the crystal that developed at that point?

John Mendelsohn, MD

I don't know when people decide what they want to be. I never thought of being a physician until I was a junior in college. I knew I enjoyed science, I knew I enjoyed people, but frankly, blood and doctoring and the level of responsibility sort of scared me. In my junior year in college, I had really the thrill of working in the laboratory of the man who had around him some of the brightest minds in a field which became molecular biology. That term had not been used really until then, and I learned how exciting research is. I learned how exciting it is to make a hypothesis and try to discover something that no one knows the answer to. You're out on a limb and you're working hard; many late nights, not as many movies. The ex-

citement of designing experiments and then figuring out why most of them didn't work and taking advantage of incredible new equipment and new machinery that was being developed.

One piece of equipment was called an analytical ultracentrifuge. They had one at Harvard. It was in the laboratory of the chairman of biology. And I needed it for some of my work. What you can do is you're centrifuging things and you actually can watch them move because there are optics set up. It is spinning around at 33,000 revolutions per minute. Yet it's set up so you can optically watch what's going on.

Tacey Ann Rosolowski, PhD

Why is it done that way?

John Mendelsohn, MD

Right now you don't need to do that. Those instruments are in museums. There was no other way to track the size and separate large aggregates of molecules from each other based on moving them through a very viscous solution.

Tacey Ann Rosolowski, PhD

You had to develop pretty keen visual skills to use that.

John Mendelsohn, MD

No. You just had to learn how to push the buttons without messing up, so that was my instruction from Watson. I got on at night when the other people were done, and I was told, "Don't break it." These instruments are marvels of physics, like the new sequencing machines. They're intricate, they're complex, and you have to do everything right. In this case, if I

had done something wrong, if anything had leaked out of this little centrifuge vessel which had thick glass windows built into it, it would have hurt the machine badly, so I had to be very meticulous. That was very important to learn. The research worked out well. We wrote a paper. I understood that science could discover things that could move knowledge along.

Tacey Ann Rosolowski, PhD

You really saw the entire process, working with Dr. Watson, from formulating a hypothesis all the way through publishing results?

John Mendelsohn, MD

Right. That's common today, but in 1957, there weren't that many people that had that kind of a privilege.

Tacey Ann Rosolowski, PhD

What kind of an individual was he as a mentor, like teaching those ineffable things that aren't written down in textbooks? What did you learn from him as a researcher?

John Mendelsohn, MD

Again, you learn some things to do and some things not to do. Dr. Watson was brilliant. His view of what was going to happen in the field of molecular biology and genetics was prescient. He understood what was going to be important. He could formulate grandiose ideas. He wasn't very good at the details of running an experiment. He could do it, but he wasn't someone who invested the time and energy into doing that, so I had a double mentor. When he was just opening his

lab, there was a man named Alfred Tissieres. He was a Swiss and also a brilliant scientist but much more willing to work with me at the level of "how do you design this experiment" and "how do you do it." We spent a lot of time on that together.

Tacey Ann Rosolowski, PhD

You got a window into the whole idea of teamwork too, like one person's gift supplementing another person's lack.

John Mendelsohn, MD

Yes. They helped each other a lot. He went on to become a leading scientist back in Switzerland in his hometown. We visited him. He's an expert on mushrooms, so we went hiking, and it was the only time in my life I trusted I could pick a mushroom and eat it rather than not eat it, because my wife won't let me do that at all. With Alfred, it was okay. He grew up there. We reached a dichotomy at the end of this, because Dr. Watson said, "You know, you ought to go to grad school, get a PhD, and move into this new field. You seem to be pretty good at the science, and look at all that's happening." I told him, "No. I want to go to med school."

Tacey Ann Rosolowski, PhD

When did that idea dawn on you?



John Mendelsohn, MD

That's why I went to work in his lab. The idea dawned on me at the end of my sophomore year in college. I had an interest in science, which goes back to high school, but I also wanted to work with peo-

ple. I was beginning to believe that laboratory science could contribute to how you treat people. Today that's taken for granted. It wasn't that common back then. A lot of the people were studying viruses. After working in Dr. Watson's laboratory for a year and a half studying bacteria, I said to myself, "I'm going to learn human biology, and I think all of this can be applied to studying humans."

Tacey Ann Rosolowski, PhD

Did you have any kind of sense of what that might look like at that point? Was it just an intuition? What was that?

John Mendelsohn, MD

I was reading a bit of the literature, and there were places like Harvard Medical School and the other medical schools that I knew a bit about. There were researchers studying human disease beginning to take some of this very sophisticated science that had been worked out, mainly on bacteria and viruses, and applying it to human disease, so I was there at the right time. Today, most of the people that do this get MD/PhDs. Back then, most MDs who ran labs didn't get PhDs, but they went and did the equivalent. They worked in labs and learned how to learn from laboratory science and apply it to patients. We had a long discussion, and I finally said, "You know, I'll get back to the laboratory, but I want to go to medical school, and I want to be a doctor." He obviously wrote a good letter for me, because I got into Harvard Medical School.

-- end audio segment--

Tacey Ann Rosolowski, PhD

Were there any other significant influences or mentors from that period, before we shift into the period of medical education?

John Mendelsohn, MD

I think those are some of the main mentors. Alan had a wonderful way with people. He was president of our fraternity.

Tacey Ann Rosolowski, PhD

What fraternity were you in?

John Mendelsohn, MD

It was called Round Towners. Our high school had fraternities. I watched him and learned how to get elected to be president of a fraternity. It involves people skills, and it's not brilliance. It's listening and empathizing and caring. There must have been many other people I picked things up from, but some of the main mentors that I incorporated into myself came along later in college and in medical school and in training.

Early Experiences with Administration

Tacey Ann Rosolowski, PhD

Let's shift to the period of your professional training. You talked about an awful lot of this with Dr. Olsen, but I did want to pick up on any of the experiences that really struck you during that time that may have had an influence on your administrative career.

John Mendelsohn, MD

During most of medical school, you're drinking water out of a fire hose. You don't have time to think about an administrative career. You're awash in information about disease, about people, about science, and at least when I went to medical school, every teacher's goal was to convert you into going into his or her field. You had a chance to dig pretty deep. The anatomy instructor wanted us all to be anatomists, and the immunology teachers wanted us to be immunologists, on and on and on. I think I stood back enough to see how a complex organization of outstanding prima donnas, which Harvard was

full of, somehow put together a program that taught me and 125 other kids in my class the science and the humanity of medicine and yet allowed these individuals to excel in their field and hopefully try to reproduce themselves. Somehow it all worked without a book of rules telling everybody what they had to do. A lot of it was spontaneous combustion. I guess I hadn't thought about it that way until you asked the question. It was a good question.

There are 3 major hospitals at Harvard Medical School, but Harvard has no hospitals. The hospitals are all separate. They compete like mad with each other until somebody attacks Harvard, and then they round up the troops, and they're great. I rotated through 4 of the teaching hospitals and saw many different ways to plan curricula, to take care of patients, and I guess I got a perspective on the many different ways of looking through lenses at a problem and getting solutions.

Tacey Ann Rosolowski, PhD

Do you recall some of those differences that struck you or things that you noticed at some of the hospitals that worked really well or that worked really badly?

John Mendelsohn, MD

I remember there was a hospital called the Beth Israel Hospital. I could tell that caring for the patients in a friendly and supportive and empathetic way was really important to them. It certainly was important at the other hospitals, but at the Boston City Hospital, where you were working on 1/10 the

budget of the others, you were treating the walking wounded of the world, and you couldn't do that in the same way.

At the other major teaching, the Mass General and the Peter Bent Brigham, the faculty was a little more oriented toward their intellectual pursuits. Yet the Beth Israel Hospital doctors, who were also quite intellectual, were really conscious of the patient. It's very interesting, because that's what MD Anderson is all about. When I was president, I talked a lot about treating the illness and caring for the patient. I was saying that because it was me, and it was also the attitude here. It's a very unusual place, partly because the doctors here really care about their patients as much as they care about their research.

They give out their home phone numbers, don't work through interns and residents, but work as the primary "hello" person many times when a patient walks in. They enjoy the practice of medicine and that interaction. It reminded me of my experience at Beth Israel Hospital, for example.

Tacey Ann Rosolowski, PhD

With the Beth Israel situation, caring is not something that is just a matter of structure. It's a matter of culture.

John Mendelsohn, MD

That's right.

"It's a very unusual place, partly because the doctors here really care about their patients"...

Tacey Ann Rosolowski, PhD

That's so firmly built into the culture of MD Anderson. I read something where you had noticed that when you came here there was a tremendous degree of congruence between your own personal philosophy about the treatment of cancer and what has always gone on at MD Anderson in terms of focus.

John Mendelsohn, MD

It was a good fit.

Tacey Ann Rosolowski, PhD

I wonder if you could talk a little bit more about that. Clearly the Beth Israel situation really jumped out at you because of the caring piece, and you've talked a bit so far about empathy and listening and your own interest in people at a very fundamental level. Talk more about your philosophy, as it evolved, in this cancer care and that fit with MD Anderson.

Between 1963 and 1970 when I was offered a faculty position things fell in place. There were no medical oncologists in 1963. We didn't understand cancer very well at all. If you wanted to use molecular biology to study cancer, you probably weren't going to work in a lab of a cancer person. You worked in the lab of a molecular biologist, and I did that. I went to the NIH and worked in a very basic science laboratory in Bethesda. Terrific training. I didn't know I wanted to be an on-

cologist then. I knew I was interested in medicine, and I was interested in science. I originally thought I would be a hematologist, because a lot of the laboratory work that was leading to understanding science was going on in hematology at that time.

An Overview of a Research Career

Tacey Ann Rosolowski, PhD

You did a fellowship in hematology oncology '68-'78 at Washington University in St. Louis.

John Mendelsohn, MD

The main emphasis was on hematology. The solid tumor cancer part was felt to be a trade more than a science.

Tacey Ann Rosolowski, PhD

Where did that cancer piece come in?

John Mendelsohn, MD

Around 1970, we began to understand more about cancer. My research at Wash U and my research on my Fulbright Scholarship to Scotland for a year and my research during medical school in the laboratory of Byron Watson, another mentor and role model, was all about what controls whether cells divide properly or not. Just around 1970, people were beginning to think about cancer as a disease where the biochemical mecha-

nisms that control whether a cell divides properly or not were important.

Tacey Ann Rosolowski, PhD

You said that in 1970 people were beginning to think about cancer as a disease. How did they think about it before then?

John Mendelsohn, MD

It was a disease where the issue was a loss of the proper controls over whether a cell is dividing by the rules or not. This was thought about before, but it was beginning to be converted into experimental action, and actually that really took off in 1970. In 1970, when I began my own research, it was with white blood cells. It was with lymphocytes. It carried over into my interest in hematology. But again, I made a big career decision change in 1980. I was studying what controls the growth of lymphocytes, and I got very interested in Epidermal Growth Factor and the EGF receptor, which I talked about in length, I think, in that other interview with Dr. Olsen.

Lymphocytes don't respond to Epidermal Growth Factor. But I was working with another wonderful person, who I learned a great deal from; my collaborator in this case, Gordon Sato at UCSD. We generated the hypothesis that if we could block the binding of Epidermal Growth Factor to its receptor on the surface of tumor cells, we might be able to inhibit the growth of those tumor cells, which was a novel hypothesis and really exciting for me and for him.

Tacey Ann Rosolowski, PhD

How did you come up with that idea?

John Mendelsohn, MD

I had to change my whole research lab. We came up with the idea by thinking about and looking at new data that was coming out of the journals over a period of about 2 years and integrating that into the background that he had. He was a world expert on growth factors and how they stimulate the proliferation of cells. I'd done a lot of research on lymphocytes, what stimulates them to grow and what stops them from growing, and what are the chemical pathways involved. Today they're called signal transduction pathways. In the 1970s, the only one that was known was something called cyclic AMP, and I was working on that. There were data that cancer cells expressed high levels of EGF receptors, sometimes a million instead of 10,000. That's a whole lot more. There were data that cancer cells could make their own EGF and autostimulate themselves. The hypothesis was published in 1980 that cancer cells had uncontrolled growth, because they made their own growth factors and stimulated themselves. In 1979 and '80, there were publications showing that the Epidermal Growth Factor receptor had in itself a tyrosine kinase, which is an enzyme that phosphorylates tyrosine.

In 1980, there were only 2 other tyrosine kinases known. Now there are 500 and many of the new drugs are against tyrosine kinases; back then, one was called SRC, and we knew that SRC could cause cancer in animals, and the other was called a platelet-derived growth factor receptor. Then we put together; okay, there's this new chemical pathway that involves tyrosine kinases. It's rare, but one of them, SRC, can cause cancer in

mice and Epidermal Growth Factor seems to be a very prominent feature in human cancer, because that receptor is overexpressed on many cancer cells. By the way, cancer cells can make their own growth factor and autostimulate themselves. Maybe this would be a good target. We said, "Let's target the EGF receptor now." Neither of us were chemists. We were molecular biologists who knew some immunology. This is where new technology comes in.

I was head of the new UCSD Cancer Center, and Gordon Sato and a man named Nathan Kaplan were my 2 chief advisors in science. They were both in the biology department at UCSD, which is fabulous, but they both were passionately interested in cancer, and they worked with me. So there were 2 new technologies. One was making monoclonal antibodies and the other was growing human tumors in mice that are hairless that have an immune problem. Well, we decided we wanted those technologies for our cancer center, so they helped me set this up. Then we decided we'd use those technologies, and we would try to find an antibody that would bind to the receptor for Epidermal Growth Factor. There were other antibodies available that did that, but we wanted to find one that bound at the EGF binding site and prevented the growth factor from reaching the receptor. So we essentially put chewing gum in the lock so the key couldn't get in. That's the way we thought about it. We wrote a grant to do that. It was turned down, but we did it with other money and some very hardworking post docs and collaborators.

Tacey Ann Rosolowski, PhD

Why do you think it was turned down at that time?

John Mendelsohn, MD

It was felt it wouldn't work. Once we wrote the 1st paper, the research was well funded by the National Cancer Institute for 15 years, but that 1st grant was turned down. That is not unusual, incidentally. A lot of the pilot work that goes on is done with smaller grants and philanthropy, and the National Institutes of Health, for the main part, are a little risk averse in that they want to see the preliminary data, and they want to know that this isn't just a wonderful idea but that there's really some scientific evidence that it will work, which we provided with our first couple of publications. It turned out that we had a good idea and we were lucky.

It was luck that Dr. Watson's lab was opening up and was available to an undergraduate. Everybody else in that lab were grad students and post docs. When I walked in, he was unpacking the boxes. It was luck that my training set me up in a field that was ready to open up, experimental oncology. There was fit. The specialty of oncology first was announced in 1970, right when I finished my training. There were no specialists in oncology then. There were only hematologists. It was luck that I met Gordon and we talked and that we had these resources so we could study the human tumors growing in the mice and show that the antibody retarded their growth. The technology

"Luck helps the prepared mind in somebody that's willing to work hard for it, so you jump on that train, but then you work hard"...

for making monoclonal antibodies was there. But maybe it wan't all luck. Luck helps the prepared mind in somebody that's willing to take advantage of it and work hard.

Tacey Ann Rosolowski, PhD

Do you have more elements of that story you'd like to put in place at this point?

John Mendelsohn, MD

A few years later, Gordon Sato went into another field. He wanted to solve the world's food problems and began to work in that area. I had the fun of continuing working on blocking the Epidermal Growth Factor receptor, the idea that you could target a therapy against the product of a gene that was causing cancer, and that turned out to be a good field to be in. I came to MD Anderson with a lab, 4 grants, planning to continue this research, and I walked into a place that had been told to cut back 50% of its hospital beds and had already cut its budget over \$90 million on a base of around \$600-\$650 million. I didn't want to do this.

Following up another question you asked, I decided, okay, I've had a great time being a physician. As my other responsibilities grew, I had to do less and less doctoring. I had a great time doing research and running a department at Sloan-Kettering. Now it was time for me to put fulltime into the institution and work to make other people famous and to make

this institution a success, so I closed my lab. That was hard. I brought researchers with me. I handed them my grants. I wrote the NIH and said, “So-and-so is taking over this grant, and so-and-so is taking over that grant.” I wished them well and turned my attention to MD Anderson.

Institution Building at UCSD and Memorial Sloan-Kettering

Tacey Ann Rosolowski, PhD

You went to University of California San Diego in 1970, and you were invited to go there, to expand their program.

John Mendelsohn, MD

I was invited to go to help start a new medical school.

Tacey Ann Rosolowski, PhD

From scratch.

John Mendelsohn, MD

Yes. When I arrived, the entire Department of Medicine was 20 people. That's cardiology, pulmonary, GI, renal, hematology, oncology, dermatology. The whole department could meet at a home. The Department of Medicine in most medical schools today is 400 people.

The fun was starting a new medical school, being 1 of 2 people in hematology and oncology. The other person was a wonder-

ful man named Mickey Goulian and we started that program. We had 2 rooms in a little teeny clinic. I started my lab. I started practicing. It was small scale, so you could do all 3 for a little while. UC San Diego was one of these phenomenal schools. They had the Scripps Oceanographic Institute for many years, but the university was started in the 1960s. Thirty years later, it was one of the 10 best universities in the whole country. It was not a hardship to come live in La Jolla. We raised our kids there. Today it's a hardship because it's so crowded, but when we were living there, it was idyllic. They built an incredible university and an incredible medical school, and I had the fun of doing that.

Tacey Ann Rosolowski, PhD

Tell me a bit about the challenges of doing that, having 20 people in a room.

John Mendelsohn, MD

It's incredible challenges, because you're in charge of teaching everything. You have to teach people the introduction to clinical medicine. I ran that course. You have to teach them the practice of medicine. I had to lecture on some of the basic science courses too. We had really bright kids. It was a dream school. The really smart people that wanted to do science and medicine applied there because right from the beginning this was very strong in science. In medicine, most of the heads of different programs were leaders in their field, the science of their field, the science of cardiology, the science of hematology, the science of lung disease. It was a very exciting period. They needed a cancer center director, and they brought out

some very distinguished people to look at the job. I was on the search committee. Again, this is luck. This is timing. You can't plan. We were too small to get the really top people to come. They were in big programs like Sloan-Kettering.

Tacey Ann Rosolowski, PhD

Why was it felt that the cancer center was needed then? What was going on?

John Mendelsohn, MD

In those days, heart disease and cancer accounted for probably 40% of hospital admissions.

If you're going to be a major medical school, you had to have a strong program in heart and cancer. Dr. Braunwald was the head of the department. He had invited me to go back to Har-

vard with him in 1972 and was probably the most well-known heart researcher in the country. He'd been at the National Institutes of Health and had run a huge program there. The UCSD Department of Medicine had 2 people in every area except heart. They had 4 people in heart on their faculty of 20.

It was pretty clear that we better build a cancer program, too. Some very prominent people were invited who were running large programs. I just think they were attracted to the ambience and the science, but the clinical programs needed a lot of work. I remember I was told that one of the people invited to look was an oncologist named Tom Frei who had been at MD

Anderson and then went to the Dana-Farber. I'm told that he suggested to the dean this young guy, Mendelsohn, has a lot of energy. He gets it. Why don't you let him do this and run with it and see what happens? I was invited to take this on. Now, I was a tenth as distinguished of any of them. This was when I was still doing hematology. I had not even gotten into this target therapy niche, but they must have seen in me someone that liked working with people and empathized and liked to organize, so they gave me this opportunity, and we created the UCSD Cancer Center.

Tacey Ann Rosolowski, PhD

Where do you start doing that?

John Mendelsohn, MD

There were only 3 or 4 of us on the team, so you get to do every-

thing. We had to start a training program. We had to expand the research program. We had to put up a building so we could put the research program in it. We had to expand the clinical program. In a period of 4 or 5 years, UCSD's first capital campaign was for the cancer center.

Tacey Ann Rosolowski, PhD

Had you ever had experience running a capital campaign?

John Mendelsohn, MD

No, I learned a lot that I used here.

"In those days, heart disease and cancer accounted for probably 40% of hospital admissions. If you're going to be a major medical school, you had to have a strong program in heart and cancer"...

Tacey Ann Rosolowski, PhD

What did you learn?

John Mendelsohn, MD

I learned how you organize and work with the community, and what it takes and the vision and the hard work and the excitement, and what you can do with money. In those days, it was \$3 or \$4 million, which would be equivalent probably today to \$30 or \$40 million, maybe a little less. You had to have the university behind you, and you had to have the faculty behind you. We started Friends of the Cancer Center. There were no other friends groups at UCSD. It was a brand-new place. I remember when the chancellor, who was a friend of mine, said, “John, I’m going to borrow all the people on your friends group. I’m forming a UCSD friends group. I want to raise money for the whole place, and these people are good at it.” Of course, I was honored but not thrilled. That was probably one of the reasons I finally agreed to go to Sloan-Kettering when I got that offer, because I felt we had plateaued.

Building the clinical program was really fun. The UCSD hospital was the county hospital, and the 11th floor had been made over for private patients, for the whole medical school. Within a few years, half the patients on that floor were our cancer patients, partly because we were known in the community. We had community people on our board, and the county hospitals were where all the poor people went. We had to convince the people of means that had insurance that, by the way, there’s something going on down there that’s really good. You’ll get good care. It’s not a dirty place. It’s a nice place.

Tacey Ann Rosolowski, PhD

Was there something about the way you communicated with folks or who you reached out to?

John Mendelsohn, MD

I hired some really good doctors, some of whom were not on the tenure track. In order to be on the tenure track at UCSD, you had to run a lab in those days. I had to convince people to come and be great clinical scientists but not get tenure track positions. The first tenure track position at UCSD for a non-lab person at the medical school went to my successor when I left. He was one of the top physician doctors and clinical trials persons in the country. I had figured out what we needed. I needed 1 person in pharmacology, I needed 1 person in immunology, and I needed 1 person in clinical research. I had 3 positions to recruit. That was a big deal. I did national searches, and one of them came from Harvard, and 2 came from Stanford. The 4 of us got together, and we divvied up the work and just built. The community came through. The hospital was excited. They wanted private paying patients. So again, things fell into place.

Tacey Ann Rosolowski, PhD

Were these people you recruited also big-picture thinkers, so you could share visions?

John Mendelsohn, MD

Yes.

Tacey Ann Rosolowski, PhD

That was important?

John Mendelsohn, MD

Yes. One of the people I recruited started the first biotech company in San Diego called Hybritech. That was a big deal because a lot of the faculty were very upset that a faculty member would actually be starting a company. It's very common today. I had to fight the faculty senate about that.

Tacey Ann Rosolowski, PhD

What were their reservations about that?

John Mendelsohn, MD

Academic medicine is not for profit.

Tacey Ann Rosolowski, PhD

Sort of a pure, don't-be-sullied-by-money thing?

John Mendelsohn, MD

Yes. You shouldn't be out trying to make money, but it's an issue that came up recently at MD Anderson. If you're going to do science just to advance knowledge, you're only halfway there, in my opinion. The other half is to take that knowledge and do something useful for people, especially if you do it in the medical field. I believed that back then, and we won that battle. This recruit was a visionary. Hybritech spawned the biotech community in San Diego, which is one of their major economic drivers today.

Tacey Ann Rosolowski, PhD

What is his name?

John Mendelsohn, MD

The 1st recruit was Ivor Royston. The 2nd was Stephen Howell, who is a brilliant pharmacologist and is still in his early 70s doing exciting research. The 3rd was Mark Green, who is a fabulous clinician and clinical investigator. They all had aspirations to do something important. They all were willing to leave meccas and come to this little nascent cancer center with me and Dr. Goulian, who was the senior person, a hematologist, and a great molecular biologist but not a cancer person. They joined this vision.

Tacey Ann Rosolowski, PhD

They created something that was theirs, but a shared theirs.

John Mendelsohn, MD

Yes. I did that at Sloan-Kettering, and I did that here, actually. I moved to places that wanted to expand in what I was good at and gave me the resources to recruit and grow, and we built teams. I learned how to do that at UCSD.

Tacey Ann Rosolowski, PhD

Are there certain lessons you learned that stuck with you?

John Mendelsohn, MD

You'd better love it, and you have to make a decision in your mind that you may be hurting your scientific career, because there's only 24 hours in a day. You've got to sleep at least 6 of them, and it takes a village. You need community support, you need the support of the faculty and the administration, and you need the scientists on board. That's all obvious, but having done that now 3 times, it's natural for me. Yet when I meet

new faculty leaders, I can see they sometimes don't have a clue how to conceptualize that. So I had the privilege of doing it in a small place, and from the ground up, creating a new cancer center. Then when I went to Sloan-Kettering, I had the privilege of working in a leadership role there as the head of medicine, at the biggest and then number 1 cancer center and see how they did it. So I was well trained with experience when I came here.

Tacey Ann Rosolowski, PhD

Tell me about the experience at Sloan-Kettering. How did that give you a different perspective from the one that you got at UCSD?

John Mendelsohn, MD

Sloan-Kettering was the largest then, the number 1 cancer center in the country, with a huge faculty, a huge research establishment, a huge facility. You weren't on a little sailboat anymore. You were on a battleship. I watched the men run the battleship, learned a lot of things to do and some things not to do.

Tacey Ann Rosolowski, PhD

Who was that?

John Mendelsohn, MD

Paul Marks, the CEO, who was a scientist clinician, mostly a scientist. He was very plugged into the community. I watched how he raised money. I watched how he made plans.

Tacey Ann Rosolowski, PhD

What were the dos and don'ts that you gathered from him?

John Mendelsohn, MD

Most of it was do's, but I just have a little more of a kinder, gentler approach, and at that time, more of a commitment to taking that 2nd step in science.

Tacey Ann Rosolowski, PhD

To bring it to the patient.

John Mendelsohn, MD

Yes. He certainly was balanced, but his main love was gaining new knowledge. As he got older, I watched. He got more interested in translating the science to the patient and actually ended up in his own lab developing a drug that's now used for some patients. How do you manage this complex matrix and try to keep everybody happy? Keep your board happy, keep your chairs happy? How do you make the decision of who's got to go? I learned a lot watching him. I had the fun of being chairman of medicine at what was arguably the strongest cancer center. I think MD Anderson's is now probably stronger, but I didn't believe it back then. I was trying to develop there what we do here so well, integrate laboratory science into the clinical departments, and we didn't get as far there as I'd hoped. There was more of an emphasis on basic science rather than applied science.

Tacey Ann Rosolowski, PhD

Did people have a prejudice against the whole clinical-versus-basic-science thing?

John Mendelsohn, MD

There was more of a division between laboratory science and clinical medicine at Memorial Sloan-Kettering than there was here.

Responding to Immediate Challenges

Tacey Ann Rosolowski, PhD

Tell me about coming to MD Anderson, because I read that you were pretty happy in your job at Sloan-Kettering. You hadn't really intended to leave.

John Mendelsohn, MD

I was happy at UCSD. We paid an extra \$10,000, had an ocean view for our home. Our kids were brought up in an idyllic environment. I thought I'd plateaued in what I could accomplish there.

Tacey Ann Rosolowski, PhD

What about at Sloan-Kettering? Where did you feel that you were in your career path at that moment?

John Mendelsohn, MD

I'd been Chairman of Medicine for 11 years. I could continue to do that, and I was enjoying that, but the opportunity to be the head of a whole cancer center must have crossed my mind.

I wasn't looking for a job. I got a letter from the search committee here. Would I be a candidate? I remember talking to my wife. When we left an East Coast environment and moved to La Jolla, we were told we were crazy. "This is Southern California you're going to, John. This is Nutsville." I remember when I left La Jolla to go work in Manhattan, I was told I was really crazy. "Everybody would give their right arm to have your home and be working at UCSD, and you're going to go live in Manhattan? It's a zoo up there." Well, we loved it. When I thought about coming to Houston from Manhattan, I was really told I was crazy. We didn't know a soul in Houston, except we did know the provost at Rice, which was very important. Anne called him up and checked it out.

Each time we've moved, we had 3 rules. It has always been because an opportunity came up that I felt I had to check out. One was that there was something exciting and important to be done at the new place, where my talents and my interests fit. The 2nd was that they were committed enough to it so they would put resources into it to make it happen. The 3rd is that we would enjoy living in the community. Fortunately my wife, like me, enjoys meeting new people and doesn't mind moving around. We know people that are in the same house that they got married in. We've moved every 10 or 15 years for something special.

We decided that the job of being head of MD Anderson was a special job. What they seemed to need was the kind of thing I had skills in and experience in. Then we did a little investigating about Houston and found out it was a city that, once you

move there, was hard to leave. And I remember coming down here and showing Anne the Texas Medical Center. She looked at me and she said, “Is this Oz?” It’s pretty amazing. It’s something that Houston should be very proud of, and of course, MD Anderson is one of the jewels of the medical center, which is a jewel in itself. When I was offered the opportunity, I had to make my mind up in 5 minutes, incidentally. I didn’t know this.

Tacey Ann Rosolowski, PhD

How did that happen?

John Mendelsohn, MD

I came down for the interview, along with a few other candidates, and at the end, they called me in and they said, “John, you’re it, and you’ve got to tell us whether you’re going to do it or not tonight. We want to know tonight.” So I said, “I don’t even have a letter of offer. We haven’t talked about a salary or resources or anything.” Bill Cunningham, who was the chancellor, and B. Rappaport, the chairman of the Board of Regents just said, “You’ve got to trust us. We want MD Anderson to be one of the great things in Texas, and we want it to be one of the great cancer centers on the planet. You’ll get what you need.” Cunningham took an envelope out and wrote a salary on it. I conferred with my wife, and I said, “You know, it feels good.” The big decisions in your life, they’re not entirely rational. Who you marry, you become a doctor, your job; it has to be something that feels good. Of course, there’s rational input first. Well, so we did it. It paid off. It was a good fit.

Tacey Ann Rosolowski, PhD

What was it that you saw about MD Anderson and about the people that were your entry into the institution that impressed you so much?

John Mendelsohn, MD

I saw a place that was passionate about clinical care, and the clinical care was very much research based, and I liked that. I didn’t know about all the financial problems. I knew about some of them. I didn’t know that they were advised to down-size their beds by close to 50%. That was this report I told you about. I met enthusiastic, smart clinician scientists and lab scientists who were really looking for a leader and who I had the feeling would kill for this place, which turned out to be true. Most of the people that I worked with for 15 years would fall on their sword for this place and became very loyal supporters of the programs we developed together. Being president of a university and being the head of a cancer center that I would aspire to make the number 1 in the country: that was appealing. I could have stayed at Sloan-Kettering and continued my research and run a fine department. I could have hoped, someday, to be head of Sloan-Kettering, but those jobs are rare. You shouldn’t pin your hopes on them. Here was this offer. We had lived on the East Coast together, and we had lived on the West Coast together. My dad came from the south, Baton Rouge, and a lot of her family came from Virginia. We said, “You know, it might be fun to live in the south.” And it is.



Tacey Ann Rosolowski, PhD

When you came and you began to get the real lay of the land, once you assumed the position of president, what were the challenges that you saw coalescing? Obviously you got a clearer picture of the economic situation and the management team's report, so how did that take shape for you into a field of challenges that needed to be met?

John Mendelsohn, MD

Everything was being challenged. The hospital and the cancer center had different chief financial officers that didn't agree. You've got to have a budget. I arrived in July. The budget guy for the cancer center said, "We've got to cut another \$70 million." We had already cut \$90 million. The budget officer for the hospital said, "Don't cut more than \$10 million." The faculty said, "Don't cut another penny. You've got to put more money in. We're on life support right now." I don't think I want to go into all the tensions that I saw, but this was a very tense place that was at a crossroads.

I got incredible advice. We have some good friends in Louisville. They invited us to go to the Kentucky Derby. I'd never been. So I'm coming to Anderson in July, going to Louisville in May or April. I spent some time with the head of Sears Roebuck, an extroverted, nice man. Incidentally, I've had no business school training. I've never been to a class. I've relied on smart people and what I've learned.

(My first recruit here was to hire Leon Leach to lock arms with me and do the business side of this place, and he's incredible.) I said, "I'm going to be going down to lead a large cancer center with a budget of \$600 million, and I've had some experience running UCSD's cancer center. Can you give me some advice?" He said, "Yes, don't do anything for 100 days, and go around and meet everybody and find out what makes the place tick and what they think needs to be done, because they know, and you don't." So I did that. I'm a yellow tablet guy.

I made arrangements to meet with each of the departments the first 100 days. I go into a room, sometimes with 50 or 100 people in it, and I'd sit down in a chair in front of them and say, "I have 1 question for you. If you had my job, what would you do differently so your job would work out better and you'd be able to achieve your goals?" They just poured it out, and I took notes, and assimilated it. It was pretty clear to me that there were a lot of functional problems here. They put a new phone system in to save money. You had to push 9 buttons to hear a human voice, so 20% of the people hung up before they made a contact at a hospital. One of the first things I had to do was say put in the old phone system, and you've got to have a human voice within 1 button. Now, that is the most mundane decision. But, that was so important.

We had cut the budget over 2 or 3 years by \$90 million. We had cut programs. We had cut secretaries. We had cut orderlies. We had ruined the phone system. I found out that everybody had a different need. Some people said that we need

more secretaries. We need orderlies. The operating room needed this. What I figured out, probably wisely, was I had gotten good advice. They knew what was needed. Instead of cutting budgets, if each of them got a little extra money that they could put into what they needed, it would work. We had a big faculty leadership meeting offsite within a month, and I wanted to discuss what was needed here. I kept getting complaints about how long it took to get x-rays read and get pathology reports. It was ruining the efficiency of the clinics. I'm getting this from the medical oncologists and the surgeons and the radiotherapists. It was pretty clear to me that in the eyes of the faculty here, they were the guts of cancer care. Pathology and radiology were looked upon as primarily ancillary support services.

At the end of this meeting, I remember I was summing it up. I said, "You know what I've heard you tell me? For the next 30 recruitments here, the majority have to go to pathology and radiology, not to your departments that you've been talking with me about, because they're very important for cancer care, and we're woefully understaffed and under-resourced in those de-

partments." Everybody shook their heads in amazement, but then they said, "You're right." We redid the whole pathology department and gave it a lot of resources, and we strengthened the radiology department. That's the kind of things that turned up by listening to the faculty.

-- end audio segment--

Tacey Ann Rosolowski, PhD

When I spoke to Benjamin Lichtiger, he was talking about how at the blood bank they did this microscopic analysis of all their processes to see how they could make things more efficient, what was being done on the basis of tradition and not logic, all those kinds of things. They found a lot of places where they could just reorganize, the old layout of the lab, just rearranging labs so that people spent less time going between their various work stations. Over the course of the day, the technician walked 5 miles.

John Mendelsohn, MD

Yes, we do that a lot here. We were doing it before I came, too. They did an analysis of a breast cancer patient, put a pedometer on her. She'd go to see the surgeon in one building and the medical oncologist in another building and go down to radiology in

Growth in Research and Clinical Care



John Mendelsohn Faculty Center



a 3rd building. She was a patient with breast cancer and walked over a mile. They began reorganizing their clinics and organizing around the disease rather than around the specialty, which you know is how we do it here now. In the process of doubling in size, which we did over a period of probably 6 or 7 years, you have the opportunity to rearrange a lot of things. We were able to accelerate that process. The building that we're in right now, the faculty building, was built to take faculty out of the clinic area and put their offices in a separate area so we could expand the clinics. The faculty and their secretaries are no longer officed in the clinic. Now, that wasn't as convenient. It was awfully convenient to have your office, step out and walk 3 steps. A senior official in the UT system advised me, "You're crazy to put the faculty across the street. They'll never go to the clinic." They did, because that's the way we were. The faculty had their own building. Now we have 2 faculty buildings for the clinical faculty because we kept growing. We had a chance to reorganize things, and we spent a lot of time trying to figure out efficiencies. We're not good at that. We're not bad at it, but we're not good at it. We could be more efficient.

Tacey Ann Rosolowski, PhD

Nobody sets out to be inefficient, so how did that happen?

John Mendelsohn, MD

The way the operating procedures and the way things are done grow partly out of a plan but partly out of just empirically observing what's working and trying to change things as little as possible. People don't like change. We began a project

my last year as president. I set a goal of trying to cut our costs 20%. I don't know if that's still the way we talk about it, because I went away temporarily right after I retired as president. I went away 6 months on my sabbatical and purposely got out of the patten of what goes on here. We had set up many teams to try to figure out how to cut costs. I don't think that has progressed as rapidly as I think it needs to, because we're still doing fine financially, but something is going to happen in the next 2 or 3 years where it's going to be incredibly important that everything we do is as efficient as possible. The way medical reimbursement is going to change if they bundle. We're going to be told, "You get \$75,000: take care of leukemia," instead of getting a reimbursement for each test you order and each patient visit and each procedure you do. That's going to change all the incentives. You want to have some funds left over to grow with, so you're going to have to do your leukemia treatment as efficiently as possible, and that's going to be a huge incentive. Now our incentive to cut costs is not as strong because it's all billable. I'm exaggerating, but that's the way American medicine works today. I'm sure the administrators in Washington are aware of that and are figuring out how to handle that.

The Board of Visitors as Financial Advisors

Tacey Ann Rosolowski, PhD

Let's go back in time a bit, because we didn't really talk fully about the context when you arrived. What was going on? You said that the economy was growing, doing fine.

John Mendelsohn, MD

Healthcare was changing.

Tacey Ann Rosolowski, PhD

Healthcare was changing. In 1995 Texas legislature had just passed the bill that allowed self-referral to MD Anderson, so there were a number of factors going on that were going to influence MD Anderson as you took over; some positive, some that were troubling. Could you talk a bit about that context and how you saw the ripple effect inside the institution?

John Mendelsohn, MD

Well, you're right. It was a confluence of challenges, like managed care and opportunity created by the ability for our pa-

tients to self-refer. The field of cancer research was getting more and more exciting in terms of what we could bring to the patient. For reasons that were not clear to me, which I ignored; the institution was set on a very stringent reduction in service mode. Again, after meeting with the faculty and assessing what the faculty and I thought the opportunity was here, if we could get the phones answered so you could get an appointment.

Then I had a lot of encouragement from our Board of Visitors. There were some very good businessmen on the Board of Visitors. There were no women involved at that time. I set up a Mendelsohn 101 economics course, and I met with five of them 3 or 4 times for a couple of hours. Of course, they knew our plans. The Board of Visitors is not a fiduciary board, but they're a very involved board, and I explained to them that I thought we had to grow rather than cut, and it would require community support. It would require a belief in the information that I presented, and I got their backing.

Tacey Ann Rosolowski, PhD

What was their response when you presented this alternative retrenchment mentality?

John Mendelsohn, MD

Encouragement.

Tacey Ann Rosolowski, PhD

What was some of the wisdom that you got from these people who were really wonderful in business and corporate?

John Mendelsohn, MD

I remember the advice that one of them gave me. Very early on, we were assessing what I needed to do internally. He said, “You’ve got wonderful people here. You’ve got to hire a chief business officer that knows how to make deals, not an academic, but somebody that’s been out there and has made deals.” Underlying that is the simple idea that you need to plan your business operation. Running a hospital is a business. You have to plan that on the basis of experience in running hospitals and negotiating and making contracts, and it’s not based on a theoretical balance sheet, on the basis of which I’d been advised to cut the budget another \$70 million. It just didn’t make sense. So we got a search firm, and I was lucky enough to find Leon Leach.

Tacey Ann Rosolowski, PhD

When you’re working with an academic institution, the faculty likes to feel as if they’re involved and that they have control. Was there a bit of a controversy, or was there some unease about hiring a chief business officer who was not an academic?

John Mendelsohn, MD

No. There was and still is a lot of pushback about the number of people that are in administration as against patient care and research. I can’t tell you how many people we had in Billing and Compliance. They’re all needed. Is it being done as efficiently as possible? No, but neither is the clinic, and neither is the research operation. Let’s face it; when you’re growing your budget and income from \$650 million to \$3 billion,

probably tripling in size, doubling the number of faculty, you have the luxury of just moving along, and you don’t want to take your time out to work primarily for efficiency. You want to build the new programs. It was only in the last couple of years when I was president that we had to spend more and more time thinking about how big did we want to be, and maybe instead of building new buildings, we should be more efficient and use the buildings we have better. We can’t keep growing at this rate. If you double in size from 25,000 to 50,000 patients, you’ve added 25,000 patients. You double in size from 50,000 to 100,000 and you’ve added 50,000 patients. If you keep growing in a linear way, the amount of resources and the infrastructure you have to build keeps going up in a way that’s unsustainable, so we had to start thinking about that.

Tacey Ann Rosolowski, PhD

What were some of the other pieces of wisdom that you got from the Board of Visitors at the time?



John Mendelsohn, MD

I relied on their advice more than my predecessor, who had great relationships with them, but I went to the Board of Visitors and I said, “I’m going to pretend you’re my fiduciary board if you’ll pretend you are, and I’m going to tell you everything. I’m going to tell you the dirty laundry, and I’m going to tell you my problems, because I want your advice. You’ve all run companies.” They gave us a lot of advice on many, many things. The person running the hospital was a subcommittee of the Board of

Visitors. It began to run through. How do you build efficiencies in? How do you do it in business? How can we do it here?

Tacey Ann Rosolowski, PhD

I interviewed Nancy Loeffler. I think she served on that committee. I remember her telling me about some of the processes they were looking at.

John Mendelsohn, MD

Well, Harry Longwell ran that committee. You've got to interview him. He was the number 2 man at Exxon. That's the biggest company in the world, and he really knew about management and budgets. I used to go to some of those meetings, and he would outline a strategy, and then the physician running our hospital, Dr. Tom Burke, who respected him, would follow that advice. We had other committees helping us on marketing. You've got to market. I think there are 10 or 12 places in Houston that call themselves cancer centers. There are a lot of ads. Even though we think it's a no-brainer, you probably ought to come here for cancer care or advice; you have to explain that to people.

-- end audio segment--

Going into Growth Mode

Tacey Ann Rosolowski, PhD

Even in the '90s, wasn't it the case that the services here were slightly more expensive, and so there would have to be some justification? Not that it was not worth it, but that the patient would need to know.

John Mendelsohn, MD

We're not that much more expensive. The service here was not as good, though.

Tacey Ann Rosolowski, PhD

In what ways was it not as strong?

John Mendelsohn, MD

Longer waits, getting the phone answered. We spent a lot of time the first 4 or 5 years making this a more user-friendly place for the patient. I still was meeting people who remembered "the old MD Anderson." You came into the clinic and pulled a number off the way you do at the meat counter at the

popular grocery store. We started scheduling appointments by the hour instead of, "you're in the morning, and you're in the afternoon." We had a lot of things we could do to make this a better experience. That wasn't true in all the clinics, but it was true in some of the clinics. Come at 8:00 in the morning or come at 1:00 in the afternoon.

Patients still sit a lot. You know why they sit? Because we're very busy. One patient walks into that clinic acutely ill instead of just having cancer; they have a serious problem, and you've got to spend time on them, and it throws everybody else off behind you. In cancer, those kinds of things just happen. Between our wonderful volunteers and the nursing staff being more attuned to this, the patients here seem to tolerate it.

I don't hear complaints about the waits for first appointments. When I first came here, I got a lot of complaints about the waits. There was a lot of complaint about getting in. The wait time to get your 1st appointment could be many weeks or even months. We set a target a few years ago to try to get the average wait down to a week to 10 days. That slips every once in a while, and it's not because people are evil. It's that there are other things. There are logistics. A big, new research program comes along, and a few more people want to stay away from the clinic and do their research. I don't know if we're still doing it, but for a while, we had reports for each clinic every month of what the wait time was and it was made public. You didn't want to be a 21-dayer, because your peers are looking at you saying, "What the heck is going on?" It turns out transparency and the competitive aspirations of the faculty to be doing

their job right is one of the great motivating forces for efficiency.

Tacey Ann Rosolowski, PhD

Was that something you learned on the job here, or was that a bit of wisdom that you got from somebody?

John Mendelsohn, MD

It's a "we." It's not "me." We had an executive committee that met every week. I met one-on-one with the 3 executive vice-presidents: the head of business, the head of academics, and the head of clinical. Honestly, I don't know where the ideas came from. They came from the group. It worked very well. It was very much by consensus. I'm sure I contributed at least 25% of the ideas, but they all contributed.

Tacey Ann Rosolowski, PhD

When you arrived, this interesting kind of confluence; you've got your planning for growth, because that's part of why you came, but you're also playing catch up with some of the systemic difficulties that were created by past growth, things that needed to be tweaked, and then you've got this economic situation. That's a bunch of thorny bushes to walk through.

John Mendelsohn, MD

It was. That 1st year was amazing. The 1st year I was a very hands-on leader, not only making decisions but conducting a whole lot of meetings. Of the top administrative decision-making people on the staff here, more than 80% were gone a year later, through many different routes. I think I only really told 1 person, "You've got to go," and the for the rest of them

things turned up and "Oh, congratulations. I'm glad you got that job." I'm not a very ruthless person, but we had to change things. During the transition we brought in faculty temporarily to take charge of things that did a great job.

Tacey Ann Rosolowski, PhD

This was a process of kind of getting people who shared the vision?

John Mendelsohn, MD

Right. Well, figuring out what our vision would be. We had to write a vision statement, incidentally.

Tacey Ann Rosolowski, PhD

How did that take place? Tell me about that process.



John Mendelsohn, MD

The head of our hospital, who at that time was an MBA, said, "John, we don't have a vision statement." We didn't have any value statement, a list of values. I remember talking to one of the faculty members who is very strongly opinionated and much respected. "I don't know our values. Come on, our mission is to cure cancer. That's all we need to know." We had committees to do the vision statement, and it took about a year. I think I really wrote the final draft. I'm very proud of it. It was bold. "We shall be the premier cancer center." We talked a lot about that. We were number 2. "Do you want to put that in writing?" "Yes." "Based on the excellence of our people, our research-driven patient care, and our science." It was very simple. I think that was very good.

Then we got our tagline, “Making Cancer History,” and that was good. We hired the Richards Group to do that. We had gone through logos with other consultants; it was a joke. Our new logo, cancer with a line through it, finally came from the Richards Group, too. This was so obvious. We had committees for the values: there were 12, then it was down to 6, and then it was down to 4. There were 3 or 4 subcommittees. Then we had a meeting, and the committee chairman presented me with “caring, integrity, and discovery” and why they had landed on them, and it worked. Those values are important. All of our personnel evaluations are pegged to those values, for example. Every business person knows you’ve got to have your vision statement and your values to create your culture. Well, I accepted that and said, “We’ve got to have it here.” We did.

Tacey Ann Rosolowski, PhD

What was the feeling amongst the rank and file about doing that? Was there a sense, “What’s happening here? What are we turning into?” You were recognizing this was an enormous place. It needs to be run like a business, so we need to step up and start doing the things that a business will do. Was there a bit of resistance to that?

John Mendelsohn, MD

No, because it wasn’t looked upon as business. It was looked upon as building upon our caring and the culture. It was a statement of our culture.

Tacey Ann Rosolowski, PhD

What kind of responses did you get to the theme line “Making Cancer History” and then the mission statement, in particular, and also the values? Did you find that having them articulated made people feel more strongly about it? What was the reaction in the wind?

John Mendelsohn, MD

I think the vision statement helped rally an institution that was in the process now of recovering from this drastic cut in budget and this inward look by saying, “We’re going to be the premier cancer center.” It’s a whole different view of the world, if you think about it. I think it was a home run. The values helped us build better communications and more meaningful collaborations between all the various interest groups, the nurses, the secretaries and the data managers, and the doctors. And we wrote sentences after each. I spent a lot of time on that. There’s a descriptive sentence after “caring.” I remember, “We care for our patients and each other.” It’s right in there. People are busy. They’re worried about their family, they’re worried about their wife’s job, they’re worried about their research, and they’re worried about their patients. Here is something you can hold on to.

Tacey Ann Rosolowski, PhD

The shared culture.

John Mendelsohn, MD

Yes. It’s verbalized. It’s not just ethereal.

-- end audio segment--

The Mission behind Growth

Tacey Ann Rosolowski, PhD

This is Tacey Ann Rosolowski, and I'm conducting my 2nd session with Dr. John Mendelsohn in the offices of the Khalifa Institute for Personalized Care. We were going to talk more in depth today about the processes of growth that the institution underwent. Just to start, I wanted to get a general perspective on the whole idea of growth of MD Anderson. Because you wanted to grow the institution, despite all advice, you decided to take that in a very bold way, and this was not just growth for growth's sake. I wanted to ask you what that aim of all that growth was. What was the mission?



John Mendelsohn, MD

Why did we want to grow, especially at a time when we'd been cutting back? There were probably at least 3 reasons. One is that, as the public began to understand more and more about the complexity of cancer care, there was a demand that was building up. When a person learned that they had cancer they wanted access to an outstanding facility with experience. In fact, between the East Coast and the West Coast, there were very few institutions that could provide that, and we were certainly one of them. We happened to be ranked the number 2 cancer hospital in the country, based on our reputation and some statistics and things like that, so people wanted to come.

The 2nd reason is that we probably had hundreds of research programs going on here, and a lot was being learned about cancer, and there were a lot of new ideas about what we could do in our research. Each research program wanted to grow. We wanted to do more breast cancer research. We wanted to do more research on genomics. We wanted to do more research on radiation therapy with new modalities. There were legitimate aspirations to expand many different research programs expressed by the faculty when I met with them during the first 6 months.

Then the 3rd reason for the way we grew has to do with what I learned talking with the Board of Visitors and getting advice and having lengthy discussions with Leon Leach, who I recruited as my executive vice-president. He was the only one with that title for a long time and my first chief compa-

triot in managing MD Anderson. We sort of made a deal. I would provide expertise in academics and research and patient care, and he would provide expertise in business and the administration of a health institution, and we would work together. We decided that for MD Anderson to achieve its mission and its vision, growth in patient care and research had to be in parallel.

We had 4 missions: clinical care, research, education, and prevention. We felt that it was very important to grow each mission area if we were going to meet the demand for more care and increase the number of patients. I picked a 50% increase in patients as the target. That was thought to be a huge, big, hairy goal. We actually achieved more than 100% in less than a decade. If we were going to grow in our patient care capabilities 50% and build the facilities and hire the people, if we were going to be able to give the same quality of research-driven care and provide the clinical trials and do the same thing for that increased number of patients, we had to grow the research program 50%. It was important to grow the education program 50% and the prevention program. Immediately, we were designing a growth strategy that encompassed the missions of MD Anderson, which is a little different than saying, "I'm going to pick 5 areas and grow in those." There are arguments both ways, but for what I saw in 1996, I thought this was the right way to grow MD Anderson. When you grow in your clinical activity, you make more money, you have larger margins, and they can be used

to grow the other activities too. There's no question that the research going on here is subsidized by the clinical activity.

-- end audio segment--

Tacey Ann Rosolowski, PhD

What were some of the numbers that you achieved in terms of growth in the clinical activities to subsidize the other areas after 2 years or after 4 years? How was that worked out?

John Mendelsohn, MD

After 10 years, we more than doubled the number of patients. We more than doubled the number of faculty. We tripled the number of trainees. We tripled the number of employees. We actually ended up quadrupling the amount of space.

Tacey Ann Rosolowski, PhD

You achieved those goals pretty quickly, getting a good margin with patient care so that you could start subsidizing research and the other areas.

John Mendelsohn, MD

We did very quickly; first of all, by the faculty being excited and anxious to do this, and then by doing some simple things to improve efficiencies, like fixing the communication system, like putting in procedures to reduce wait times so that you could get an appointment here. When you came to the clinic, you could get in without spending all day waiting. And by helping to streamline the clinical research programs so that we essentially doubled the number of patients on clinical trials. A lot of people who come to MD Anderson come because the

standard therapies failed and they want access to clinical trials. It was impressive to me to learn that the majority of our patients don't come from greater Houston, which is very different from what I saw at Sloan-Kettering, where 85% of the patients came from greater New York. That's 20 million people. It means that a lot of patients that came here drove a long time or got on airplanes to come here. You've got to have a special reason to do that. It's not just to get another opinion. It's to go to a place that has real expertise and can offer something different.



It's not just to get another opinion. It's to go to a place that has real expertise and can offer something different.

Tacey Ann Rosolowski, PhD

In your interview with Dr. Olsen, you said that you were really influenced by a book by Michael Porter, Competitive Advantage, around the time when you came here. He had that bit of wisdom that said you could be Kmart or you could be Saks Fifth Avenue, but you couldn't be both.

John Mendelsohn, MD

As I said to you before, when I learned I had this job, I said to myself, "Wow. I've had zero formal training in business," although I'd learned a lot about business. I called my son who was at Wharton. I said, "Quick, give me a reading list." My son thought for a while about what I was getting into, and he said, "Well, I advise you to read books by Michael Porter, who is an expert on competitive advantage." I read his book, and subsequently, I read other books he wrote, and we became very good friends. He's a friend of MD Anderson. A number of people here collaborate with him now, studying how to manage the business of delivering medical care bet-

ter. This book explained a very important principle to me by giving the example of Southwest Airlines. Southwest Airlines focused on a certain market and had a standardized way of doing things as cheaply as possible. You didn't get assigned seats, and you had to wait in line, but the planes were on time, they were clean, and they were able to provide the best, inexpensive way to fly. When other airlines that gave you assigned seats and first class and all kinds of special privileges tried to also combine with that some cheap seats and minimal services they couldn't do it. You can't do both.

An example he gave was you can't be a Walmart (the cheapest) and a Saks Fifth Avenue (best quality). You have to decide what you want to be, and then you have to be the best at it. When I got to MD Anderson, we had a lot of discussions about what we want to be that didn't take very long, and there was no question. We wanted to be the best place to deliver cancer care, which means this isn't going to be the cheapest, and we're not just going to find the most efficient way to do things. We're going to find the best way to do things in an efficient manner. The research had to be a part of it, and the time to do the research had to be guaranteed to faculty. We were not trying to create a product that would compete with well-trained oncologists in the community who were not doing research and who would refer their tough cases to us, so that really set a standard for how we would approach things. We are designing programs that are going to be the best, not necessarily the cheapest. That was not always what we were advised, but there wasn't much argu-

ment internally once we thought it out that way, and I owe Mike Porter that insight.

Tacey Ann Rosolowski, PhD

How long did it take to come to that consensus about what you wanted to be?

John Mendelsohn, MD

A couple of months; we had to decide. As I told you, I was advised to cut the budget. One of our 2 financial people wanted to cut it another \$70 million, and the other one said, “No. We only need to cut it \$10 million.” We actually added \$20 million to the budget, and I didn’t know where that was going to come from. Looking back on it, that was gutsy, and I have to give the regents and my bosses credit for allowing us to do that. It was an act of faith that, okay, we’ll get those patients in here. Forget the advice we’ve gotten from well-paid consultants. We’re going to have so many patients wanting to come here because we’re going to be the best place, and let’s look at it that way. Fortunately, it worked.

Tacey Ann Rosolowski, PhD

Tell me a bit about that initiative in establishing excellence as a primary goal.

John Mendelsohn, MD

It wasn’t a hard initiative. That’s the way we were. The doctors here want to be the best clinician in their field. We are sub-subspecialists. In many cancer practices, the same doctor has to treat breast cancer and lung cancer and colon cancer and maybe even leukemia. Well, almost every doctor here

is a sub-subspecialist. He or she is treating one of those diseases and usually one modality, either surgery or radiation or chemo. Furthermore, they’re not alone. They’re on a team of between 2, 5, 10, and even 15 other people who are similar sub-subspecialists. That breeds excellence. There are no surprises after a while. You talk about your tough cases, you have conferences every week and review what you’re going to do, and pretty soon you’re an excellent expert in your particular area of cancer.

-- end audio segment--



Tacey Ann Rosolowski, PhD

You mentioned that articulating the values of caring and integrity really help solidify the culture of MD Anderson. I’m wondering if bringing this idea of excellence, being so much a cornerstone of what MD Anderson is about, to the surface and articulating it changed the atmosphere a bit.

John Mendelsohn, MD

I think it gave people a vision. That’s the single sentence of our vision statement. We shall be the premier cancer center in the world based on the excellence of our people, our research-driven patient care, and our science. That was written with this very point in mind. If you walk around saying, “Hey, we’re going to be the best, and we’re excellent,” and it’s a sentence you can do in less than 1 elevator ride and it’s on the walls and it’s on the stationary and it’s said over and over again, if it’s phony baloney, it isn’t going to work. But if

it's an accurate statement of an aspiration that we could achieve, it gives you something to focus on and feel good about.

Tacey Ann Rosolowski, PhD

It was certainly more than that, too. That word became part of people's performance reviews and a benchmark that they begin to measure themselves against and having conversations about what that meant for staff members, for all sorts of care delivery, individuals as well as faculty and research. It became very thoroughly threaded through the fabric of the institution.

John Mendelsohn, MD

I think every business and every medical center and every university wants excellence, but I think we're fortunate here. We're very focused. Most medical schools have to deal with aspirations in cardiology, and pulmonary and, by the way, GI and brain and surgery and the psychiatry department. They want to be excellent, one of the best. All of them want to be the best in the world. We're just dealing with cancer, and that focus means there's much less pulling and tugging. You're trying to get people together in a room and say, "How are we going to be excellent?" There's still plenty of pulling and tugging, because there are many kinds of cancer, and there's laboratory research versus clinical research, but in most medical centers those same pullings and tuggings would go on in each of the various types of illness and disciplines. I love the focus here, and I think when I came here I

understood that this place had the potential to be what our vision statement said because we are so focused.

There have been opportunities in the past, and during the period when I was president, it was discussed: should we combine with the Health Science Center? Isn't it silly to have 2 branches of the University of Texas next door to each other? You need cardiologists and pulmonologists, because cancer patients get sick. I said, "No." When I came, we had a dozen of those people. When I finished being president, we had over 100 people in general internal medicine. They had a whole separate division, but they were full-time members of our faculty, and they were interested in problems in their disease that cancer causes. The pulmonologists were interested in what's a "white lung" on the x-ray? Is it infection? Is it a drug reaction? Is it cancer? The cardiologists were interested in the side effects of chemotherapy that affect the heart. We developed the expertise we needed that kept it internal. We didn't want to discuss joining with the Health Science Center. The Health Science Center has a School of Public Health, which is terrific. They have a medical school. They have a nursing school. It's much harder to focus when you've got to cover all those bases and be fair to so many different constituents.

-- end audio segment--

Growth in Research and Clinical Care

Tacey Ann Rosolowski, PhD

It's really interesting how that was R. Lee Clark's vision, and that independence is still the right way to go. You began to touch on my next question, which is what was your vision, or how did your vision evolve during that first 100 days when you were talking to all the faculty and other divisions about what they needed? How did that vision evolve in the first, say, year or 2 years and alter what you believed you wanted to achieve here? And then, of course, I'll ask you how you went about doing it, which probably will be a whole different story. But how did it start?



John Mendelsohn, MD

It turns out that there were many things that were needed. We needed a change in the way the basic sciences were structured. We needed to complete something that had begun, which was to reorganize our clinics around the disease entity rather than around

the professional approach that's taken. If you're growing and building new space, then that gives you a wonderful opportunity to redesign things. Rather than picking a top-down approach and saying, "This is how we're going to do it," I think the right way to describe the strategy that I and the leaders took was to appoint people who were on the front lines, in the various areas, and task them with coming up with what they needed and come back and present it to the executive committee and get advice from the faculty. You can't get consensus on anything, but I find that if the faculty and the leading administrative people here feel they've had a chance to have a role in the decisions that are made, once the decision is made, they'll get behind it. Whereas if it's all top-down and a team of outside experts come in and says, "Here's how you've got to do it," and they haven't been really consulted and listened to, there's going to be pushback. It's just human nature. So we did a lot of the former.

-- end audio segment--

Tacey Ann Rosolowski, PhD

How did you feel the basic sciences needed to be reorganized?

John Mendelsohn, MD

It's a very complicated area, but in some ways, the basic sciences were extremely integrated here compared to at other institutions. There were a lot of laboratory scientists that were interested in cancer, but the way they were resourced and the way they were managed was different if the basic scientist happened to be in a basic science department compared to a basic

scientist who happened to be in the clinical department. We still have the term basic science, but basically anyone who ran a lab was a laboratory scientist, and anybody who ran a clinical trial was a clinical scientist. They're both scientists, and they both need resources. We tried to set a more uniform and transparent way of dealing with those things.

Tacey Ann Rosolowski, PhD

How successful was that?

John Mendelsohn, MD

About as successful as I've seen in any academic medical center. It was a pretty simplified leadership structure we set up with a chief business officer, a chief academic officer, and a chief clinical officer. Those weren't the actual titles. When you're the president, you don't know, because unless you're really doing a terrible job, people aren't going to come tell you that you ought to be doing something differently. At least they didn't here very often. They'd give me advice, certainly. If anyone had a problem, they knew who was accountable for the solution and who to go to. If you were do-

ing research, you went to the person that we began to call the dean and the provost. If you were trying to develop a clinical program, you went to the person we're now calling the physician chief. If you had anything to do that required money and space, you went to the people working under the chief financial and business officer. As long as the 4 of us were in sync, it seemed to work out fine.

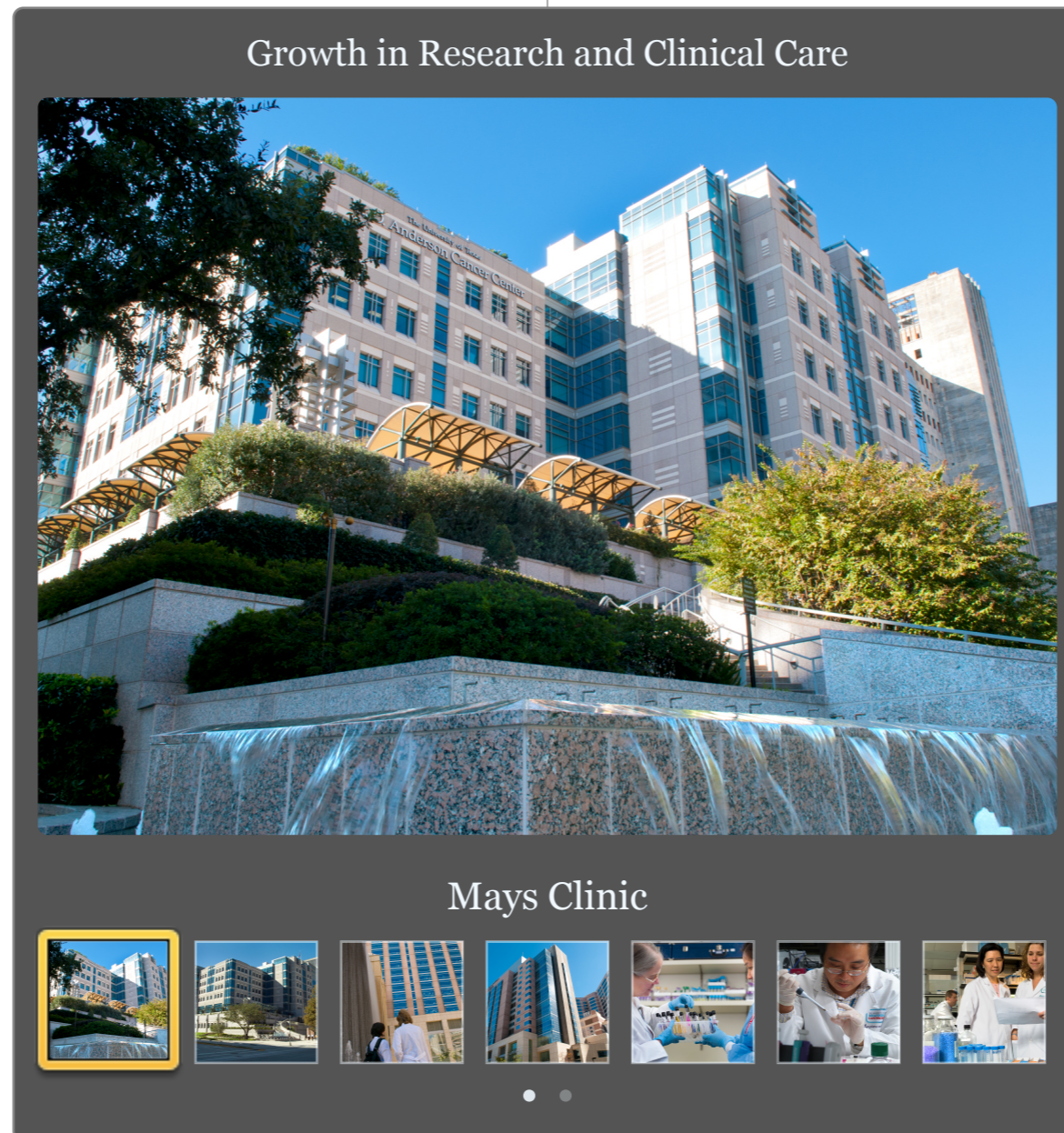
I met with each of these 3 individuals one-on-one every week, and the agenda was what's going on that could be a problem, and what are you doing about this or that? Then we'd meet as a group and discuss things, and for most of the time, there were very few surprises.

Tacey Ann Rosolowski, PhD

How would you describe the relationship that you had with this team? How did your personalities balance and working styles balance?

John Mendelsohn, MD

Overall different, but I think we locked arms. When the rub-



ber hits the road, we're the ones that are accountable for achieving this vision, and let's help each other do it. It was very collaborative.

Tacey Ann Rosolowski, PhD

Can you give me an illustrative example of that collaboration?

John Mendelsohn, MD

We wanted to grow our research programs, and there was initially a tremendous emphasis on making sure the hospital and the clinics were okay. We put up a new faculty center for physicians' offices and their support staff, we raised the funds to put up the Mays Clinic, and we expanded the resources for imaging. We had 1 new research building, the Mitchell Building, that went up but to make a major growth in our research, we had to think about putting up buildings for which we had no adjacent space at the time. This is when we considered going to the South Campus, and that was a big deal. It was a mile and a half away.

In the UT system, it had been considered a big deal when we started building across Holcombe Boulevard, put up those walkways, and you sometimes have to walk 10 minutes now to get from 1 clinic to another area. It's supposedly better for your health; although I see the same obesity problems here I see everywhere, unfortunately. It has to do with fructose more than walking, I think.

The South Campus took a lot of give and take and planning, because it was a big change in the community and a big financial investment. We had to put the clinical activity in proton

therapy down there. And we had to make decisions about which research programs would go there and how we would bundle them together so it made sense, because they are a mile and a half away. There were a lot of meetings, and it worked out pretty well.

Growth in Education and Prevention

Tacey Ann Rosolowski, PhD

I want to come back to the story about Research Park again, but it seemed like that was such a key working relationship to have this team of individuals who were really in sync about the vision, and then to have that sense of transparency that they were getting the ear of individuals who were coming up with new ideas for new programs or to get the feedback from the front lines about how things were happening on the ground. In terms of growing those 4 dimensions of the institution, how would you tell the story of how one grew a bit and then the other grew a bit? How did you 4 manage that process?

John Mendelsohn, MD

Of course, the main growth was in clinical care and research, and in the clinical care area there was pretty much a consensus on how to grow. We wanted to continue to emphasize ambulatory care. We



wanted to create an ambulatory environment where the doctors were grouped together by the type of cancer, and the Mays Clinic made this possible. When you go to the Nellie Connally Breast Center, you're entering an area the size of a football field that only deals with breast cancer and has 1 hello window. Now they have more, but it started out with 1 hello window. The breast cancer patient checked in there and saw all the people that they needed to see.

Tacey Ann Rosolowski, PhD

Was instituting that at MD Anderson in the wind nationally? How innovative was that?

John Mendelsohn, MD

It was in the wind nationally, but we were doing it much more aggressively and in a more committed way. Now, let me say that in the average hospital you couldn't do what we did. The average hospital had to build hello areas for heart disease, lung disease, kidney disease, brain disease, gastrointestinal disease. There are huge competitive influences. Every one of these clinics, except for 1 clinic that's called General Medicine Clinic are dealing with a kind of cancer, so it was easier to do here. It was a commitment that we made. We tore down walls. We redesigned things. As I mentioned, we pulled doctor's offices out of the clinic and put them in a separate building, because if you're going to have a clinic that has surgeons and medical oncologists and radiotherapists there, they can't all have their offices in that area. Previously, many medical oncologists had their offices in the area. It involved a whole lot of planning, but on the clinical side, I think there

was a pretty good consensus on what we wanted, and it was started before I got here. I really want to give credit to the people that planned that. I certainly had a role in moving that along, but this idea of reorganizing care came up through the faculty and some of the faculty leaders.

Now in the area of research, there are infinite opportunities. The way Dr. Margaret Kripke and I handled that was to have meetings and listen. When we finally made the decision we were going to have a south campus and we were going to pick out some areas to emphasize, then we solicited from the research faculty leadership: what do you think we should expand in? And my question was: what are the areas that are ready for growth and research that MD Anderson already has strength in so that we can become leaders? We don't want to take on something we're going to be 10th best. And where do you think that there could be an impact on patient care if we expanded that research area? I think we got a list of 40, and we had a series of 4 or 5 meetings, each of which lasted a few hours. We appointed champions of each of those areas, and we went through and we boiled it down to 5 or 6. The faculty knew that there was going to be a fair amount of money put into the selected programs and the new space. Honestly, I got no complaints, because the faculty felt that a fair selection process had been put in place and this wasn't top-down. This was a consensus built out of their own leadership. They accepted the fact we would expand in metastasis and immunology and in experimental therapeutics. This

made sense in the overall mission of being the number 1 cancer center, so they were very different processes.

-- end audio segment--

Tacey Ann Rosolowski, PhD

Do you want to talk about education and prevention and finish out the 4 areas?

John Mendelsohn, MD

Education is a complicated area, because we have no medical students. We have a graduate school program which is shared with the Health Science Center, and each of the chief academic leaders here has shared with me the idea that we want it to be better. It's very good, but we want it to be better. We want to attract the top students.

The main training programs involve the people that deliver medical care, so we have lots of fellows and residents who are learning the specialty of oncology. We have nurses learning the subspecialty areas, and people learning how to manage the x-ray equipment and deliver the radiotherapy and run the diagnostic laboratories. In the area of our clinical fellowships, we work very hard, supporting the people who run those fellowship programs. I know that in surgery, Dr. Pollack is very proud that they have 6 positions, and they only have to list 7 to fill the positions from the national lottery. They knew they'd get filled. We improved the teaching in all of our programs. When the word gets out that really bright people are coming, other bright people want to join them. We raised the standards in those programs, and we did it in many programs.

We have one of the top programs in radiation physics in the country. We have one of the biggest physics groups in any academic center. I think it's 80. They're not all faculty but when you're running 22 CT scanners, and all the radiotherapy and proton therapy equipment we have, you need a whole lot of engineers and physicists. Many of them are faculty members, and some of them are really strong professionals that are not on a tenure faculty track but are here because they love working on this kind of operation.

Tacey Ann Rosolowski, PhD

What has been the effect of having raised the standards in an arena like radiation physics and having critical mass of people who are really, really into this particular area?

John Mendelsohn, MD

As you're growing, you advertise and you've got some good friends you can call for names to recruit. In parallel for example, we train students in how to run the kind of diagnostic tests that you need to run in the pathology department's diagnostic lab, then each year, we hire the very best students. There's a big shortage of these people. You're training the people you need. And you're also hiring some of your best fellows in medicine and surgery and radiation, so you're creating a next generation.

Tacey Ann Rosolowski, PhD

There was also the great milestone of the degree granting status that happened. Maybe you can talk a bit about that.

John Mendelsohn, MD

MD Anderson started out giving degrees in 1970 or '71. When they created the Health Science Center, the regents decided that the graduate school should be combined. We already had one. Dr. Clark was very generous. He said, "Well, they can give the degree, because they're a complete medical school." There is a lot of feeling here that they are excellent partners to have. But MD Anderson was carrying a disproportionate share of the reputation and the load; the majority of the teaching, the majority of the lab work were going on in our labs. If the degree came from both institutions, then that would help us attract the very best faculty and students. I went to the UT system and said, "We'd like to make it a joint degree." Of course I was told this was very complicated and don't waste your time on that. Everything's fine. I was also told not to build anything on the other side of Holcombe Boulevard either, but we needed it. We went through all the hoops, and Dr. Tomasovic, who is under Dr. Kripke, had to produce 2 telephone books' worth of documentation. We had to prove that we were good scientists in order to get certified. We did it, and I have in my office a copy of the 1st degree that has both signatures of the 2 presidents on it. When we do the ceremonies now, both presidents simultaneously award the degrees. I think it's very important for MD Anderson to be a degree granting institution. We now completely join the field of academic medicine, not just in research, but also a degree granting education.

Tacey Ann Rosolowski, PhD

The idea that MD Anderson has been a bit weak in the basic

sciences area has always been a sticking point. To what degree has the degree granting status helped to change that, if at all?

John Mendelsohn, MD

From the very beginning, we put a concerted effort in trying to take what was, I think, a very strong basic science program and make it into an outstanding basic science program. We succeeded more in building the clinical research program than in building that program. All of them grew. It's interesting and good that our new president comes in, and after sizing things up, he has decided he really wants to make an even stronger effort to build up the basic science and bring in people that are of the caliber of the national academy and that can capture Howard Hughes Grants, and I applaud that. Now, we certainly set the groundwork for it, and we built on the groundwork that had been set by my predecessors. I think MD Anderson is ready to have more of the world's leading scientists. I know Dr. DePinho has made that one of his goals, and that's good.

Tacey Ann Rosolowski, PhD

What do you think is the reason for MD Anderson being slow to come to that point, being ready?

John Mendelsohn, MD

I'm the first laboratory scientist that has run MD Anderson. It was a confluence of issues involving personalities that I'd rather not get into and what was emphasized and where you could make rapid progress where in other areas you might make slower progress. It was also a matter of competition.

Right next door was Baylor. Baylor's science program was in the top 20 of any American academic medical center, and it still is. That kind of competition is now becoming more and more of an interesting collaboration and an asset. I think the collaboration and interaction with Baylor has been improving. It's complicated because officially we're tightly collaborating with the Health Science Center, which also has some very good scientists in it, but not, as a whole, of the caliber of Baylor. Here you have 3 institutions all within a 5-minute walking distance of each other. I think there were a lot of sociologic issues, a lot of internal issues in terms of what the leadership here was experienced in and good at and what was being emphasized. There's a time for everything. I think right now the goal should be to maintain this incredible strength we have in translational and clinical research, which certainly expanded and helped rank us number 1 over the past 15 years, and add to it an equivalent strength in fundamental laboratory research, which would round things out.

Tacey Ann Rosolowski, PhD

Let's talk about that 4th area, prevention.

John Mendelsohn, MD

My predecessor, Dr. LeMaistre, was very interested in prevention. He was on the original Surgeon General's Report that said smoking can cause cancer, which was a very brave thing. He always wanted to bring prevention into our mission, which it wasn't. He convinced Bernard Levin, who was a gastroenterologist, to become the head of a new prevention division. He had the ability to move some resources in that direction, and

we built a prevention program, which became very strong academically and moderately effective in having an impact clinically. I think the main challenge, and it's a very difficult challenge, is most people that come to MD Anderson as patients have a sign on them, "I've got cancer," or "I've got pancreas cancer, or breast cancer." The people who come to our prevention clinic are usually people that are well. They're probably going to their family doctor, and ordinarily when they get sick, they go to Methodist or St. Luke's or Hermann Memorial. People who are healthy usually want to avoid coming to a cancer center hospital and this is a challenge. We thought of putting up a prevention clinic out near the Galleria, away from all of our patients with cancer. That's still something we're considering. If we're going to have a major impact on prevention beyond researching it and learning how to do it, and impact the many of thousands of people that need to be screened in order to carry out prevention, we have to develop the model to do it. Frankly, there are so many things pulling on the resources we have that that has not moved into the top priority so far.

We talked about having an executive program. People fly to the Mayo Clinic to get a complete workup. If you're going to do the complete workup, you've got to have cardiology and diabetes covered with world-class experts, which the Mayo Clinic can do and Hopkins can do and many places can do. We're not set up that way. Our world-class experts that we have high numbers of are in cancer; it gets complicated to ask somebody to come and do an executive workup just for cancer. At one time, we thought of setting up a joint program with Texas

Heart. There are a lot of ways to carve this up. It needs some attention if we're going to do it right. If we don't do it right, we don't want to do it.

Tacey Ann Rosolowski, PhD

Were there some conversations with the Texas Heart Institution about that?

John Mendelsohn, MD

Yes, there were. It didn't rank high enough on the priority list. The amount of effort it would take and the impact it would have on what we're already very good at wasn't as strong. Wisely, people here are really focused on what we're really good at. If you go to the airport, you can buy these books on how to be a great executive. One piece of advice came from Jack Welch: Be number 1 or 2 at something or don't do it. Well, we didn't articulate that, but I think that's part of the feeling here. If we do it, we want to be number 1 or 2, but the setup of a major prevention screening program that would be 1 or 2 would be a very major undertaking.

Tacey Ann Rosolowski, PhD

You mentioned the executive workup. Not only are they very elaborate processes that require an individual to go to a lot of specialists, but they're also extremely costly. I assume that part of the thinking about MD Anderson beginning to offer this would be that it would be a real revenue generator and maybe get some real important people to come in. How was a model being thought of to kind of offer that kind of service, of-

fer prevention for the community? What were those conversations?

John Mendelsohn, MD

There's an unnamed hospital in this city where if you're a wealthy person, you go in and you're in a luxury environment. We're very proud here that all the patients are in the same environment. In 1 room might be the CEO of a Fortune 500 company and in the next room might be a gardener or someone in a small business. They have their white gowns on, and nobody knows the difference. They're all getting the same standard of care. I don't think there is a strong sentiment, on my part or anyone's part, that a public university that reports through the regents to the state government should set up some boutique program for wealthy people to fly in from all over the world. If we're going to set up a prevention program, it's got to be for everybody, and that was the way most of us thought about it.

We're very proud here that all the patients are in the same environment...

Get rid of the traffic jams. Get rid of the waits. You should go to a prevention clinic, and to be able to have an appointment say, at 2:00. There are no emergencies, so you ought to be able to keep the appointment. If you go into one of our prevention clinics you're seeing a prevention specialist, but often they're also taking care of a sick breast cancer patient who suddenly comes in because she's having seizures because it went to her brain. This prevention specialist is going to peel out of that clinic. We have ideas on having the prevention clinic

staffed in a separate location, and specialists would say, "I'm not doing general cancer work that day. I'm just going to go to the prevention clinic." There's been a lot of thought on it.

Marketing and Fund-Raising

Tacey Ann Rosolowski, PhD

How do you want to tell the narrative of attacking these problems, these areas now?

John Mendelsohn, MD

The attacking was done by 18,000 people. It wasn't me attacking. The people that did the attack were the people that were on the front lines and were in charge of those areas. When you want to grow, you need a budget. In the clinical areas, we had a rule of thumb. If you want 10% more income and 10% more money to spend, figure out a way to bring in 10% more revenues. If you're going to hire some scientists, you better hire some more clinicians, because the system is balanced and working now. We set targets for departments, the leadership did not set a target for each individual. The breast program wanted to grow 20%, and we said, "Okay. You want to grow 20% in clinical activities and research? You've got to see 20% more patients." Remember, we talked about the balance. You

can hire 1 person to see all the patients and another one to do research, or you can hire 2 people and each of them do half and half. We don't care how you divide it up, as long as you produce the needed patient volumes, and that was the approach we took.

Tacey Ann Rosolowski, PhD

What was the result to that demand for change?

John Mendelsohn, MD

The clinical faculty doubled, and each area handled it differently. You're going after people, and each person has different aspirations. Of course, they come in here and apply for a job: "Well, I want to do research, patient care, and teaching." But you learn that some people really just love patient care, and they're doing the research because they want to feel they're contributing. There are some people that just love research, and patient care is a drag. I believe people are going to do their best if they're doing the things that they fit with the best. We used the word fit in the last discussion often. My encouragement to the department chairs was get a fit with a group of people so you get your bases covered in the clinic and are doing the kind of clinical trials you want and have the research you want.

Tacey Ann Rosolowski, PhD

I already knew from what you said that there's not a micro-managing attitude. It's just really let the individuals within each of their sphere of influence figure out what works best for them.

John Mendelsohn, MD

Yes. I talked about how we approached resources. The limiting thing became space. You could have a great research plan, but if there's no lab space open, you better not ask for the plan this year.

Tacey Ann Rosolowski, PhD

Would you like to talk about space, or would you like to talk about capital campaigns next?

John Mendelsohn, MD

Oh, I don't like talking about space. That's the hardest. We built a lot of buildings here. It takes 4 years to build a building. Until recently, every time we built a building that was supposed to have shell space in it that we could grow into, it was full by the time it opened. With our expansion of the hospital, we built enough space so that I hope it isn't full until 2018 or 2020. That was the plan; we'd open 2 floors every couple of years. We haven't achieved that in the clinics, because they're crowded. We haven't achieved that in the labs, which are really crowded. Space is always a challenge.

Tacey Ann Rosolowski, PhD

Actually, the dramatic increase in demand for services was reminding me of some of the issues we were talking about when you first arrived here, which were how to get part of the market. The demand was increasing, but people, to an extent, had some choices. What was the approach in presenting what MD Anderson could do for the public? You hired the Richards Group to help with marketing. What was that about?

John Mendelsohn, MD

Well, we did change the culture. Prior to 1996, many of the doctors here only wanted to see patients that fit their research protocols. Seeing a "routine patient" that wasn't complicated pulled them away from their research. That wasn't uniform, but it was a challenge. I remember the first faculty meeting. We needed more radiologists and pathologists. The other thing we talked a fair amount about was what did we want MD Anderson to be? I got a very clear statement from the faculty that we want to be the number 1 cancer hospital. I said, "Well, then we've got to do things differently, because if we're going to be the number 1 cancer hospital, we have to be the place you want to go to 1st when you get cancer. Two-thirds of those patients aren't going to be research subjects. They're going to get cured or have long term disease control. We have to give cancer patients the feeling that this is where they want to go for expert care, and in case they are among the 1/3 who aren't going to live 5 years free of disease they will have access to our experimental treatments.



I remember the lymphoma clinic was 1 example. I think it went from 500 or 600 a year to 1,200 a year almost immediately when they opened the doors and said, "We'll welcome all stages of lymphoma, not primarily the ones that are advanced and need experimental therapy." Each area was different. The surgeons, of course, were more interested in seeing the fresh cases, but the medical oncologists love clinical

research, doing clinical trials, and they love seeing patients that would be eligible. I think things did change, and we had more of a feeling that we want to be the “go to” place: no matter what stage your cancer is, come to us because we give you the best hope of a cure.

It was also worth pointing out that if you see patients with a new diagnosis of cancer, 1/3 of them are going to run into trouble within 5 years and need experimental therapy, and you’ve got their original records. You can follow the long-term course of their disease, and you’ll learn more about how to take care of cancer than if you only take patients from another hospital when they suddenly find that they’re advanced stage and refractory to standard treatment. There was a re-arranging of thinking. I’m sure many Faculty thought that way already, but there were many Faculty here who didn’t.

You’ve got to be able to get an appointment within 7 days, on average. You’re not going to wait 3 1/2 weeks for an appointment when you learn you have breast cancer. And you’ve got to make it a little more user friendly in terms of wait time when you’re in the clinic, because we’re often dealing with people who want to get back to work. They want to be seen.

Tacey Ann Rosolowski, PhD

What are some other changes in either practicalities or attitude that you felt were undertaken in order to attract more people to MD Anderson?

John Mendelsohn, MD

We kept building the research programs and the laboratories

with which the clinical investigators could develop collaborations. So for example, when I was at Sloan-Kettering as Chairman of Medicine, there were no PhDs in my department. Dr. Hong here, Chairman of Cancer Medicine, probably has 70 PhDs in his department. Being someone who was experienced and had a love of translation of science to patient, I encouraged growth in that area. In my own research, I brought the laboratory to the patient. In that area, we were probably more successful in recruiting than in attracting basic fundamental researchers who were National Academy members or candidates. You need both. You need really fundamental scientists that are looking at something that may not have apparent application to cancer right away. They have to be interested in cancer, or why bother coming here? You also need scientists who are studying human cancer and applying what’s been learned by the fundamental scientists to the problem of the disease in a cancer patient. We’ve got a number of those, and we want more of them.

-- end audio segment--

Tacey Ann Rosolowski, PhD

How did you go about letting the public know what was available here?

John Mendelsohn, MD

The marketing and the capital campaign come together. When I came here, we did some market surveys, and we weren’t very well known out of Texas. In Texas, we were thought of very



well. At that time, the Dallas Cowboys and MD Anderson, I think, were 2 of the short list of 3 or 4 that the whole state was proud of. The Dallas Cowboys have dropped down a bit, but MD Anderson is still on anyone's list in Texas as something that Texans are proud of. In any one 5-year period, we'll see somebody from every single county in the state. When we thought about who we wanted to attract here as patients, what kind of faculty and trainees we wanted to attract, and the fact that we wanted to be the premier cancer center in the world, we said to ourselves, "We've got to be known better outside Texas, and we have to market ourselves." At the time, our marketing budget was miniscule. I think it was \$1 million, and our operating budget was close to \$1 billion. It's gone up more than that now. We developed a logo, we developed our catchphrase "Make Cancer History," we paid more attention to how we advertise.

Tacey Ann Rosolowski, PhD

What were some of the issues you thought about with advertising?

John Mendelsohn, MD

We did a survey. There was a man named Martyn Howgill that worked for Leon Leach. We learned that a key thing in attracting patients here, is to realize that they are initially going to their general doctor, who is already affiliated with a hospital that has a cancer program. Things happen quickly. People are frightened. Except for leukemia and brain cancer, there's no emergency with most cancer, but people want to be seen tomorrow. And doctors would like to keep control of

their patients, and they want the business. "It's an emergency. You've got breast cancer. We've got to take your breast off tomorrow." There's no emergency here. We learned that people have to have in their mind that MD Anderson is the place that has the best hope for them if they happen to get cancer, before they get the disease. Then, if they get the disease, the reflex is, "Wait a minute. I want to know what MD Anderson thinks before we decide." We had to design marketing and advertising with a modest budget with that as the goal, to get in people's minds that this isn't just a place to go when all hope is gone. Cancer is a complicated disease to cure, but it often is curable, and we are really skilled at it. We've got tremendous expertise at it. You ought to get our opinion before you decide what you're going to do.

Tacey Ann Rosolowski, PhD

What did that 1st marketing campaign look like to change the public perception?

John Mendelsohn, MD

It was modest; some advertisements and billboards and a certain emphasis we put into the stories that came out in the newspapers. We sent a whole lot of information out. We were already doing it. We did a lot more. We sent out information to news agencies. It's usually in printed text. It's now done by the internet, but the stories were written in such a way that positioned MD Anderson to be the place of hope.

Tacey Ann Rosolowski, PhD

When you first upped the marketing budget, what did you up it to?

John Mendelsohn, MD

I think it was \$3 million.

Tacey Ann Rosolowski, PhD

What is the marketing budget now?

John Mendelsohn, MD

I don't know. I haven't been in charge of it for a while. We developed plans to expand marketing tremendously. We reduced some of those plans but the budget was approaching, I think, between \$10 and \$20 million a year. I don't know where we are now. It's a \$3.5 billion operation running now, but there's never enough money. I believe that a certain expenditure for getting the message out about MD Anderson is worthwhile for attracting patients, for attracting doctors, for attracting faculty, for winning the polls and being ranked number 1 and capturing philanthropy.

-- end audio segment--

Tacey Ann Rosolowski, PhD

What is the importance of private money here, and why is it so important that private donors support MD Anderson?

John Mendelsohn, MD

Most of the patient care money that we get, which accounts for close to \$3 billion of our net revenues, has to go into paying salaries and de-



veloping the facilities and the equipment and the laboratories that provide the care for those patients. We do have a positive margin that we also can partially use to help build research programs. The research grants that we get are for very specific projects, and they're very competitive. The chance of NIH grant funding is about 1 in 10 today.

Tacey Ann Rosolowski, PhD

That's decreased significantly, too.

John Mendelsohn, MD

Yes. When I began my own research in 1970, it was a 40% chance of being funded. If it didn't happen the first time, you're up to 80% if you tried again. If you were good, you got funded. Now some very good people are reapplying and reapplying. It's hard to find money to do new things. It's hard to find money to build buildings, and to buy expensive equipment that's shared rather than part of one particular project or another. Philanthropy is incredibly important for starting up new things. A new faculty member comes. You want to give them a startup package. They finished all their training; they're ready to set up their own lab. They're not going to get a grant for 3 or 4 years. They need to know they have a million dollars, or sometimes more, that they can draw on to get their lab program going. Then you need the money for the infrastructure, for the animals, for the sequencing equipment, for all kinds of research resources that are hard to get grants for, and then you need funds to build new buildings in which to place them. So you can't grow and expand a research program without philanthropy. You can

grow a clinical program without philanthropy because clinical programs do generate positive balances, but you can do a lot more with the clinical program with philanthropy to support clinical research.

Tacey Ann Rosolowski, PhD

As I understand it, donations to MD Anderson increased 500% during your presidency.

John Mendelsohn, MD

It's complicated. I think the average amount of money raised around 1992 was \$25,000 a year. Then they conducted a major capital campaign, and they raised \$150,000 in that capital campaign over a period of three years. Then they were ready to settle back, and we decided we're not going to settle back. Pat Mulvey, who is a terrific development officer, the board, and I agreed that we would just try to ramp up the standard year-by-year philanthropy. Working together, we pushed it up together to well over \$100 million a year. Then we developed our next campaign, which was to raise \$1 billion over about 6 years, and which was going to be pushing toward an average of \$200 million a year. We actually achieved more than that in 5 years. We ended up reaching a point where we were raising about \$200 million a year, which is more than a huge increase over what it was 20 years ago. But this was not a sudden jump. This was the accumulated hard work and determination of a talented development team and a Board of Visitors that had a lot of contacts. And I had the fun of meeting a whole lot of interesting people. Of the very wealthy people in Texas, I probably met half

of them during my 15 years. They're all wonderful people, and some of them ended up giving us great gifts. For some of them it took a decade before they did, and that's all right.

Red McCombs was chairman of our Board of Visitors when I came. He has told me he said publicly that he was upset. He wanted somebody else to be president. He thought bringing in this outsider didn't make sense, but evidently I won him over. I used to go visit him about once a year and ask him for a big gift. He's a great big teddy bear of a man. He'd always put his hand on my shoulder and say, "John, I'm going to give you a big gift, but this isn't the right time." And the next year, the same thing. We announced our south campus, and I get a cold telephone call from him. "John, I want my name on that." He tells the story, so I can say it. "I'll give you \$25 million." Well, Pat Mulvey and I wanted more. We'd wanted \$30 million.

So I said, "Thanks, Red." This is the 1st time I'd ever been offered anything like that as a gift to MD Anderson. "I'll get back to you right away. Let me talk it over with Pat." I got back on the phone with him again within 24 hours and said, "Red, we so appreciate it." You know, I don't want to turn him off. I said, "Red, we were hoping to get \$30 million for that." And the way he tells the story to me is he says, "I put my hand on the phone and said to my wife, 'Charlene, I better take it quick or he'll go for \$35 million.' It's a deal." Those are the kinds of things you never forget. He was so proud to

*be able to do it, and I was so proud to be able to deliver it,
and the call came from him.*

-- end audio segment--

MD Anderson's Institutes: Transforming Cancer Care

Tacey Ann Rosolowski, PhD

When he told that story, he talked about how the idea of a research institute really captured his imagination. I'm starting to understand from interviewing people on the Board of Visitors is that development is such a key piece: to find what is going to capture the imagination of a specific individual. That leads me to my next question. Because it's about research, it's about science, and that can be pretty complicated sometimes to get laypeople to understand. I'm wondering if you have a particular approach or communication style when you talk to people that you consciously or maybe unconsciously use to really win people over and deliver that message about research-driven patient care.



John Mendelsohn, MD

Yes. The way I organized, with a lot of advice, the approach to that billion dollar campaign was to create the institutes

that we have. The McCombs Institute had already been created, and we expanded that. So we created an institute of basic science, and that produced a lot of issues, of course. I had to make it very clear to the faculty that all space and all appointments were still going to be through the departments, and the institutes were there to gather together centers of excellence and departments of excellence to focus on topics. Dr. Kripke and I had the usual meetings, and we ended up with 5 institutes: the McCombs Institute (basically it's for translation science, but that isn't what it's called); The Institute for Personalized Cancer Therapy, which I now direct; the Institute for Basic Science, which collected all our basic science; a division of Quantitative Sciences, which fed into biostatistics and informatics and computer science; and there's an Institute for Cancer Care Excellence, which focuses on how to deliver care better. It's the research on how to be better clinicians from the operations point of view, not from a new drug but from how you organize your care? How do you get the flow better? How do you save money? How do you increase value?

Tacey Ann Rosolowski, PhD

You're just building efficiency right into the infrastructure.

John Mendelsohn, MD

Yes. I drew a diagram, which I spent a whole lot of time on, which built on Michael Porter's thinking about cancer care that he called the Clinical Care Cycle. I expanded it into the Cancer Care Cycle. It involves prevention and early detec-

tion, and then intervention, diagnosis and treatment, and finally survivorship.

Tacey Ann Rosolowski, PhD

Now, did you have an intuition of this?

John Mendelsohn, MD

It was easy. I understood how science feeds into clinical care. That's why I came here. That's what I'd been doing for years. I felt that it was important for this campaign to have a simple diagram that explained it. I drew a number of different versions of it. That diagram that we have in front of us, I must have put that up on the screen and presented it or put it up in an office 500 times and explained how we are organized. Our central focus is on the patient and patient care, and we'd like to prevent the disease. If you get cancer, we will treat it. We want you to be a survivor, and you need to be followed as a survivor because it could recur. Then the different research programs feed in. I'm pretty good at explaining science. I think that's one of the reasons we were successful, and I've been told that. It worked for a period of nearly a decade.

Dr. DePinho has a new diagram and a new way of explaining it, the Moon Shots. People understand that. People understood my diagram. They understood how we're focusing around patient care and building all this in. People can understand what a Moon Shot is, and they can understand he has the same goal. Take science and bring it to the patient and decrease the number of deaths from cancer. I think it's going to help him organize the next round of philanthropy.

Now we're going to say, "Okay, next round. We're not stopping. These institutes are here. They're working." His mantra is to strengthen the science and organize the research better to produce a better treatment or a better diagnostic test for cancer, using technology that's developed during the past decade. He's very articulate in explaining that.

Tacey Ann Rosolowski, PhD

You developed this diagram entitled Transforming Cancer Care Through Research. During which capital campaign did you begin using this?

John Mendelsohn, MD

Well, it was as we were planning the \$1 billion Making Cancer History campaign.

Tacey Ann Rosolowski, PhD

That began in September 2007.

John Mendelsohn, MD

Yes, but the planning for the campaign began 18 months earlier, so I would say we were drawing that diagram up in 2004-2005, because I was using it also to organize the research programs here. I wanted people to break down barriers between different departments and work together and collaborate, but the topics for each of those institutes came out of discussions with faculty leaders.

When you're talking to someone who is considering giving money, the other thing you learn very quickly is they're going to give money to something they're excited about. As

you're talking, you're listening and watching with eye contact. "Oh, I'm really interested in that survivor program." You continue explaining with a little more emphasis on that program. You were hoping to get more money for the Basic Science Institute, but for that person it may turn out it will be for something else, and you have to meet their personal expectations.

-- end audio segment--

Tacey Ann Rosolowski, PhD

When you began to raise the bar with the capital campaigns, the goals for bringing in money every year, how did you begin to expand the base of donors outside of Houston, outside of Texas? How did that ripple effect work?



John Mendelsohn, MD

It depended a lot on Pat Mulvey and his team, and on the Board of Visitors and its development subcommittee and executive committee. We would take leads from anywhere. I was willing to travel, and Pat Mulvey and his team were willing to travel. Board members were willing to help us. There wasn't any one process. And actually it would be very interesting to interview Pat Mulvey. He's probably not on your list, but you ought to interview him because he did something amazing. A public university raising money at the levels that many private institutions would give anything to do. We are a public university. People would say, "Well, you get your money from the state." The state covers only 4% of our

budget, so you explain that pretty quickly. We're glad to get that 4%. It's \$150 million a year, which would be very hard to raise if you didn't get it from the state. We use it well. The campaign was a process rather than something that happened overnight, and it depended on the fact that the Board of Visitors and our Development Office and the faculty all were behind this. Any faculty member here knew about this chart and could explain it to a potential donor.

Tacey Ann Rosolowski, PhD

How did the faculty become part of developing these relationships with potential donors?

John Mendelsohn, MD

We asked them, if you know of a potential donor, please give us a call. And there had to be some trust because a cynical faculty member may have felt, "Well, if I call the Development Office, they're going to raise something for Mendelsohn's favorite project, and I want the money to go to leukemia research." We had a rule that Pat Mulvey and I agreed on. If the faculty member called you in to meet somebody that was interested in giving, we would not try to dissuade them from giving to the area that the faculty member had originally generated their interest in. Many of the patients who gave us money were grateful patients. For some of them it wasn't through their physician. They just loved MD Anderson, and they wanted to go right to the top. Some of them wanted to work through their doctor, so each case was different. Each person that gave major gifts did it for a different reason.

Tacey Ann Rosolowski, PhD

From the stories that I've heard via the Board of Visitors in particular, development is such a great word because it's about developing relationships. As you mentioned, sometimes it can take 10 years for a gift to come through, or longer, and it's about letting that person find their way into the institution in a way that makes sense to them and inspires their passion.

John Mendelsohn, MD

You want to give them guidance, but you want them to know and feel, in an honest way, that they're in the driver's seat. It's their money.

-- end audio segment--

The George H.W. Bushes and MD Anderson

Tacey Ann Rosolowski, PhD

Why was establishing the relationship with the Bushes so important?

John Mendelsohn, MD

That was very exciting. I think my wife was the main source of the idea, although other people also brought it up. Some of our board members were very good friends of the Bush's. President Bush is an incredible man, and he and Barbara had a child that died of leukemia. She was treated, actually, at Sloan-Kettering. I'll never forget the time we invited him to give a commencement speech here, and he was talking about the advances in science during his lifetime. He said, "We had a daughter with leukemia," and he actually stopped and choked up and was tearing. He got control of himself and finished his sentence. "If she had gotten that today, she'd be alive." Oh, it was as poignant as you can get. President Bush

was on our Board of Visitors. That was already established. He played golf with some of the people and was social.

I think it was my wife's idea. She said, "Well, he's got a big birthday coming up. Why don't we see if we can celebrate his birthday and turn it into raising awareness and funding for MD Anderson?" The Development Office came back and said, "Yes. He's having a 75th birthday in a year and a half." The wheels got turning. One of the members of our Board of Visitors was Bob Mosbacher, who had been chairman of the Board of Visitors and who had actually gotten a little disaffected with MD Anderson. He had been President Bush's campaign manager. I loved this man, and both Anne and I became very dear friends of his. We rekindled his interest in MD Anderson, aside from the fact that we just enjoyed being together.

Pretty soon, we got the idea in front of President Bush and Barbara: would they celebrate the birthday in honor of MD Anderson and Bob Mosbacher would head this event. It was going to occur at the baseball stadium, and pretty soon it was very clear there were ground rules. President Bush did not want to ask anyone for money, but he would be willing to be the honoree at an event where his birthday was being celebrated by MD Anderson. Pete Conway got involved, and Ernie Cockrell and a lot of business leaders in this community joined with Bob Mosbacher, and we had a fabulous event and raised \$10 million and celebrated. In this process, Bob Onstead, who was one of the chairs of our Board of Visitors, and I were talking; maybe the idea came from someone else, too. Could we entice

President Bush to become chairman of our Board of Visitors? It was Bob that approached him. We had to pick the right person.

I was invited to come out and talk with the President, and we met and talked a couple of times, and the answer came back, Yes. That was incredible. I'll never forget the first meeting of the Board of Visitors he ran. He's a master at running meetings. He would draw out opinions and build consensus, and he'd make decisions, and we'd move on, and it just flowed beautifully. I've watched another person do that; Benno Schmidt who was chairman of the Board of Regents of Sloan-Kettering when I was there. He is a Texan, UT Austin law professor who Jock Whitney recruited to New York to start the first venture capital firm, and I watched how he handled the board. He and George Bush are the 2 best.

After the meeting, President Bush turned to me and said, "You know, John, that's the first meeting like this I've run since a cabinet meeting, and it was fun." Just having him there helped us attract very distinguished board members from all

over the United States as well as contributors from all over the country and around the world. It helped fulfill this idea that I wanted to pursue when I came, that MD Anderson wouldn't just be a great place in Texas, but everywhere in the world it would be known and respected. President Bush had an impor-

tant role just by his presence and people knowing that he was committed. When he got up at various charity events, he said, "I love MD Anderson. I'm so proud to be on its board." He's a very modest man, and that hits homeruns.

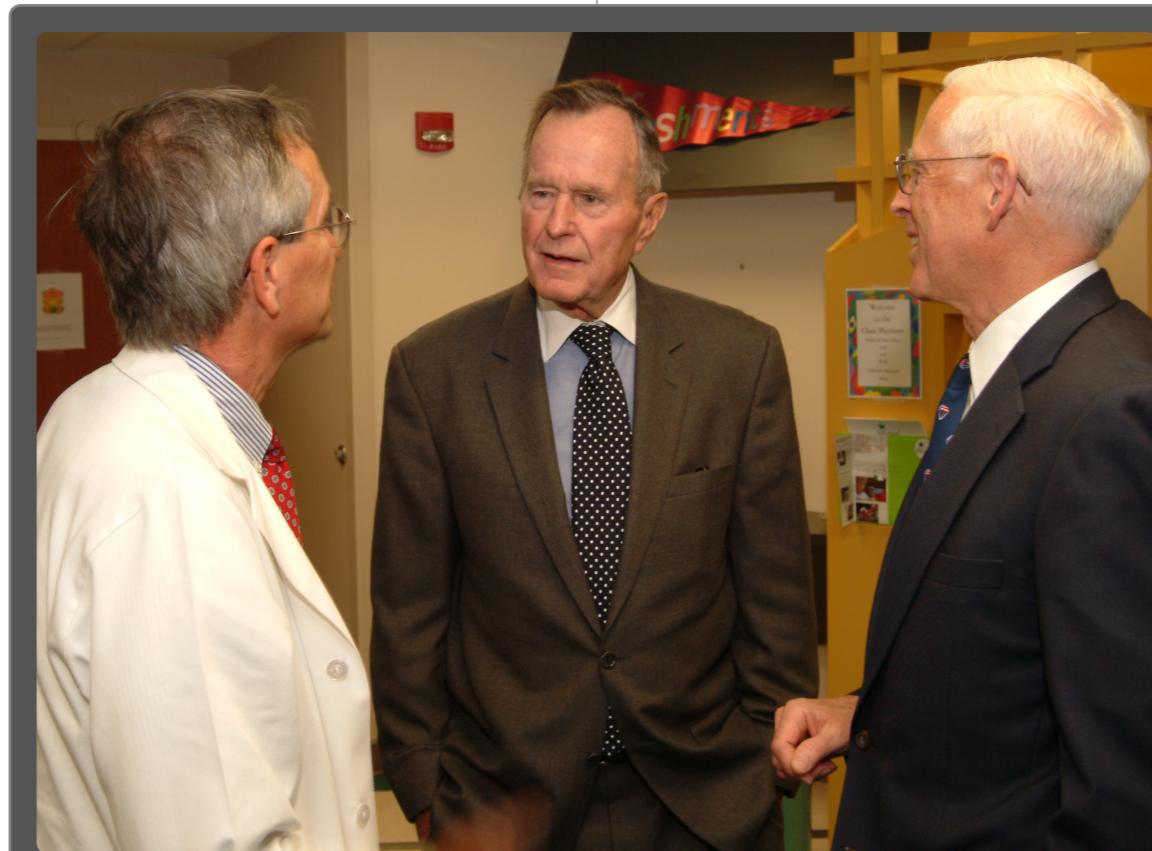
Tacey Ann Rosolowski, PhD

Also having that brush with a serious disease as part of his history means that he speaks from the heart.

John Mendelsohn, MD

He and Barbara both. He spent many, many hours here. You're the vice-chairman, and then

you're the chairman elect, and then you're the chairman. This is "harder" than being president of the country according to President Bush. The presidency is a 4-year deal. Being chairman of our board is a six-year deal.



President Bush Visiting MD Anderson, 2005

Tacey Ann Rosolowski, PhD

How did you go about building on that new national and international attention that the Bushes enabled MD Anderson to have?

John Mendelsohn, MD

They give a party every year in Kennebunkport and invited potential thought leaders and donors who we wanted to attract to MD Anderson to come. I'm not bashful. I enjoy meeting people. We reached out and met a lot of people from many cities, many of whom joined the board and are still friends of mine. In parallel, our advertising went national, a bit; remember, we had a small budget.

We hired a firm in New York to help us plan introducing ourselves to the media capital, which happens to be there. Wonderful people. It was arranged that I would have interviews at *Wall Street Journal* and *The New York Times*. We got our message out about translational research. I got this diagram out. I got our vision out. We began to be ranked number 1 cancer center, so people were more likely to think, "Well, we better listen to them." I started an effort, which I called Mendelsohn's Folly at first, which was a global program. We had experiences with a small cancer center in Spain, which would take hours to explain, but it was with good intentions. It was with total undercapitalization and naïve planning and the 1st document I signed here was the plan for this, which had been put together prior to my arrival.

Tacey Ann Rosolowski, PhD

You signed this in 1996?

John Mendelsohn, MD

Yes. This had been planned prior to my arrival, but I agreed to it. The board told me it was a good plan. I think Red McCombs was involved in some of the planning. I flew over there, and I learned a lot. I learned how to start a cancer center in a foreign country, which came in handy later. We developed some interactions abroad, and then we started a program called MD Anderson Global where we, in a concerted way, tried to develop formal relationships with some cancer centers around the world, at first mainly oriented toward training in clinical care delivery and exchange in research. There were many people that said, "This is crazy. Let's stick to our home base here on Holcombe Boulevard. Why should we spend the time? Our professors are flying across the ocean to go to these meetings. They could be treating patients here and doing their research here." There was a pushback by a lot of the leading thinkers here.

My attitude was the same as at that first meeting with the clinical faculty. You want to be the number 1 cancer center? We've got to see patients up front, even when you think there's a high likelihood they'll never be on any of your clinical research protocols. We want everybody to feel this is the best place to come. If you want to be the best cancer center in the world, you've got to be acknowledged that way around the world, and I worked hard on it. We developed these relationships. I went to a lot of conferences and signed a lot of agreements, and some of them have turned out to be very exciting

in terms of research. Some of them have been modest, but there's no question in my mind that the MD Anderson of today is partly a result of this program, which has expanded to include true affiliations in clinical care here and abroad. We speak over 60 languages, and we have scientists and clinicians here from around the world. We're recognized all over the world now as a great cancer center and arguably as the number 1 cancer center. If you go to China, you go to India, you go to the Middle East, you go to Brazil, you go to Mexico, there are a lot of people that are aware that MD Anderson is on the planet and that we're very good, and many of them will come here. The international traffic in this country and in the field of medicine went down after 9/11 because it was so hard to get visas. Everybody was worried about sneaking in trouble. The global effort continues, and Dr. DePinho is very supportive of it.

The original question was, how did we market and brand MD Anderson? It's partly through the people on our board. It's partly through marketing, in the literal sense. It's partly by meeting with newspapers and thought leaders in New York and all over the country, and it's by creating a world presence for ourselves. Many of the major cancer centers in the world feel a relationship with us and have a plaque on the wall saying, "We are a sister institution of MD Anderson." All of these things together, I think, fed into each other. And, most importantly, we continue to give fabulous care.

Tacey Ann Rosolowski, PhD

What are some of the really productive collaborations with overseas institutions?

John Mendelsohn, MD

An example would be with the DKFZ, which is a German cancer center in Heidelberg. I developed a wonderful friendship with the director of that cancer center. We started talking about collaborations, and they're terrific in a number of areas. One of them, for example, is in the physics of radiotherapy and radiology. They have some of the best programs in the world, and we've got some nice collaborations going on with them that feed into our proton therapy program and into our medical physics program. For a while we had some very good collaboration in Great Britain on drug development. They're not as strong as they were a few years ago. We have a very interesting set of collaborations going on in China looking at traditional medicine and fitting in nicely with our integrated medicine program. Lorenzo Cohen actually went on sabbatical for 6 months over there. I think we helped develop that. He went to institutions where the director said, "Oh, Yes. We have an agreement with MD Anderson. We're glad to welcome you." There are many other examples like that. Those are the first ones that come to mind. Talk to Oliver Bogler. He puts a book out listing about 30 of them.

Research Park

Tacey Ann Rosolowski, PhD

Shifting gears a little bit, I'm looking at the south campus research initiative, talking a little bit more in detail about the south campus and planning all of that. Of course, we've addressed that with talking about your chart here, but I'm wondering about the actual process of getting that started, getting that off the ground.

John Mendelsohn, MD

Initially, it was basically taking over 100 acres of UT land in partnership with the Health Science Center and securing its borders and purchasing land from the Department of Defense where there were some military training bases that moved out to Ellington Field. We put in some roads for which we had to get help from the city and the regents; all of our property and buildings belong to UT and the regents. We worked out a collaborative arrangement with the Health Science Center, which already had student dorms down there and a baseball field

and their athletic facilities that we now have use of. Then picking which programs would go there and starting to build some buildings. Frankly, we didn't know how big it was going to become, but we planned "big." Before the economic downturn, we put up our first 2 or 3 buildings without a master plan, and then we put the brakes on and said, "Wait a minute. This campus may end up with a dozen buildings on it." We hired a firm to come in and draw a master plan up. We have some beautiful plans about how the campus could look someday, with an integrated feel, but right now it looks somewhat broken up.

Tacey Ann Rosolowski, PhD

When did this process start, dealing with the land?

John Mendelsohn, MD

Probably around 2000-2001.

Tacey Ann Rosolowski, PhD

How did you select the first buildings to put up and who was actually going to be housed there?

John Mendelsohn, MD

There was 1 building there. It was the **M**etastasis Center. It was the R.E. "Bob" Smith Building, where Dr. Fidler and his program were located. It was built to be the food delivery service for the old medical center, and that didn't work out so it was converted to research space. The first new buildings that went up were next to it, in which we focused primarily on immunology and systems biology and some other areas that we wanted to expand. And then it grew from there.

Tacey Ann Rosolowski, PhD

How did you select the particular areas that were going to be housed far away from the patient care areas?

John Mendelsohn, MD

It was pragmatic. You'd think you'd want to put your basic sciences down there, but for basic science we'd just built the big Mitchell Building, and what we most needed was growing the lab space for some of the more clinically oriented laboratory researchers. We had to put in shuttle services. It's non-ideal. People still drive back and forth. You can look on a screen, and you know what time the shuttle that you're interested in is coming. It's like the appointments in the clinic. Once it's routinized and is a reliable system, you work a way out to do it. If you want to go to a conference down there, you've got to leave your office here 15 minutes early. If you want to go to a conference on this campus, you've got to leave your office 5 minutes early. You've "lost" 10 minutes, and time is very precious, so at first we had a lot of people that didn't want to move down there. They'd be too far away. We had a lot of people that wanted to move down there to get away. Everybody had their own motives, and it was worked out very much on a case-by-case basis. I have to give Dr. Kripke credit. She was the dean at that time, and she had to negotiate the details, although I had a role in it. But I'm going to give her the credit. She was incredible.

Tacey Ann Rosolowski, PhD

I read somewhere that you envisioned the Research Park as presenting an opportunity to unite



academic medicine with industry. If you could talk a little bit more about that vision.

John Mendelsohn, MD

When I was in San Diego starting the UCSD Cancer Center in 1978, I hired a young scientist named Ivor Royston who came there with the purposes of being a faculty member and starting a company, which was called Hybritech. He launched the first biotech company in San Diego, which now has 150 of them. There was a fight among the faculty about whether a faculty member could also be making money by starting a company; there was a huge worry about conflict of interest. It is common practice today. Conflict of interest is a true ethical issue, but it can also get in the way of progress and it can be managed appropriately. I watched the biotech industry grow there. My best friend in San Diego was a man named Bill Otterson, and he was in the computer business and made some money. He came to work essentially voluntarily for the university and set up a program called UCSD Connect. He taught me a lot about business, and I taught him a lot about research. UCSD built up collaborations with scientists and entrepreneurs, and a lot of biotech companies came along. Of course, that was also going on in the San Francisco area, and in Boston. It was going on in the research triangle in North Carolina.

When I came here, I said, "My Goodness. Here we are at the biggest medical center in the world, and there's very little biotech. We need biotech." I guess I didn't think big enough because having now visited MIT I have seen what they accom-

plished in the past 15 years; they've built the Silicon Valley of biotech around MIT. It's incredible. Most of the big pharmaceutical companies now have their major basic research buildings next to MIT and the interaction is incredible. That's what I wanted to do here, on a smaller scale, but I didn't have the resources to do that. I wanted to try to attract some drug companies and some biotech companies by offering them cheap land near the university where they could collaborate with Rice University and us and Baylor and the Health Science Center. I helped start the Houston Technology Center, but for a while they were not that interested in biotech. They were concentrating on other things. I helped start BioHouston, and I'm still the vice-chairman. I tried to figure out ways through community organizations and also through our own resources, to attract biotech to come here.

Tacey Ann Rosolowski, PhD

What's the advantage of having that attached to the academic institution?

John Mendelsohn, MD

A little biotech company starting up wants to attract people that work. If they know there are 800 scientists only a mile and a half away who are experts in biomedical research and that they can go to and talk to, they can recruit scientists and post docs to work in their companies that are up to date on all the new technologies. There's a lot of exchange that goes on between the biotech researchers and the academic researchers in terms of technology and approaches. There's a lot of proprietary stuff too, so it isn't a complete exchange of

information. The young biotech companies depend on being near major universities and being near others like themselves, because most of them actually fail or are bought out. In either case, the people need new jobs, and if there's 10 new biotech companies starting up every year in a community, you're more likely to move there and take a job because you know if that company doesn't work out there's going to be another one. We never got that critical mass going here at the level that I'd hoped we would.

Tacey Ann Rosolowski, PhD

If the institution feeds the biotech companies with potential employees, what's the other vector, going from biotech to academia?

John Mendelsohn, MD

If the institution has some inventions, the biotech may license those. It's very hard to develop a new drug or a new diagnostic test because the grant money you get is mainly for discovery research rather than applied research. You need a few million dollars, and then you need a number of millions of dollars to take a discovery and bring it to the clinic. That's something that Dr. DePinho understands very well. He'd like to do the same thing in spades. I wish him well, and I hope we succeed. The companies get access to ideas that they can license, they get access to the interchange between companies and with academia, and they get an environment where it's easier to recruit good scientists to work for them. The majority of people trained in biomedical research don't go to work for universities. The majority of them, including the

ones trained here or even at Harvard, go to work for companies. Companies spend a lot more money on research than academics today. There are good jobs at companies. You don't have quite the amount of freedom, but you have other securities.

-- end audio segment--

Tacey Ann Rosolowski, PhD

I was talking to George Stancel about the focus of research programs and how it's still a challenge to get people to think beyond the walls of academia when the reality is most people won't get jobs in an academic institution.

John Mendelsohn, MD

I don't think it's hard. I think the problem is in the leadership of the graduate school. They've got to think that way. They've got to bring in people to think that way.

Tacey Ann Rosolowski, PhD

Probably at the level of the classroom too, to get people to always be thinking that maybe, in use, differently and about their skill set, thinking about the skill set they're developing.

John Mendelsohn, MD

If you're in Boston or in San Diego or San Francisco and you're a grad student, you could spend 3 months at a company as part of your training and not have to move your family. There's not that kind of opportunity here.

Tacey Ann Rosolowski, PhD

Having a biotech city here, if you will, very near the institution, would actually enhance training.

John Mendelsohn, MD

It would enhance training. You'd be able to recruit more faculty because they want to be around these people. They may want to jump ship. You'd recruit more students. There are new training programs that we could put in.

We need a training program that combines computer science and computational biology and systems biology. That's where the future is, and we don't have it yet. If I could just move in and I were the king of the world, I would get Rice and Baylor and the Health Science Center and us together and create the best training program on the planet that brought those fields together along with bioinformatics. We would attract the superstar kids, ages 20 to 25, that we could then recruit into our genomics programs and in all the new research going on which requires a knowledge of how to use computers to get information and how to take science and move it into databases which are only managed with skills that involve computer sciences. Computational biology, systems biology, computer science, and bioinformatics can be interlocked together.

Tacey Ann Rosolowski, PhD

Was there anything else that you wanted to talk about with Research Park and the growth of that particular campus and what it represents to MD Anderson?

John Mendelsohn, MD

It's MD Anderson and the Health Science Center, because their dental school is down there, and they have their psychiatry and research program down there. I think what it represents is a way to provide the space in order to expand research in a setting where the Texas Medical Center is getting pretty crowded. Subsequently, in the past few years, still during my presidency, we invested in the property where the Sheikh Zayed building is going up right now. It will include the Sheikh Khalifa Institute and a lot of other things. It's going to be the growth space for Dr. DePinho to expand basic science. We also purchased the nearby property where the old dental school was.

In the process, we spent money which allowed the Health Science Center to build on the south campus, but we also now have properties adjacent to the hospital, so we have the luxury now of planning the next building programs close by. Well, 1 of those 2 spaces is now being taken by the Sheikh Zayed Facility, but there's still space where the old dental school is where we can build. So I can't predict. I think it's going to be fun to see. I think for the next 3 or 4 years we're going to be completing the insides of the new building that's already been started. It's going to open in 2015. We're going to be putting a lot of money into the Moon Shots, so I think it's wise not to build too many additional new buildings. We've got our hospital set. We don't have to worry about that. I don't know whether there will be another prevention building on this campus or expansion of the clinics, and I don't know what else will go on the

south campus. I'm not in a hurry to guess, and I would think Dr. DePinho is not in a hurry to guess.

Let's settle on the incredible resources we have now and hire faculty and get programs going and not keep planning which building is going where. We have the buildings we need now. We have the building for administration, too. We put a lovely administration building up on the mid-campus. We did research that showed that we're paying exorbitant rents for large numbers of administrative offices at multiple local sites and that the new building would pay for itself in 10 years if we could just get rid of all those rents. Why not have a building which is just about in walking distance? I could walk there easily. I bet some people that are in the Mitchell Building would drive there. Why not have an attractive facility instead of renting space? It is open and it has shell space in it which I'm told is rapidly filling up. A lot of the people that are in the Pickens Building are going to have to move there because the faculty continues to grow. There are 2 or 3 floors of the Pickens Building for education and offices which will have to move there to make room for faculty, so we're blessed with incredible physical plant. My guess is we should now focus now on using to make our Moon Shots work and improve our care.

Patients: From the Wealthiest to the Indigent

Tacey Ann Rosolowski, PhD

There was another important gift that you were able to secure in 2011, which was the \$150 million gift for the Institute for Personalized Care.

John Mendelsohn, MD

Well, no. It was a gift for \$100 million for the new facility and \$25 million for the Institute for Personalized Care and \$25 million for pancreas research and other things.

Tacey Ann Rosolowski, PhD

Talk to me about getting the largest gift ever made toward cancer research in history.

John Mendelsohn, MD

It was the largest gift we've ever received and the largest single gift I think the University of Texas has ever received. Because it involved patient care, it's confidential, but let's just say that the people in Abu Dhabi were very satisfied with their

care and felt that they wanted to invest in making that care even better. They developed very close-working relationships first with physicians here, who gave marvelous care, and then with myself and some of the research leaders and the administrative people here. This was a very complicated and long negotiation.

Tacey Ann Rosolowski, PhD

When did it begin?

John Mendelsohn, MD

I think it was signed probably in 2010. I probably began in 2008, so maybe 2007 or 2008.

Tacey Ann Rosolowski, PhD

Cultivating those connections.

John Mendelsohn, MD

Yes, growing out of care for a number of people who were quite ill with cancer.

Tacey Ann Rosolowski, PhD

What was the process of reaching out to individuals or tapping into those networks of patients that would create that international clientele?

John Mendelsohn, MD

We had more international patients here before I came than we have now. The number went down substantially after 9/11. This is true for the Cleveland Clinic. This is true for all American institutions. The people in the Middle East who were the

main users got used to going to England and Germany instead of coming to the States, although it's coming back. This is an area I think we could do better. The international patients need a concierge service. They need very special treatment. Many of them like to pay in cash. The best time to get them to pay is on the way out the door, not a bill sent a month later. Our routines here are very different. I think we're getting better at it than we were, but I think this is an area we could expand on. It's going to take effort. We're so busy taking care of all the patients that are crowding our floors we don't give "VIP" care here. We give everybody some level of VIP care, so there isn't any separate VIP group. If we want to get more of those international patients, we're going to have to spend a little more time figuring out how to triage them in ways where they get the amenities they want, but that we're not compromising the time and effort of our great doctors, so that we can continue to implement this idea that a Fortune 500 CEO and a gardener can be in a room next door to each other and get the same level of care. We have to work that out still.

Tacey Ann Rosolowski, PhD

What do those patients represent for MD Anderson?

John Mendelsohn, MD

I think it's about 3% of our patients.

Tacey Ann Rosolowski, PhD

Why are they so important to MD Anderson?

John Mendelsohn, MD

The main reason they're important is many of them have com-

plicated cancer, and we hone our skills and learn and do better by taking care of complicated cases. We're not getting a typical, easily curable case here. They are a potential source of revenue when the per-patient reimbursement in Medicare is below our cost. The per-patient reimbursement in the private sector here has been above our cost by I'm guessing in the area of 20%, but this figure is decreasing. Individual wealthy foreign patients are reimbursing at a higher rate, although they're negotiating tougher now. I don't think the finances alone drive it. This is something very important, actually. Everything we do, all these ventures we've been talking about, we have a set of rules that Mr. Leach actually put on the blackboard one day to summarize our priorities. First, it has to be something that we want to do for our mission. Second, it has to be doable by MD Anderson, and we must be proud of it. That's another way of saying you want to be number 1 or number 2. Third, we don't have to make money on it, but we should avoid losing money on it. I guess those are the 3 main rules. The other one is the fit: do we have the skills and the resources to do it? Proud of it, can we do it, won't lose money, and does it fit?

Tacey Ann Rosolowski, PhD

What do you do when you take a medical institution and begin to ask business questions about how it functions? You raise the issue of patients who can pay more than others, and do we treat them differently, or do we think about them as sources of cash rather than points to receive a lot of care? How do we speak about money and care in the same way? I can see that

this set of rules is creating a set of guidelines in which you can at least begin to address those issues. What's your reaction to that corporatization of care?

John Mendelsohn, MD

I don't call it corporatization. You can't do anything unless you can pay for it. It's that simple. If you're running a symphony, if you're running a soup kitchen, if you're running General Motors, if you're running a hospital, you need a budget. You need what you'd call a business plan. You're looking at revenues, and you're looking at expenditures, and it has to foot out. I don't think this is a corporatization. This is just responsible management.

One of the chief questions that comes up is what do you do for poor people? When I first came here and was in charge, I think about 10% of our care was with indigent patients. Now I think it's about 8%. We have a wonderful program we worked out with LBJ Hospital, 1 of the 2 county hospitals, where, at our expense, we put doctors and nurses and trainees there to take care of cancer patients. If they need a bone marrow transplant or something that can't be done there, we'll bring them over here. It's a win-win deal. They get staff, and we get to free up a bed for a patient that Medicare or the insurance company will pay for instead of having to give the bed away to unreimbursed care.

Now, we won't give free medical care to everyone. We give free medical care to indigent Texans. We'll work very hard to try to find a way to get them on Medicaid or find another way

to pay for it. We'll work with them. But, as a last resort, we'll give free cancer care to indigent Texans. If you're indigent from out of Texas, we just can't do it. We'd break the bank. The person that's the toughest is somebody who is poor but not indigent. Our formula goes up to, I think, 3 times the indigent level.

Suppose you're making \$55,000 a year (above the national average), and you're a young person. You didn't buy an insurance policy, and you've got 3 kids, and you're paying off a car, and you get leukemia, which is going to cost \$150,000 to treat, and you don't have any insurance. You've got a job, and your wife's got a job, but the family income couldn't possibly cover this. That's the person, to me, I feel most sorry for. That's the one that is the hardest. Somebody here has to deal with that person, try to get a 20-year payment plan. You have to ask personal questions. They don't want to give up their car. They can't get to work. This is painful.

This is something that is unique to America. Every other Western country has nationalized healthcare. It may not be as good, in some cases, but at least it's there. It may not be as prompt. You may have to wait 6 months to get a hip replaced, but it's eventually fully paid for by the government, in most of Europe and Canada and Australia. So part of what has to happen in the United States is not only covering and insuring the 30 or 40 million people that are uninsured but providing backup insurance for a catastrophic illness - like acute leukemia. It's going to be challenging, and the American health system has to figure out how to handle all these challenges.

Tacey Ann Rosolowski, PhD

Who is it that works with a patient, such as the one you described who makes \$55,000 a year?

John Mendelsohn, MD

We have intake people that are specialists in this. It's Patient Services personnel and business office personnel who have training and oversight from business and from the clinical program. It's a tough job.

Tacey Ann Rosolowski, PhD

Yes. It's just the realities of people's lives and the choices they have to make.

John Mendelsohn, MD

If you're from Harris County, now we've worked it out so that we can get you quickly admitted to the county system and manage you at that institution. That works out well.

MD Anderson and the Texas Medical Center

Tacey Ann Rosolowski, PhD

This is Tacey Ann Rosolowski. Today I am seated with Dr. John Mendelsohn, in his office in the Institute for Personalized Care. This is our 3rd session. We were talking about the way a lot of people are confused or mystified about the relationship between MD Anderson and the Texas Medical Center, the Health Science Center, and the Graduate School of Biomedical Sciences. Can you demystify that a bit and talk about what comes up in decision making at MD Anderson, taking into account its relationship with those other institutions?

John Mendelsohn, MD

The Texas Medical Center was formed when the land was deeded to the city by Mr. Hermann, and probably a little additional land, to create a medical center. It is an organization that is run by a private, non-for-profit, self-perpetuating board. It hires a president, and the president has a staff. The enabling documents that set it up created it in order to parcel out the land and control the use of the land, and really that's what it does. So the land we're on is rented from the Texas Medical Center, as I understand it. There's a covenant that there's nothing for profit that can be in the Texas Medical Center. When St. Luke's Hospital, 10 years ago, thought of selling itself to a for-profit hospital chain, it was stopped by the Texas Medical Center, so they enforced their covenant.

The roads and the garages are all under their purview, and every time you want to build a new building, first of all, you have to get the land. Second of all, you have to go through a rigorous review by a subcommittee of the board of the Texas Medical Center, which is assuring standards and assuring compliance. The Texas Medical Center has not, as an entity, spent much of its time during the past 15 years developing programs. It's proud that there are an incredible number of institutions that are excellent that are part of it. Methodist Hospital, Hermann Memorial, St. Luke's, ourselves, and Children's are all run by independent boards, all competing and collaborating on our own terms, with the Texas Medical Center not taking a part in that.

Then there are 5 universities. There's Baylor College of Medicine, MD Anderson and the Health Science Center, both branches of University of Texas, Rice University, and a pharmacy school here that's a part of the University of Houston. There was a center on ethics. I don't know if it's still here. So it's a wonderful mixture of groups that are relevant to medical care delivery, and it's not just doctors. The Texas Medical Center is the umbrella. Now, about 15 years ago, when MD Anderson was planning growth, we had a hotel, the Rotary House, across Holcombe, not on Texas Medical Center property, and the School of Public Health of the University of Texas Health Science Center also had a building across south of Holcombe, which is not part of the Texas Medical Center. We began to build on property south of Holcombe, which technically is not part of the Texas Medical Center, and then we started building mid-campus. I have to take that back. It's possible that the area between Holcombe Boulevard and Brays Bayou is part of Texas Medical Center, so that has to be checked. But then we started building south of Brays Bayou, and we started building on the south campus, which is land that is owned by the University of Texas. The Texas Medical Center has no jurisdiction over those lands. For a while, their attitude was very much hands-off. That's your business. I think lately they're becoming interested in trying to be a coordinator.

Tacey Ann Rosolowski, PhD

Are you friends with the University of Texas or Texas Medical Center?

John Mendelsohn, MD

The Texas Medical Center also has interactions with 2 other entities: the DeBakey VA Hospital, which is on Federal Government land, and a mental hospital that's about 2 miles from here. I'm not sure how that relationship works. At one point in my tenure as president of MD Anderson, I met with the leadership of the Texas Medical Center to encourage them to get involved in building more collaborative programs. Dr. Wainerdi has spoken about that. He has just retired. He was president of the Texas Medical Center for over 2 decades. Formal collaborations never became substantive, and it became too complicated. There is a lot of collaboration, organized around specific objectives or specific research scientists' interests.

Tacey Ann Rosolowski, PhD

What would be the advantage be of having Texas Medical Center take on more of that role?

John Mendelsohn, MD

One advantage is that we're the biggest medical center in the world, and people outside of Texas don't know about us. A TMC role could be in branding and advertising. We're all looking for patients. I think it hasn't happened, because we're all pretty busy, so we're not worried about that. If it ever became important, if there was so much competition that we were anxious to attract patients, it might be that we work closer together. If all these different entities were aggressively advertising, it gets kind of complicated. If you might put it together and say this is the world's largest medical center, you have specialists that are in the top 10 in heart and the top 10 in cancer

and the top 10 in everything under 1 group of roofs, and we collaborate. But I think this is unlikely and unworkable. There have been discussions that Dr. Wainerdi has brought up about privileges crisscrossing. A number of our doctors can operate at St. Luke's and can operate at Methodist. Over the years, I think this has gone up and down. It's not a big part of our program or anyone else's, but in our gynecology program we have a very strong relationship with St. Luke's. We tried to develop a strong relationship with Texas Children's, and it didn't work. They were not interested, so we developed our own pediatric intensive care unit and built in some specialists to take care of the general pediatric problems of our young patients.

Tacey Ann Rosolowski, PhD

Why do you think Children's wasn't interested at that time?

John Mendelsohn, MD

You'd have to ask them. It was probably partly competition and partly internal issues. Maybe they were busy doing their thing and didn't want to overextend. There was talk at one point of building a joint children's hospital for cancer. It got pretty detailed. We also had talks at one point with Hermann Memorial, about having a joint children's program. Our program remains independent.

MD Anderson, the Texas Medical Schools, and the

Tacey Ann Rosolowski, PhD

That struck my ear because when I was talking to George Stancel, he expressed the really strong opinion that given shrinking resources everywhere and the need to use everything more efficiently, that those inter-institutional collaborations can really help people leverage what they have very effectively.

John Mendelsohn, MD

It could, and if we joined with Texas Children's, it would be the largest children's cancer program in the country. Right now, St. Jude's is the largest children's cancer program. Big-ness isn't always the best. Now, Anderson has a lot of relationships. I got a phone call from Peter Traber, who was the President/CEO of Baylor a few years ago, when Baylor was in the midst of breaking its relationship with Methodist. He needed a new head of neurosurgery. He did not have the resources to build a neurosurgery program, so he asked if he could meet with Ray Sawaya, who is the head of our neurosur-

gery program. I met with Ray Sawaya, and we talked it over. Ray thought that there would be advantages having a joint program because Baylor includes both Texas Children's and what would have been Methodist and the program at Ben Taub. If physicians training in neurosurgery came to MD Anderson, they would only see cancer, but if they were in a big program, they'd see vascular disease and other types of neurosurgical problems. For at least the last 5 years, he's been the chairman of neurosurgery, both at Baylor and here, and they pay 49% of his salary. I told him, as long as it's advantageous to your program and MD Anderson, it's great.

I'm willing, and I think Ron DePinho is willing to consider individual collaborative efforts where there is a win-win situation. The Children's thing could pop up again. Texas Children's is in an even stronger position now, I think, than it was 5 years ago. They've done a terrific job of building. They can't possibly have the cancer research resources available for their patients that we have. They're a complete hospital. I think there would be advantages to them. They have tremendous expertise in taking care of very young kids. There are children that are half a year old that get cancer, and they have special needs. I can see where we could help each other, and it might come up again.

Now the medical school. In 1940, I think there were only UT Austin, UT El Paso, and UT Medical Center in Galveston. It was called UT Medical Center. It was the only medical school component of UT, and it was put in Galveston because when it was created in the late 1800s, Galveston was the largest city in

Texas. So you put your medical school in your largest city, rather than in Austin. Well, the regents decided to create a branch of University of Texas that would be a cancer center. It was a really amazing and farsighted decision, because they wanted to build a cancer hospital, and they wanted it to be part of an academic program that was in University of Texas. In 1941, the MD Anderson Foundation put up some money, and that's why the state located it here. It happened to be that just before then that the Texas Medical Center was created. When it was created, Hermann Hospital was here, and I think there was 1 other building, and that's it. There wasn't much at Rice either, compared to today.

This was a suburb, and there was a big gap before you got downtown. The Texas Medical Center and the city got busy and they said, "Well, we're going to build a major, world class medical center." There were 2 early ventures. One was to attract Baylor College of Medicine, which was affiliated with Baylor University in Waco but was located in Dallas, to come to Houston, and they succeeded. The original Baylor building, I think, was built in the 1940s and opened here, so we had a new medical school. Then they worked with the legislature to get this new branch of the University of Texas to come to Houston, and they succeeded. Beyond that point, the Texas Medical Center is not part of what happened to MD Anderson. It was now a UT issue, and UT got busy and recruited Lee Clark to set this institution up. It was a brilliant recruitment because he was energetic and hugely ambitious, had a wonderful vision, and understood how important science was for pa-

tient care. He put the stamp of research driven patient care on this institution that we're so proud of. The enabling legislature was in '41, in June. Pearl Harbor was in December, and everybody got distracted, but they did set up a small cancer center in James Baker III's grandfather's home. I think the University rented it. James Baker Sr., who had a huge role in setting up Rice, had passed away. There are pictures in our archives of 1 building that was converted to house, I think, 20 beds, and other buildings were a small lab and a clinic, and that was MD Anderson for 4 years. Then the war ended, and then R. Lee Clark came and everything took off.

As I remember it was around 1970. Houston, which had fewer than 100,000 people when Rice was founded in the late 1800s, had grown tremendously during the war, and became a major port. We built the ship channel in the early 20th century. It was decided that Texas needed more medical schools in Houston. So, the University of Texas created a new school called UT Health Science Center. At that point, MD Anderson had a graduate school, but we had no medical students, and Lee Clark was delighted that there was now going to be a medical school and he gave the graduate school that we had to the Health Science Center to run with the proviso that we would work together. It would be a joint graduate school. Again, you're trying to conserve resources. Why not have a graduate school that covers both institutions? There were discussions off and on over the next 30 years that we might do the cancer for the medical school, but that never really got to be a big program, partly because of the medical school, partly because of

Hermann Memorial, which had a lot of private doctors that weren't that excited, and partly we were busy growing ourselves. The graduate school then was a joint program, and about 1998 or '99, I decided that it was a shame that we were doing over half the teaching, over half the students were coming here to do their lab work, yet the diploma was given out by the Health Science Center.

So I visited with the regents and said, "We want a joint diploma." Jim Willerson, who was the president of the Health Science Center, was very much in agreement. He's a collaborative person, too. We were advised that it was going to be complicated. We had to get certified by the southern branch of the medical school accrediting organization. Stephen Tomasovic, who was the associate dean, had to prepare about a foot-and-a-half-tall pile of paper. We were site visited, and we passed. It was very thrilling. I have a copy of the first diploma that has the signatures of both presidents on it. I've met students who say, "Oh, I have a diploma with both presidents." They like that. So we still have a joint program, and now the latest version of the deanship is that there's a co-deanship, and 1 person from each institution is asked to do this.

Tacey Ann Rosolowski, PhD

When was that instituted?

John Mendelsohn, MD

The co-deanship was instituted in the past year.

Tacey Ann Rosolowski, PhD

What was the reason for that?

John Mendelsohn, MD

I think they decided let's find a way to make both institutions feel the representation. Up until then, the deans, since 1970, had been mainly based at the Health Science Center, and University of Texas MD Anderson Cancer Center felt left out. But there's a huge joint committee structure in the graduate school approving all the courses and planning everything. I do believe that we have been represented fairly.

There was a lot of discussion over 16 years ago that there was a pecking order in laboratory research. Baylor was at the top, we were in the middle, and UT Health Science Center was at the bottom. I think it's more of a level playing field now. I still think Baylor has incredible laboratory research and science, but I think ours has gotten better. Dr. DePinho is working to make it even better, and the Health Science Center has also gotten better.

For a number of years, we have had some very good students in our graduate school, but also some of the students aren't that strong. My personal view is we should be a smaller graduate student school until we can attract more of the very best students. The students come and interview to decide where they want to go to school. If they see that everybody in the school is darn good, I think they're more likely to come. That's the feeling of the current president of MD Anderson, too. For a while, the Health Science Center was not as interested in raising the standards. That doesn't mean there weren't a lot of good students; there were many good students, but there were some that we didn't feel were in that top category. We'd like to

be in the top quartile of all the graduate schools. We'd like to be in the top 10%, if possible. You do things one at a time. I think that's something we should still continue to try to do. The Health Science Center has increased its strengths, and I think that's something we could achieve. We also should be very good, because better students help attract better faculty. You get better research done. You also can select some of the best to become your post-doctoral trainees. They get to know MD Anderson, and they're excited about it and come back. Good people feed other good people.

Tacey Ann Rosolowski, PhD

How do you evaluate the position of the graduate school in terms of its students and success in producing top individuals?

John Mendelsohn, MD

It's what I just said. I think there are some top students, but I think that we'd be better off setting tougher standards. The graduate school has turned out some very fine people that have populated medical schools and universities all over the country. It's a very good graduate school. We want it to be in the top 10%.

Tacey Ann Rosolowski, PhD

Do you think it's a matter of setting the bar higher for admission? What's your view of how the educational programs might need to change to achieve that?

John Mendelsohn, MD

We spent a lot of time on that. We had a lot of committees

here that went over that issue. It has to do with making the courses better, and it has to do with having tougher standards for students getting in and also having tougher standards for students advancing beyond the first 2 years and getting their thesis research plans approved. "Okay, we're the best. We're going to have the standards that are the best." When we pick our surgery fellows, they have a fellowship program. I think they have 6 slots, general cancer surgery. I think they only have to accept 7 or 8, because they know anybody that's accepted is going to come. The graduate school doesn't have that. They have to accept a lot more in order to fill their quotas. It's a ramping up process. It's not the main mission of MD Anderson in some people's eyes. Our main mission is to study and treat and train people for cancer. Well, a lot of people in the graduate school are in neurosciences and other areas. The graduate school is very conservative. We wanted to have a program in bioinformatics. We developed it as a strong collaboration with Rice. I don't know what happened to it exactly. I think our graduate school should think about bioengineering with Rice. I think they should think about computer science and bioinformatics and systems biology with Baylor and Rice in addition to MD Anderson and the Health Science Center. I don't know how Baylor feels about that. If I were trying to figure out my workforce in the research area 10 years from now, I think that a training program that would encompass those areas I just mentioned would be the most important. Not just biology, because there are a lot of people being trained in biology. Finding people that really understand how to use computers to analyze data from huge amounts of genomics or pro-

teomics data and make inferences about biology using systems analysis; that's the future. It's something that we need and the world needs. They're going to have no trouble getting great jobs, the people who train in these areas.

Tacey Ann Rosolowski, PhD

You qualified that statement. In some people's eyes, the educational piece is not part of the main mission, but you obviously see that differently. Or do you?

John Mendelsohn, MD

Education is huge here. We train hundreds of doctors, nurses, and technical staff as well as research scientists. I think it is a very important part of the mission, but we have a pecking order in our mission. Patient care is listed 1st, research is listed 2nd, education is listed 3rd, and prevention is listed 4th. The reason I think prevention is listed 4th is that we're a cancer center, and the people that come here mostly have cancer already. They've had the diagnosis, and they're referred here. If you're doing prevention, it's a whole different deal. You want to work with healthy people. You have to set up the infrastructure and the place to come to. People that are healthy don't want to come to a clinic that's full of people getting chemo and wearing hats because they've lost their hair. Our clinics are very busy, because just a lot of emergencies have come up, and people aren't always seen on time. If you're going to a prevention doctor, you want to be in and out. You want to go back to work.

Tacey Ann Rosolowski, PhD

You mentioned last time that there was this discussion that perhaps putting a prevention clinic out near the galleria area.

John Mendelsohn, MD

That's right. We thought about a prevention clinic with the Texas Heart Institute, with Dr. Willerson, because when you go up for a prevention workup, you're not just interested in preventing cancer. You want to prevent heart disease and diabetes and all kinds of things. Do we want to hire the staff to be able to see a whole lot of people that are healthy and think about prevention of heart disease, or should we just focus on preventing cancer? These are issues that we were discussing. I presume that they're still under discussion. I think when you're already really outstanding at taking care of cancer patients and doing research on how to take care of them even better, and you need more resources for that, it's a challenge to think, well, wait a minute. Am I going to take a whole lot of our resources and set up a program for the well people in Houston or around the world, when we're so focused on cancer therapy? The Mayo Clinic does it, and Hopkins does it. Is this the right way to use our resources? These are tough decisions.

Prevention and Care Become Academic Fields

Tacey Ann Rosolowski, PhD

Prevention is really a big piece of that.

John Mendelsohn, MD

It's very important. If you want to make an impact on cancer, prevention is a big piece. Now, the Moon Shots include prevention, and Dr. DePinho is very clear on that. There wasn't much prevention here in 1990. Dr. LeMaistre was in on the original report of the surgeon general that said tobacco causes cancer. He's been interested in prevention, and he was not an oncologist. He is a pulmonary specialist. He decided that we'd build our prevention program. He recruited Dr. Levin to run it, and we built a very strong prevention research program with a modest-size clinical activity. We've expanded the clinical activity somewhat, and especially in smoking cessation and prevention. It's possible that these Moon Shots will pick certain areas to expand, but it will probably grow out of something like that

rather than just independently deciding to build a whole prevention program with a whole new building in the Galleria.

Tacey Ann Rosolowski, PhD

I wanted to make sure that we covered all of the inter-institutional observations that you wanted to make.

John Mendelsohn, MD

There's a little more. During the past 15 years, there were many discussions that nursing should become an academic activity. We decided that was good, so if you look in our yearbook, which is our catalog, you will see now the Department of Nursing is there giving PhDs. It's a small program. We also train a lot of oncology nurses. We've expanded that, and of course, that involves interactions with the Health Science Center's nursing school. It began about 6 or 7 years ago, and it's gradually grown.

Tacey Ann Rosolowski, PhD

This was part of your vision to strengthen the academic base?

John Mendelsohn, MD

It was my vision and the head of nursing and Dr. Burke, who was the physician-in-chief. We all felt that that was important. At one point we created in prevention, a department that looks at health disparities. We were thinking about having a department that looked at healthcare delivery. The research would be on how to deliver healthcare more effectively and ef-

ficiently, comparative effectiveness. That program never got started outside of the hospital. It's built into the hospital's programs. It is listed on the one-page summary diagram as an institute, but it's not built into the academic program.

Tacey Ann Rosolowski, PhD

In each of these cases, what is the significance of building these programs into the academic dimension of the institution?

John Mendelsohn, MD

There are 2 reasons to do research: to expand knowledge, and to impact society. If you're going to attract good people and you're going to create the resources to do research, it usually involves an academic program. But, you can be doing research primarily in order to improve the efficiency and efficacy of MD Anderson. This is being done by the hospital, and the people doing it often have PhDs, but you're not involving a lot of students. You're not setting up courses. You're mainly doing research in order to improve care at MD Anderson. You're publishing it, but it's not as academic a program. An academic program means you have a formal catalogue, you have formal courses, you have students, you're giving degrees, and it's a big deal to set that up. We're doing some academic collaborating with the School of Public Health, too. I mentioned about looking at comparative effectiveness; that could be set up jointly with the School of Public Health, and there may or may not be enough interest in it. There are so many opportunities here, and everybody is working pretty hard and pretty busy.

The priorities are set, I think, more around expanding areas that are working really well and are one of the top in the world or are mission critical, rather than putting a lot of resources into trying many new academic pursuits.

Tacey Ann Rosolowski, PhD

The institution evolves pretty slowly. You have to wait for the right moment for those connections to take place so that people can act on the possibility for collaboration.

John Mendelsohn, MD

No, I don't think that's true, because in some areas the institution evolves very fast. About 10 years ago, Dr. Kripke and I had a series of meetings with faculty leaders. We said, "What are the areas MD Anderson should expand in?" I think a list of 38 was generated. We narrowed it down to 5 or 6, and we set up the south campus, and those programs were set up within a few years. We built our immunology program. We built our systems biology program. Our Proton Therapy Unit is there. We acted very aggressively on that. It's some of the more peripheral areas where it's slower, but not in the major areas of focus of our mission and our vision, which is patient care and research and how they interact.

I think we underutilize opportunities with Rice. I told you I thought we need more interdisciplinary training in computational methods and computer science for biology researchers and cancer researchers in the future, and Rice is full of people that are good at that. We ought to be taking more advantage of it, in my opinion.

Growing Research and Faculty Careers

Tacey Ann Rosolowski, PhD

You've talked about your view of what has been done, what could be done. I really am getting this picture of you as this person who always sees opportunities for collaboration. Would you describe yourself in that way?

John Mendelsohn, MD

Yes. I like to think strategically about how to build whatever I'm working on into being one of the best or the best. There are really 2 ways to go about that. One is to build internally, and the other is to leverage by collaborating. There are certain core things you've got to build internally, but then beyond that, it's less expensive and it's quicker and easier and more possible to reach excellence to collaborate where there's excellence nearby, and duplicating it would be a challenge, and taking advantage of it would be terrific. That's sort of my philosophy.

Tacey Ann Rosolowski, PhD

What else can you tell me about your philosophy of leadership and particularly how you led MD Anderson?



John Mendelsohn, MD

I think becoming president of MD Anderson was the best course in how to be a leader. When I came here, the place was in much disarray, and we've gone into that a bit. I learned that you need to set up structure where it's very clear who is in charge of what. When I came here, there were 2 independent financial officers; one for the hospital and one for the cancer center. The hospital is part of the cancer center, so it was crazy. I spent a lot of time on this, and we did set up the structure, which I think works well, where we have 3 executive vice-presidents. One is in charge of the business and infrastructure, one is in charge of the academics, which is research and education, and one is in charge of the clinical care. The way I set it up was I wanted to know what was going on in all of their bailiwicks, and I wanted to be involved in the decisions that involve major strategic questions and allocations of resources, but I wanted them to run their areas. You have to have strong people, but also people that are willing to lay their cards out and don't hold them close to the chest, at least with the rest of the executive leadership. We had meetings every week. As travel increased, we probably averaged every other week, the 4 of us, along with Adrienne Lang, who is from my office, who became a 5th member of that group as a vice-president. She

made sure we were tracking together. I also met individually with each executive vice president on a weekly basis.

Tacey Ann Rosolowski, PhD

What was Adrienne Lang's role?

John Mendelsohn, MD

She had a very unusual title; we used a title that had come from Dr. LeMaistre, and it really wasn't the right title. Now she is the Vice-President of Executive Operations. That's a new title. That seemed to work. When we do new things, I like the faculty to be involved in the thinking; but in many ways this is a very top-down organization. The president has huge amounts of control, but if you use it wisely and the people that work here know you're listening to their opinions, you get a lot more done than if you just announce, "This is what we're going to do." Adrienne Lang coordinated this balance of input into our decision making.

For instance, when we want to decide how to grow our programs on the south campus, I had a good idea in my mind, with Dr. Kripke, of what we wanted to do. But, we were willing to say, "The faculty may come up with some things we haven't thought of." So we got faculty leaders together, and we had these meetings that are called "retreats" on Saturday mornings and took minutes. Then we had subcommittees that went into the areas that seemed the most promising. When we started developing programs on the south campus, it was very interesting because people knew we were going

to be putting up new buildings and money would go into certain programs. Quite honestly, I didn't get 1 complaint from a faculty member, "What happened to my program?" They knew that this was a group decision, not top-down, and that their peers had been in the room, their chair had been in the room, and I think an organization works better that way.

It was easier when we had 700 faculty than when we have 1500 faculty. Bigness is a new challenge, but my leadership philosophy was created working in smaller environments. It began at UCSD, where I was, as an associate professor, appointed head of a new cancer center that needed to be built. It was a matrix cancer center. I didn't have control of the surgeons. I didn't have control of the radiotherapists. I also was head of medical oncology, so I had control of the medical oncologists. When you're in that position, you're putting together a cancer center in a medical school, you've got to have the chairman of medicine, the chairman of surgery, and the dean behind you. I learned a lot about how to listen to people and set up environments where they feel their opinions are being taken into consideration as plans are being made. It's much easier when the cancer center is also the academic center, and I had that experience at Sloan-Kettering and then here. I believe there are no secrets, and I believe that there has to be transparency, and there has to be fairness in terms of salary levels and resource allocations.

There are 2 philosophies in American universities. One is you go find some superstars and give them the huge resources, and everybody else doesn't get the same deals. Then there's

the philosophy that everybody gets the same deals. I'm somewhere in the middle, but during my 15 years as president, I tried to be sure we're giving assistant professors here the protected time and the resources so that they could build their careers. It isn't just that I want to get the superstars into the national academy. I wanted every faculty member working here feeling that their career was important to me, and I talked about that. I believe it's true. I often had people come to me for career advice, and the deal was you're not talking to me as president; you're talking to me as someone who has been around and had experience. When you consider accepting a job as chairman of a department elsewhere while you're working at MD Anderson and having a great time and doing wonderful research, what are the pros and cons of taking on the leadership responsibilities? If you can do it here, fine, but there isn't room for everybody to be a leader here.

We talked a lot about that with people at the assistant, associate, and full professor level and people that were serving as department chairs here that were given opportunities to run cancer centers. If you're going to retain those people here, and I'd like to retain them, they've got to feel they're getting opportunities and resources. Anybody being recruited is always offered a wonderful package. If they feel they've been treated fairly and have resources to do what they want to do, you're in a much stronger position to say, "Look, you go to X medical school and you'll have more authority, but you're also going to have more accountability. You're going to be

competing for resources with the academic cardiologists there and the large psychiatry department there and many other disciplines, and you're not going to have what you have here, which is a clinic that is focused on cancer and filled with people in your specialty."

If you're a surgeon caring for breast cancer patients, you've got outstanding medical breast people and radiation breast people and imaging breast people and pathologists working together in your clinical specialty. You're a research engine. If you go somewhere else, you're going to have to set that up, but you will not be able to turn to 50 other people that are only interested in breast cancer. You have to decide what gives you your kicks. If being a boss is important to you and creating a program, even though it may be smaller in scope, it's your program; it could be reasonable to go somewhere. Those are the kind of discussions we have. That gets back to the idea that we started this little sector. I feel everyone that's here on our faculty should merit and should get enough resources to build their career. It's never a totally level playing field, because there are superstars, research leaders in their field, and you want to give them what they need, and they need more.

Tacey Ann Rosolowski, PhD

Is there anything else you wanted to add about your leadership philosophy?

John Mendelsohn, MD

I learned that as the leader of MD Anderson, one of his or her

key goals is to have a vision for where the institution could and ought to go and say it over and over and over again. It becomes a mantra. If you go to the airport and look at all the books that are for sale about how to become a successful businessman, this is said over and over again, and it's true. We spend a lot of time on that, and I think the vision statement is really important. I think Dr. DePinho stated a very clear vision. In his most recent meetings with the faculty, he said we're going to take 5 cancers and create Moon Shot programs to greatly impact these patients. The other cancers are going to get resources, too; they're just not as developed for rapid, major clinical impact, so they're not going to be the Moon Shots. We're not ready to go to the moon in some areas. He's setting what they call in the textbooks "big, hairy goals," and we did that too. Dr. Clark did that, and Dr. LeMaistre did that, so I think Anderson has been fortunate having presidents who propose big, hairy goals.

-- end audio segment--

Building Translational Research

Tacey Ann Rosolowski, PhD

How would you describe the big, hairy goals of each of the presidents, looking at it through that lens?

John Mendelsohn, MD

I think Dr. Clark's big, hairy goal was to create, out of nothing, a really important cancer center that was as good as any and was oriented toward both studying cancer and treating cancer, and he did that. I think one of Dr. LeMaistre's major focuses was building stronger connections to the community. It was at the end of his 18 years as president, through a huge effort on the part of our community supporters and the Board of Visitors, MD Anderson had a bill passed which allowed self-referral, which changed things tremendously. Until then, a patient couldn't call here for an appointment. Most doctors took care of the patient until the train wrecks occurred, then they'd

call us with the a referral. That creates a certain kind of patient population you're treating, primarily with advanced cancer.

Then his other big area was building up prevention. When I came, my own experience has been in what's called translational research. I liked the idea that much of the science here would be as focused as much as possible on bringing something to the bedside, and we expanded the clinical trials research program tremendously. I also wanted to take advantage of that self-referral and to change the vision of MD Anderson so that the average person in Houston today, if they get cancer, may think to themselves. "Maybe I ought to go to MD Anderson for my initial care." Whereas I think the average person in Houston 20 years ago thought of MD Anderson as the place you go when their treatment hasn't worked out well. I think it's better to take care of the patient from the start. You learn more, and you help people more. We change the diagnosis when patients walk in the door somewhere around 5% of the time. Sometimes we send people out without cancer that came in with a label, "I've got cancer." Those are wonderful events. A man called up saying, "My daughter has stomach cancer," just in tears. We sent her out 5 days later with a diagnosis of a benign ulcer. If she had not come here, she would have had her stomach out. I think this happens because we're specialized. We have so many really fine doctors that really understand their kind of cancer that we're less likely to make mistakes like that.

When I came here initially, I had to put a lot of resources into the pathology department and the radiology department in order to bring them up to snuff, because most of the resources had gone into medical oncology, surgical oncology, and radiation oncology. To provide a complete care of the patient, you need experience in all of the specialties. One of the reasons we grew so much is we started taking in more patients that didn't fit any research protocol. They weren't research patients. My point to the faculty was, probably 1/3 of those patients are going to need experimental therapy at some point in their care, and you're going to have complete records on them. You're going to know what their tumor looked like from the start, and you're going to be able to study the natural history of cancer much better even though 2/3 of your patients get well and do well on what we call standard of care.

And you can also improve standard of care. You can do research on how to do early cancer care better. A lot of the chemo that is given today in conjunction with surgery is given before the surgery to shrink the tumor. You can't do that if you're only seeing end-stage cancer. One of the things that developed while I was president was the attitude that we want to give complete care to the patient from the 1st day of diagnosis to when they're either cured, or they're a long-term survivor, or unfortunately when they die of their disease. The program of developing these multidisciplinary care centers had been started before I came, but I pushed that forward very aggressively, and we completed it. I think, we have created a situation where each doctor here becomes, after 4 or 5 years, a na-

tional and sometimes a world-class expert in what they're doing, because they're so focused and they have an outstanding team to work with.

I spent a lot of time in my thinking about building the image and the patient base of MD Anderson beyond Houston and beyond Texas, trying to attract patients from all over the United States and the world. Until 9/11, that was all going very well. Since 9/11, it's harder to get patients from around the world. They're going more frequently to Germany and England. I also spent a lot of time visiting cancer centers in other major cities around the world and setting up collaborations in research and sometimes in clinical care, and we began to experiment with putting our name up on cancer centers in other cities. There's one in Florida that we developed that I inherited. There's one in Spain that we started right after I came that we learned a lot from; it was painful, but what we learned is now being applied well to a number of collaborations with cancer care institutions, nationally and internationally.

Sister Institutions



Tacey Ann Rosolowski, PhD

What was that learning process like, with the center in España?

John Mendelsohn, MD

You have to learn who to make deals with. One thing we learned in España was you don't make a deal with anybody unless they've got the resources and the commitment to create something. In Spain there was a lot of goodwill, but the people that put up the money initially were in it for profit. We were always short on money, and we were working with people that were trying to find an inexpensive way of getting things done. The current people that have taken over MD Anderson Espana are a large chain. They want this to be a jewel, and they're putting money into it. In the long run, they'll make money, but they're not worried about investing. They have a different view of the investment than the original people we worked with. It was all transparent, but we

learned what to look for. We learned how to set up. The faculty, the executive leadership, and I agreed we're not putting our name up unless we think the care there is really outstanding. For a while, people here said, "This is crazy. They can't get as good of care there as they can get here." My point was, well, they can get a lot better care working with us than they got before we were there. We could be raising the bar.

We want to be the number 1 cancer center in the world, which is the aspiration that we set up in our vision statement. I think we talked about the vision statement. We purposely said, "We want to be the premier cancer center in the world." That was a big, hairy goal, and I think we achieved it. Let's put it: as the premier cancer center in many people's eyes. In any list of the top 3, we'd be on the list. That wasn't the case. In order to merit that, you've got to have a presence in the world, by working with cancer centers in many states and countries and creating situations where we are contributing to their quality of care. We have a number of cancer delivery partners around the country and a few internationally without our name over the door. We're giving advice and sharing expertise, and being paid for it.

We had to set up rules. One rule we learned is don't go unless they have the resources to do something that we'd be proud of. Another rule is that they have to agree to do things our way: our quality assurance, organizing around multidisciplinary care, our standards. I think those are the 2 main rules. We've learned that it's much better if you can get people involved that were trained here.

In the Spain affiliation, a lot of the people came here, got trained, sometimes for 3 months, sometimes for a year. The hardest thing is you have to go and visit, not just your business and operations experts, but your brain surgeons and your breast oncologists and your radiotherapists. You have to visit there. You don't have to be there all the time, but in any 2-year period someone from a variety of disciplines has to go and spend a week and see what's happening, show them what you have learned is right. I remember in Spain, when we got to leukemia, the head nurse in our leukemia program had to spend 3 months in Spain because leukemia patients are very complicated, and they take special knowledge in order to give care so they don't die from the treatment. That's the level of commitment you have to make, which means you don't do a lot of these. We also learned you can't do a lot of them because you want your people around here to be available to take care of our patients. If they're in the airplane all the time, we can't do our thing at home.

-- end audio segment--

Tacey Ann Rosolowski, PhD

Given the challenges with MD Anderson España, for example, what have been the benefits of that collaboration and relationship?

John Mendelsohn, MD

Well, there have been very few referrals. There have been very few research accomplishments. If you read our mission statement, it says we want to eliminate cancer in Texas, in the coun-

try, in the world. If you read our vision statements, we want to be the premier cancer center in the world. We've set up something very special in Spain that we think is justifiably thought of as the best cancer program in Madrid, and that's a part of our mission.

We don't put our financial resources into these relationships. We're a public institution, even though the state only counts for 4% of our budget. If we went and spent money to develop a cancer program in another country or another state, we'd be in the newspapers about it. We can justify what we are doing. We're paid for our time and effort, we're paid for all we do, but these things we've done in Spain and other places, up until now, have not been major business programs. Now, what we're doing in Banner, and what we're starting to do now in all of our regional care centers is different. They're part of a business plan in addition to part of the mission, and they will be margin centers. (We don't use the word profit.)

Personalized Care

Tacey Ann Rosolowski, PhD

I wanted to shift gears a little bit, because we didn't bring the story of your interest of translational research and personalized care to a conclusion, and certainly you have this new role as Director of the Institute of Personalized Care, so I wanted to speak a bit about that. First, I was hoping you could give me a snapshot of what exactly personalized care means.



John Mendelsohn, MD

Care is always personalized, because it's a compact between a doctor and a patient. Some people like to use the word targeted or precision care today. The fact is that even in the time of William Osler, 1890, there were no antibiotics and few effective medications. The most common causes of death were pneumonia and tuberculosis. Operas today are about AIDS. The operas in the 1900s were about tuberculosis. The hero of La Boheme dies of tuberculosis. The hero of La Travi-

ata dies of tuberculosis. You read the biographies of the famous composers, and their brothers died of tuberculosis. It was very common. Doctors didn't have many tools.

Personalized cancer care back then meant caring for the person more than curing the disease. In the last 100 years, we've gotten much more sophisticated in ways to intervene with illness. The surgery got more sophisticated. Radiation therapy was invented in the last 100 years. Chemotherapy was invented in the last 50 or 60 years. So now the personalized care involves bringing a whole lot of new toolboxes in and hand tailoring the care to what's wrong with that particular individual person.

Then along comes this new revolution in genomics, and we now understand that each cancer is a little different because its group of 4 to 6 aberrant genes are different from the genetic mutations in another cancer of the same type. Whereas we would look at a breast cancer patient and on the basis of what the pathologist sees in the microscope and correlating that with what we know about the outcomes of the disease, now, the pathologist also provides a genetic profile, and we know that gene aberrations caused that patient's cancer.

We can now say to a patient, "We can profile your disease not just looking at the pathology in the microscope and not just looking at where it is in your body with CT scans and MRI scans and PET scans, which we do incredibly well now. We can also say what's the biochemical mechanism causing your cancer to act the way it's acting," which may be differ-

ent in 2 breast cancer patients that otherwise were the same under the microscope. Personalized therapy today means, in many people's eyes, taking advantage of what we are now learning about an individual patient's disease at the molecular and genetic level and using that information to design their therapy plan, which you can call it precision. You can call it personalized, you can call it targeted.

-- end audio segment--

The Institute for Personalized Care

Tacey Ann Rosolowski, PhD

How does the mission of the Institute for Personalized Cancer Therapy go about putting that into operation and what is your role as director of that institution?

John Mendelsohn, MD

Right now there are maybe a dozen genetic aberrations where testing is paid for because they determine therapy. Other than that, the approach that I just outlined is research that requires funds. It's not reimbursed, so one of the goals here is to raise the philanthropy and the grants and the commitment of some of our hospital margins to set up research protocols that prove this works for the benefit of the patient's care. Now maybe we'll prove it doesn't work; then we'll quit. We think it's very likely it will work based on research we've done and other people have done. It's not standard of practice yet in most situations. The 2nd thing is, in order to do this you need a more sophisticated infrastructure. Pathologists become even more im-

portant because you can't treat a patient on the basis of a lab test unless that lab test has been done in a laboratory that has been certified. They have very high standards. It's not a government certification. It's the pathologists. It's called CLIA. We have a CLIA lab. When the pathology department does a blood count, sodium and potassium, they have to have CLIA certification. Well, now we had to build in CLIA certification to do gene work. One of the challenges is that nobody knew what CMS would demand. Nobody knew what the FDA would demand. There were a lot of people that suddenly feel they should have some say in how all these tests are done. They're hard tests. They're hard to interpret.

Tacey Ann Rosolowski, PhD

Can you give me an example?

John Mendelsohn, MD

If you're sequencing a genome, you're getting 3 billion pieces of information. The error rate in the machine is 1 in 1 to 10 million. Then you're identifying genetic aberrations, putting the information together and discarding errors. It took 10 years to sequence the first genome. Now we're trying to do it in 11 days, or faster. We cut up the DNA into little pieces and sequence them all simultaneously, and then we use statistical algorithms to fit them all together. The process needs a sophisticated approach to look at the data that comes out and say these are the genomic aberrations.

Then in many cancers we're finding 100 genes are abnormal. They aren't all causing the cancer. Cancer is a disease where

your genes get beat up. There's a lot of thinking and planning and information that we are mostly carrying in our heads that will someday be validated and fed in by a computer to say, well, these are the 3 or 4 abnormal genes that matter. Right now, many of the genes that matter are ones for which we happen to have targeted drugs, and the drugs have been produced because somebody found that those genes seem to be important and the experiments in animals showed that if you attack that gene and the product of that gene with a drug, the animal's cancer gets better. So it's a complicated learning process.

We're setting up the tools in pathology and also in diagnostic imaging, because if a person has cancer and they're doing well on standard care, and 5 years later a recurrence occurs, you don't want to look at genetic aberrations in that original cancer. You want to look at the new evolving cancer. We have to biopsy the the tumor in order to do the gene tests on it, so we have to expand interventional radiology while we expand pathology. Finally, we have to show the faculty that this part of the workup is very likely to be useful, and encourage the faculty to design the trials which will test our hypothesis. It's still a hypothesis, doing this on a routine basis for all patients that are not being cured or well-controlled in their cancer care.

This is the next step. So we're meeting with the faculty, and they're very excited about doing this kind of research. It's a 5-year plan. We will reach the point where this year we'll probably sequence 1,000 patients, the next year probably 4,000. At the end of 5 years we hope that we will have shown that this is

important and useful for every patient that has advanced cancer that is not cured by standard care, and that might be 30,000 a year.

This is very different from other institutes. This is an institute that's trying to set up a process and a way of thinking. The only full-time member of that institute on the faculty is me. I also have an appointment in experimental therapeutics. Most of the people that are doing this work are members of the Pathology Department or the Systems Biology Department or the Medical Breast Cancer Department, or many other departments like Investigational Cancer Therapeutics. We are pulling together a matrix. This is going to become important for caring for any kind of cancer. It's a project that maybe I'm suited for because I used to run the institution, so I know most of the players, although there's a lot of new ones coming in every year. I think people know that I'm not in here trying to build my own research career on what's coming out of this. The people that are doing these studies are going to be the authors of the publications.

Tacey Ann Rosolowski, PhD

Can you tell me about some of the specific studies that are being done?

John Mendelsohn, MD

There are 2 main protocols that have been set up. One is called Clearinghouse, and that's a protocol that was piloted in breast and colon cancer and now is opening up gradually to all types of cancer. When people with advanced cancer are con-

sidering an experimental therapy, we do the genomic testing, and we help their physicians to select an experimental therapy that is most likely to be effective. There are a few dozen protocols now where the patients with different types of cancer get their tumors sequenced and then we give the information to the treating physician who is a physician scientist - but the science is on their patient. That's just starting. If you ask me how many times a patient has gotten a drug as a result of this test, I can't give you the data right now. I think probably Dr. Funda Meric-Bernstam could, if you wanted to ask her. We're just setting up the process. It didn't start until March. It was only a pilot project for 6 months, so we're just opening it up.

The other protocol is called Unusual Responders. These all have consent forms and IRB approval. Let's say the patient receives an experimental drug and it works. Unfortunately, most experimental drugs only work for a while. The tumor starts growing again. We'd like to biopsy that tumor again, and we'd like to see what's changed, what new gene abnormalities have occurred. We'd also like to study patients who sometimes have an incredibly effective response to a drug, and go back to the original tumor to do more complete genetic sequencing which may explain the success. The first part of this year, we were testing only about 12 different genes. Now we're testing 46 genes, and we're testing certain hot spots on those genes where common mutations are seen. We're going to be expanding them to probably 80 genes and then 200 genes. We will be expanding and looking at not just the known impor-

tant mutations but looking for all mutations, because the technology is allowing us to do that.

Suppose somebody has a wonderful, complete response and another patient didn't respond. We'd like to go back to their original tumor. Both tumors had that target genetic aberration. They were assigned the drug. Well, we'd like to now look at all the genes in those 2 tumors, pair them up, and see are there other genes that are abnormal in the one that responded or abnormal in the one that didn't respond. We can begin to understand the mechanism. Maybe we can add a 2nd drug for that person that didn't respond. Maybe we should say to a patient, "We're not going to give you a particular targeted drug even though you have the genetic target for that drug, because you've got other genetic problems, so it won't work." This is part of the research in the Unusual Responder program.

Those 2 protocols are set up, and we're going to meet with the lung group and other groups soon. They're beginning to look at genetic aberrations in lung cancer patients. I think eventually this is going to become a standard way to look at any patient, but we're pioneering, showing the way how to do it.

We think about cancer in a Darwinian sense. There is natural selection going on in our bodies due to mutations in the cancer that accumulate. It happens with tuberculosis, too. You need 3 drugs to treat tuberculosis, because you give the one drug and the bug develops a resistance to it. It's a very challenging battle you're doing with that cancer.

Tacey Ann Rosolowski, PhD

How quickly do these mutations take place?

John Mendelsohn, MD

They can take place within weeks.

Tacey Ann Rosolowski, PhD

Then you have to revise your protocol.

John Mendelsohn, MD

Typically, they probably take place in weeks and months, but not decades.

Tacey Ann Rosolowski, PhD

Do you find that with this vision this could become the standard way that all patients are handled? Obviously you're going to set up work with a lung cancer group.

John Mendelsohn, MD

Well, we're working with all of them. It will be the standard way. I think it is likely enough it will be the standard way so that if we want to be the number 1 cancer center, we'd better be prepared to offer it. And if we're pioneering how to offer it, we're doing the right thing. Enough people agree with this so that the institution and philanthropy are willing to put resources into it.

Tacey Ann Rosolowski, PhD

The question I was trying to formulate had to do with the vision issue. You said that one of the interesting things about this institute is it's really about changing the

way people are thinking.

John Mendelsohn, MD

And putting in the infrastructure.

Tacey Ann Rosolowski, PhD

With the cognitive piece, we are focusing on this moving target idea, the Darwinian battle that's happening over weeks and months. That's what you're trying to really focus on?

John Mendelsohn, MD

Yes, but it's a huge challenge. There's all kinds of information coming out now, the literature about different genes in different types of cancer. You're one of our crackerjack colon cancer docs. You can't keep up with all that literature. One of the things we're developing is a decision support tool. We want to be able to take the literature as it comes out and funnel it so that the physician who gets the report, X gene is abnormal in your patient, can have a little background. Here's the literature on that gene that's relevant to you, and here's the literature where somebody has shown that if you treat that gene aberration with a particular targeted therapy, it will help your patient. We're not going to say to a physician who is treating a colon cancer patient, "Here's the result of the test. You treat X way." They decide the treatment, and we want to give them the tools so that they can decide what is the right thing to do. And we also have to give these tools to the patient. There's a huge structure, medical informatics, that's needed here that we're just beginning to adequately



staff. Many medical schools have departments of medical informatics and we have one.

Tacey Ann Rosolowski, PhD

Why was MD Anderson slow to develop that?

John Mendelsohn, MD

At first we didn't need it as a formal department.

Tacey Ann Rosolowski, PhD

What's the plan that you're putting into place to address that now?

John Mendelsohn, MD

The Institute is scaling up its informatics capacity. Dr. Mills and Dr. Meric-Bernstam are working with many biostatisticians and bioinformaticians in the institution and Dr. DePinho has taken on this need in a big way. The institution is working with Oracle and talking with IBM, and we want to get the information systems in place here partly to just keep track of all our data and mine the data and learn from it but partly to package the data in a way that is useful for the clinician and the patient who has cancer. This is going on everywhere in American medicine, and it will be worked out in the next few years. We'll be part of the solution, and you'll be able to buy something off the shelf 5 years from now. We may be contributing to it. It's a huge project, and there's very little funding for it in the standard research grants that pay for cloning genes and doing biology and things like that. That's another reason we need all these people, I told you,

trained in computer science and bioinformatics and systems biology.

-- end audio segment--

Tacey Ann Rosolowski, PhD

I remember hearing that it used to be that the phrase was knowledge is power, and I was hearing somebody say more recently that that's not true anymore. Now power is what you know how to do with that knowledge, and it isn't just that you can push a button on the internet and get a list of a million and five hits where you might go to sites. It is how do you do exactly what you've described? How can I get that information in small bundles that have meaning to what I need to do in accomplishing my work and my mission? That's really amazing, and it sounds like the funding organizations need to catch up with that idea.

John Mendelsohn, MD

This country isn't in a strong funding position right now. The NIH budget is going down rather than up. Hospital margins in general are going down. Ours, fortunately, is not. Informatics, information management is very expensive. MD Anderson spends a fortune on computers and many millions of dollars on recording and managing information.

The Institute for Personalized Care: Future Activities

Tacey Ann Rosolowski, PhD

What are some other projects that the institute is taking on to move ahead this vision?

John Mendelsohn, MD

We're starting an education program. We're going to be taking people that have been trained in medical oncology or surgical oncology and giving them training in some of these areas I was talking about. They get a stipend, and they have time off, and they do research. The research is oriented not only on learning how to clone a gene or how to do molecular biology. It's also about learning how to interpret data. Dr. Robert Wolff is in charge of the program. For example, some trainees may work with Dr. Andy Futreal on a survivorship project that he's developing, and I think he's probably going to work with 2 or 3 of the Moon Shots doing that kind of thing.

Tacey Ann Rosolowski, PhD

If a patient has been treated from diagnosis forward at MD Anderson, do you keep tissue samples of all of those?

John Mendelsohn, MD

Oh, Yes. In fact, we have lots of tissue samples and tumors saved up in many different banks, and one of the things that was a challenge is identifying them and getting access to them. Under Dr. Kripke we worked together to set up a location with special freezers and an emergency power system. All these precious samples are now annotated stored off campus, I hope away from floods, in a building that has an extra power source if the power goes down. That situation occurred in the TMC about 8 years ago during one of the floods; Baylor lost a huge repository of frozen breast cancer tissue. So yes, we have a very precious bank of tumors.

Tacey Ann Rosolowski, PhD

If there have been multiple cancers with the survivors, of course, it would be so important to go back and look at the tumor profiles of all of those.

John Mendelsohn, MD

We definitely can do that.

Tacey Ann Rosolowski, PhD

That's where the bioinformatics comes in to help with the algorithms.

John Mendelsohn, MD

We have internal experts and many algorithms are available

on the internet. We can get help from the Broad Institute, Baylor, and Wash U which have major genomic sequencing centers. There are probably a couple of dozen different sources of computer packages, and you can't do them all, so part of it is picking out which ones are the right ones. Well, fortunately there are a dozen people here, like Dr. Weinstein, Dr. Chen, Dr. Futreal, and Gordon Mills and people in the Bioinformatics Department that know these tools and can help us decide which ones are the right ones. The pathology department has some people with these skills, too in the CLIA lab. We've got to work together. That's one of the missions of the institute, the IPCT. We'd like to make it happen as smoothly and as seamlessly as possible. Linda Chin's department, Medical Genomics, and Gordon Mills' department have faculty with computational skills, and then you always have to have internal people that are writing code too to make it all happen.

Tacey Ann Rosolowski, PhD

Any other areas that you'd like to talk about with the institute's activities?

John Mendelsohn, MD

In the future? We're just looking into genes now. We need to look in the future at whether the gene is expressed or not at the RNA level. We need to look at the proteins that are produced by the genes, see if they're functioning differently or not at all. For example, are they phosphorylated, or are they not phosphorylated? The tools to do that are all available. It adds cost. This isn't paid for by insurance, so it's all research. You can't just go and take 30,000 patients and do all that. You'd

break the bank. We have to selectively begin to look at the RNA expression, and we have to selectively look at the proteins. We have to look at the immune environment in the patient. It turns out that the immune system can promote cancer, and it can also fight cancer, and Dr. Allison, who is moving here this month from Sloan-Kettering is an expert in that, and Dr. Grimm, already here, is an expert in that. I think 5 years from now, part of the IPCT will be an immunology profile. Is the patient fighting their tumor, or is the immune system actually promoting the tumor, and what can we do to promote the former and inhibit the latter?

The other thing we want to develop in the IPCT is a better way than sticking biopsy needles in people and getting pieces of their tumor or cutting with a knife into people and getting pieces of their tumor out and looking at the genes.

There are 2 approaches. One is imaging, nuclear medicine, and PET imaging and approaches like that. Right now it's much more developed in mice than it is in people. We started building a program but the person that was running it is leaving, and we're going to be recruiting a new major investigator for imaging research. Another way to go is blood tests, because blood is easy to draw. When cells die, they typically release DNA into the blood, and there are ways we can determine if a segment of DNA came from the tumor or not. If a treatment is working, the tumor DNA might go up, because the tumor cells are dying, and then it might go down after that because they are gone. If your disease is under control and then all of a sudden the tumor starts growing again, some cells

are dying again and the DNA may tick up. There are ways to monitor DNA in the blood, or circulating tumor cells in the blood, and this is an area of testing that's being studied here and in a variety of different labs around the country. If it becomes useful we want to be there with it for our patients.

There are a number of people here that are interested in looking at the proteins in the blood. Dr. Hanash has just been recruited here by Dr. DePinho, and he's a world expert on measuring proteins. Any blood test that we can use instead of biopsying a tumor is better.

The other reason blood tests are better is that tumors are heterogeneous. Suppose you've got a metastasis growing in your lung and another one growing in your liver. There could be new mutations in the lung and not in the liver or new mutations in the liver and not in the lung. All of a sudden, the genetics of the tumor is more complicated. You might have to use different chemo to treat the lung than you do in the liver, even though the cancer originally came from the breast. If those tumor cells are all leaking DNA out in the blood, we can detect this and say, "Okay, there are 2 populations here. One we better treat with this drug, and one we better treat with that drug, without having to stick needles in the liver and the lung."

Tacey Ann Rosolowski, PhD

Do you have a sense of when the institute might be prepared to start really investigating this aggressively?

John Mendelsohn, MD

I think it will happen through the Moon Shots, because there's

going to be a lot of money invested. Studying these kinds of diagnostic and therapeutic approaches are good ways to change death rates, so I think it's going to happen. It's also going to happen because people are being urged to collaborate, taking advantage of the sequencing equipment and the technology and the informatics we have, and the huge number of patients we treat.

Creating Growth and Supporting Values

Tacey Ann Rosolowski, PhD

As you look back over your contributions to MD Anderson as president and all that you've done, what are some things that you're especially proud of accomplishing?

John Mendelsohn, MD

I'm proud that we've been able to more than double the number of patients we can treat and that we greatly expanded the institution's ability to achieve its mission. When we grew, we agreed we were going to build research and education and prevention in parallel with patient care and to keep the balance, so we were able to grow not only our patient population. We were able to grow tremendously in the faculty and the staff and physical plant. This organization is serving a lot more people, and it's doing a lot more research. I think you can't but be proud that we're rated as the number 1 hospital for cancer treatment almost invariably now by different rating agencies

and even more than that by the cancer community. They look to us as the leader, so that's something I'm proud of.

I'm not going to name specific research projects that the faculty accomplished. A lot of great research went on during this period, and there has been a four-fold increase in our research budget. I think it went up from grants and philanthropy and hospital margins. We're the number 1 institution in the country in funding from the National Cancer Institute, partly because we're big, and partly because we're doing great work. I'm proud of that and the whole research enterprise, especially the strengthening we were able to do in translational and clinical research. Routinely now we're studying about 10,000 patients a year on therapeutic clinical trials, which is probably double what it was. The trials are getting more sophisticated in the direction we've been talking about. I think the reason MD Anderson is able to attract the faculty that work here and the patients that come here is because we do offer something special to the sick patient with cancer, and that is research-driven patient care. We've emphasized that.

I'm proud that this has been a happy place to work during the 15 years that I served as president. We worked hard to develop and practice our values: caring, integrity, and discovery. There are written statements for each of those values that I had a role in developing. For instance, we care for our patients and each other. I think it was part of the culture, but I think we worked hard to make it even more so. It's alleged that patients used to feel they were like cattle. They'd come in



and get a number and waited, and they'd sometimes have to wait 3 or 4 hours. We wanted to be a place that's very user friendly for patients. We worked on that. And we also want to be a place that's user friendly for each other. We worked on that, too, and this is a place where there's a spirit that I'm proud I contributed to. We do patient surveys, and we do employee surveys. We pay outside groups to come in, and they ask lots of questions. There are always people unhappy about something, but when they ask the questions "Why are you here?" and "Do you know what the mission of this place is?" these outside agencies tell us we're at the top of the chart; even if they're unhappy with their boss, they're proud to be working here, making cancer history. We've created an environment that's different from most academic medical centers, which are more tense places, and I hope that continues.

-- end audio segment--

Another thing is extramural, for example, interactions between MD Anderson and the Board of Visitors. The Board of Visitors is much more national and even international than it was. We're raising friends and funds from places outside Texas more than we were. We're also doing more collaborations, and the outreach program we talked about that became MD Anderson Global and is continuing to expand. So, this was a really great place in Houston, Texas, and now it's considered a really great place in the world, and I think I had a role in creating that difference. Those are some of the things I'm proud of.

Tacey Ann Rosolowski, PhD

Is there anything else you'd like to say about your impressions of or your hopes for MD Anderson?

John Mendelsohn, MD

I've been to a lot of academic medical centers, and I think there is an esprit here that encourages many kinds of collaborations: between different doctors taking care of a type of cancer; between laboratory scientists and clinical investigators; a collaborative approach between the patient and the doctor; the team of doctors; collaboration between the doctors and the nurses taking care of the patient. It's a "team sport." Nobody's perfect at it, but I think we're as good at it as anywhere I've ever seen. So, that's something very special about MD Anderson, and it is important when things are getting tough like in bad economic times. There was one year when we were halfway through the year, and there was barely a positive margin. You need your margin in order to continue excellence and growth, and we communicated this to the faculty. We set targets of seeing more patients and cutting down waiting times to get appointments and things like that. Seeing more patients isn't just the doctors volunteering to go to the clinic. You have to get the pipeline going. Everybody rolled up their sleeves, and we turned that margin around within 6 months. We ended up with a higher margin at the end of that year than we had projected, and at mid-year we had only \$4 million. It was a remarkable turn around. Well, that's a team effort that you can't do unless eve-



rybody is rowing together, and it proved to me that it was worth the time and effort invested in building the esprit and the commitment of everyone who works at MD Anderson,

-- end audio segment--

Life Partnership with Anne Mendelsohn

Tacey Ann Rosolowski, PhD

Can I ask you about another team effort, which is your partnership with Anne Mendelsohn? How important has that been to your career and your effectiveness as a leader?

John Mendelsohn, MD

I'm very lucky. You meet a girl when you're in your mid 20s, and you decide to get married, and we just celebrated our 50th anniversary. We still enjoy sharing our interests and our lives, and we are still in love with each other. Anne has been willing to be an active partner in everything we've done together. When I was in training we moved a lot, and since I started at UCSD, we've had 3 major jobs. We had one at UCSD, where I founded and directed their cancer center, one at Sloan-Kettering where I was Chairman of Medicine, and one here. And with each move we made we weren't going to move unless she was excited about moving.



She was not initially excited about moving to any of those three jobs. She hesitated about a move out to Southern California. If you've been on the East Coast a long time, the Northeast Coast, Southern California is sort of like Texas: they're often made fun of. But we went out to La Jolla. We found incredible people and an opportunity to help start a new medical school, and she joined in and worked with me. We started a new cancer center. We had to raise money. She had a major role in developing the equivalent of our Board of Visitors, our community supporters. The first fundraising drive at UC San Diego was for the cancer center, and my wife had a major role in identifying and recruiting the contributors. They were so effective that the chancellor of the university "borrowed" most of them and created a university level group. She's always asking me about what's going on, and she's giving me advice. If we're sailing, I hold the main sheet, but she's telling me when to trim it. When we were on sabbatical we put 15,000 miles on the car that we bought. I drove every mile, but she was in the front seat with the maps telling me what to do. She's great at that.

When we went to Sloan-Kettering, there weren't as many opportunities for her to be participating in what I did, but we had faculty over all the time. We had dinner parties. She got to know the faculty spouses. At MD Anderson we started a tradition. People didn't know each other well enough, so she said, "Let's throw a Christmas party," so we had our Christmas party, and it was continued for 15 years on a Sunday afternoon in December. Everybody on the faculty and senior

administration was invited with their spouse or their friend, and in any one year about a quarter of them came. She's just been great at building collaborations and helping people meet each other. She was very active on the Board of Visitors. Most of our major donors that gave over \$1 million know Anne well. I've learned that people don't give \$1 million just for the institution. They give it because they're giving it to the person they trust and admire and are willing to support, and Anne is part of that. There are a lot of fundraising events where people are honored. We've been honored as a couple 7 times. This doesn't ordinarily happen that often. It isn't John Mendelsohn being honored. It's John and Anne Mendelsohn.

Here's the picture: 70th anniversary of MD Anderson. They honored Anne and John Mendelsohn at the event.

Anne was chairman of the Teach for America board for 2 terms, and she was chairman of the Museum of Natural Science for a term and a half. She's been very active in the community. I think she's on any list of community leaders in Houston. That's important to us because when we move to a community we want to be part of it and not just part of a group of doctors and scientists. Most of our friends are not MD Anderson people when we go out at night. That was true in New York. And it was true in San Diego. We have friends

"I'm very lucky. You meet a girl when you're in your mid 20s or early 20s, and you decide to get married, and we just celebrated our 50th anniversary. I'd say we're still quite compatible and actually in love with each other"...

from all walks of life, and she's very important in that because of her interests and because of the friends she develops.

We won't even get into the subject of raising our kids together: it's been a wonderful partnership. I'm very lucky, because each time we move she has had to start over. We have a lot of paired career families on our faculty. When you're recruiting, the spouse's career is key, and Anne has restarted her career each time we moved. She worked in very interesting paid positions until we moved here. Then she said, essentially, "I'm working fulltime pro bono for MD Anderson for 15 years." Now she's got more time on her hands. She's actually doing more things in the community. It's been wonderful. It was impossible without her. I'm glad you asked the question.

-- end audio segment--

Tacey Ann Rosolowski, PhD

Is there anything else you'd like to add?

John Mendelsohn, MD

When I retired as president, people knew that I'd lived in La Jolla, California. I had a lot of friends there. I lived on Manhattan. I had a lot of friends there. I think many people figured I'd be out of here. But Houston is our home. We're very happy here, and we belong to River Oaks Country Club and have a lot of friends there, and we have friends we play tennis with.

She has a list of 15 different women, and at any one time 4 of them are playing tennis together. We enjoy the Houston Grand Opera, and I joined the board. I'm now the incoming chairman of the board. The point I'm making is that we feel very happy and proud to be part of the Houston community, and we're participating in it even more now that we have the time. I'm going to be raising friends and money for the Opera. Not at the same level as MD Anderson and we certainly will continue to help this great institution in any way we can. We love the community and we love MD Anderson. We're very happy to be here.