

# **Donald A. Podoloff, MD**

Interview #67

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## **Donald A. Podoloff, MD**

Interview #67

### **Interview Profile**

**Interview description submitted: 2015**

#### **Interview Information:**

Three interview sessions: 2 April 2015, 23 April 2015, 4 June 2015  
Approximate total duration: about 4 hours 30 minutes  
Interviewer: Tacey A. Rosolowski, Ph.D.

**To request the interview subject's CV and other supplementary materials, please contact:**

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#### **About the Interview Subject:**

Donald A. Podoloff, MD (b. 23 December 1937, New York, New York) came to MD Anderson in 1986 as an Associate Professor in Radiology and Nuclear Medicine. Today he has joint appointments in the Departments of Nuclear Medicine, Diagnostic Radiology, and Clinical Systems Imaging, all in the Division of Diagnostic Imaging. He currently serves as Director of Clinical/Translational Research in that Division.

Dr. Podoloff's research has focused on diagnostic methods and therapies for non-Hodgkin's lymphoma as well as functional imaging to locate tumors and determine drug dosages. His administrative roles have included Department Chair, Department of Nuclear Medicine (9/1993-9/2005) and Division Head, Division of Diagnostic Imaging (9/2001-9/2010). He currently serves as Medical Director for the Center for Advanced Biomedical Imaging (3/2009-present), a center he helped to found.

#### **Major Topics Covered:**

Personal and educational background

Comparison of private practice and work in MD Anderson's academic context

Views on radiology: evolution of the field and shift from image of forms to function; integrating radiologists into multi-disciplinary care teams

Views on medical education and its impact on research innovation

Views on training radiologists at MD Anderson

Research: imaging of living systems

Evolution of radiology at MD Anderson

The Center for Advanced Biomedical Imaging –history of, economics of, potential impact on MD Anderson

Research culture at MD Anderson

Growth at MD Anderson

Ethics in medicine and research

Faith

**A note on transcription and the transcript:**

This interview had been transcribed according to oral history best practices to preserve the conversational quality of spoken language (rather than editing it to written standards).

The interview subject has been given the opportunity to review the transcript and make changes; any substantial departures from the audio file are indicated with brackets [ ].

In addition, the Archives may have redacted portions of the transcript and audio file in compliance with HIPAA and/or interview subject requests.

## **Donald Podoloff, MD**

Interview #67

### **Table of Contents** Three Interview Sessions

Interview Session One: 2 April 2015

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*A Switch from Internal Medicine to Diagnostic Imaging (Never Losing the Internist's Perspective)*  
Segment 03 / A: Professional Path;

*Private Practice and an Opportunity to Develop a Radiology Department*  
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*Discovering How to Image a Beating Heart; Reflections on Radiology's  
Shift in Focus from Form to Function*  
Segment 05 / A: The Researcher;

*An Opportunity for Intellectual Challenge at MD Anderson*  
Segment 06 / A: Joining MD Anderson/Coming to Texas;

*Building a Clinical Nuclear Medicine Program*  
Segment 07 / B: Building the Institution;

*Contributions to the Institution: Leadership and Diversity; A New Research Project*  
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*Technological Advances that Have Transformed Diagnostic Imaging*  
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*Advances in Radiology Continue to Raise Questions about Ethics and Consent*

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*A Brief History of PET Scans at MD Anderson*

Segment 11 / A: Overview;

*A View of New Collegial Leadership*

Segment 12 / B: Institutional Change;

Interview Session Two: 23 April 2015

*Interview Identifier*

Segment 00B

*Training Radiology Residents and MD Anderson as an Educational Institution*

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*The Center for Advanced Biomedical Imaging: an Opportunity to Realize a  
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Segment 14 / B: Building the Institution;

*Developing and Opening the Center for Advanced Biomedical Imaging:  
Challenges and Complexities*

Segment 15 / B: Building the Institution;

Segment 16

*The Center for Advanced Biomedical Imaging: More on the Story of Establishing CABI*  
B: Building the Institution;

*The Center for Advanced Biomedical Imaging: Part of the Changing Institutional  
Vision of Cancer Care*

Segment 17 / B: Building the Institution;

*The Center for Advanced Biomedical Imaging: A View at the Five Year Anniversary and  
Role as Medical Director*

Segment 18 / B: Building the Institution;

*Overview of Administrative Roles; The Moon Shots; Translational Research and  
the Future of Targeted Therapy*

Segment 19 / A: Overview;

*Administrative Roles, Views on the Multi-disciplinary Environment of Centers and Institutes,  
and A Radiologist's Contribution to a Care Team*

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Interview Session Three: 4 June 2015

*Interview Identifier*

Segment 00C

*Next Steps --for the Division of Radiology and the Field*

Segment 21 / B: Building the Institution;

*Medical Education, Radiology Researchers, and The Future of Radiology Research  
(in the Healthcare Economy)*

Segment 22 / A: Overview;

*MD Anderson Growth as an Impact on Institutional Culture and on Radiology*

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*Legacy Left at MD Anderson; A Love of French Cooking; Life and Work Fed by Spirituality*

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## Donald Podoloff, MD

Interview #67

### Segment Summaries

Interview Session One: 2 April 2015, about 1 hour 45 minutes

Segment 00A  
*Interview Identifier*  
about 2:25

Segment 01  
*The First Person to Go to College*  
A: Personal Background;  
about 2 min 30

Story Codes  
A: Personal Background;

In this segment, Dr. Podoloff briefly sketches his family background, noting when his family emigrated from Kiev, Russia to the United States. He also explains that he was the first person in his family to go to college. An uncle who was a proctologist was the only member of the family involved in the sciences or medicine.

Segment 02  
*Chemistry and an Early Mentor Lead to a Focus on Medicine*  
A: Educational Path;

Story Codes  
A: Personal Background;  
A: Influences from People and Life Experiences;

Dr. Podoloff begins this segment by explaining that he started out in public school, but then shifted to private school. He notes his interest in chemistry, describing the shelf full of chemicals he had in his room. He also talks about the family's physician, Dr. Lucen, who treated his asthma and inspired his interest in medicine. He explains why, after beginning his undergraduate education at the University of Rochester, he transferred to New York University. He talks briefly about his style of thinking.

Segment 03

*A Switch from Internal Medicine to Diagnostic Imaging (Never Losing the Internist's Perspective)*

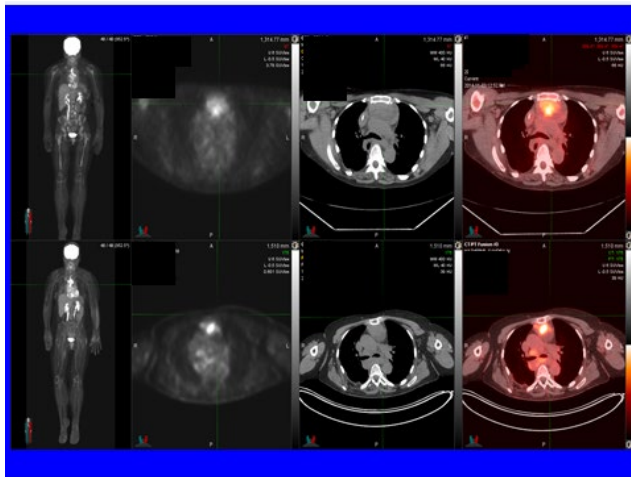
A: Professional Path;  
about 10 minutes

Story Codes

A: Military Experience;  
A: Influences from People and Life Experiences;  
A: Personal Background;  
A: Overview;  
C: Evolution of Career;  
C: The Professional at Work;  
C: Professional Practice;

Dr. Podoloff talks about how he switched from his original focus on being an internist, with an interest in psychiatry. Dr. Podoloff tells the story of joining the Air Force after his residency, an experience that tracked him into radiology. He was stationed at the Clinton-Sherman Air Force Base in Clinton, Oklahoma. Though interested in psychiatry, he explains, he changed specialties because radiology services were contracted to external providers. Dr. Podoloff then explains how he got into a residency program in diagnostic imaging at the Wilford Hall Medical Center at the Lackland Air Force Base in San Antonio, TX ('70-'73). There he became interested in nuclear medicine.

Next, as part of a discussion of the kind of cognitive work that characterizes nuclear medicine, Dr. Podoloff explains why the field is jokingly referred to as "unclear medicine." He refers to an image (provided below) to illustrate the fuzzy images he had to interpret.



Dr. Podoloff's Caption for the image to the left: Whole body PET, 2 PET, 3 CT and 4 PET/CT fusion images of a patient with mediastinal lymphoma. This scan is in Dr. Podoloff's materials as Podoloff Scan 1.

Segment 04

*Private Practice and an Opportunity to Develop a Radiology Department*

A: Professional Path;  
about 10 minutes

Story Codes



A: Professional Path;  
A: Overview;  
A: Definitions, Explanations, Translations;  
A: The Researcher;

Dr. Podoloff begins this segment by noting that his dual focus in internal medicine and diagnostic imaging would be very important to the evolution of his career. He then talks about his years in private practice at the Diagnostic Clinic of Houston, Houston, TX, where he served as Director of the Department of Nuclear Medicine with responsibilities for building a new program (8/1975-5/1986). He then explains why internal medicine enhanced the diagnostic imaging perspective, enabling him both to work with patients and understand the science of disease from a physiological perspective.

Next Dr. Podoloff explains how he built a nuclear medicine program at the Diagnostic Clinic. He also explains how nuclear medicine differs from radiology. He notes that he built a very successful department.

#### Segment 05

*Discovering How to Image a Beating Heart; Reflections on Radiology's Shift in Focus from Form to Function*

A: The Researcher;  
about 10 minutes

#### Story Codes

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

Dr. Podoloff first notes that the Diagnostic Clinic conducted more cardiac scans than MD Anderson at the time he joined the institution. In the remainder of this segment, Dr. Podoloff explains how he conducted a bone scan on a patient and then a brain scan shortly after, and this led him to discover a process to image a beating heart. The brain scan showed not the brain tissue, but the vessels. Researchers at Harvard University published this technique –the MUGA labeling technique-- however he was recognized as an innovator.

Dr. Podoloff then comments on his academic connections while he was in private practice: he served as Clinical Associate Professor of Nuclear Medicine and Radiology at the University of Texas Health Science Center in Houston from 1976-1985. He comments on how advances such as the MUGA technique have shifted radiology's focus from the form of organs to physiological processes.

#### Segment 06

*An Opportunity for Intellectual Challenge at MD Anderson*

A: Joining MD Anderson/Coming to Texas;

#### Story Codes

B: MD Anderson History;  
C: Diversity at MD Anderson;

Here Dr. Podoloff tells how he decided to leave private practice in 1985 for a position at MD Anderson. At this time, Nuclear Medicine was splitting off as a separate department. He notes that he took a substantial salary cut, but lists the benefits of working in this new context. He notes that Drs. Marv Chasen and Gerald Dodd served as his mentors.

Next Dr. Podoloff observes that in 1985, the perception was that MD Anderson was a very depressing place where patients went to die. He tells an anecdote about the diversity among the faculty at MD Anderson.

#### Segment 07

##### *Building a Clinical Nuclear Medicine Program*

B: Building the Institution;  
about 6 minutes

#### Story Codes

A: Professional Path;  
B: MD Anderson History;  
B: MD Anderson Culture;

In this segment, Dr. Podoloff sketches the roles he served once he came to MD Anderson as Deputy Chairman of the Department of Nuclear Medicine. He explains that he ran a small clinical operation that generated income and explains how the system of keeping physicians on salary at MD Anderson leads to good medical practice. He talks about the impact of this shifted role on his own career and how he developed the clinical operation.

#### Segment 08

##### *Contributions to the Institution: Leadership and Diversity; A New Research Project*

A: View on Career and Accomplishments;

#### Story Codes

C: Diversity at MD Anderson;  
C: Women and Minorities at Work;  
A: Contributions;

In this segment, Dr. Podoloff explains that he has made his most important contributions to MD Anderson through involvement in leadership. He talks about his service on committees, particularly the Credentialing Committee. He explains the importance of this committee and then notes that one of his biggest contributions was to increase the number of women on the committee from zero to fifty percent. He comments on what women bring to leadership roles.

Next, Dr. Podoloff notes that committee work helped him understand his own leadership abilities. He notes that he trained four out of the five department chairs in the Division of Radiology at MD Anderson.

Next, Dr. Podoloff briefly explains a clinical trial using the radiotracer, IPQA, to image a genetic mutation.

[The recorder is paused for about 4 minutes.]

Segment 09

*Technological Advances that Have Transformed Diagnostic Imaging*

A: Overview;  
about 13 minutes

Story Codes

D: Technology and R&D;  
A: The Researcher;  
C: Discovery and Success;  
A: Overview;  
A: Definitions, Explanations, Translations;  
D: Understanding Cancer, the History of Science, Cancer Research;  
D: The History of Health Care, Patient Care;  
D: Business of Research;

In this segment, Dr. Podoloff explains the major technological breakthroughs that transformed the practice of diagnostic imaging. He begins with CT scans, which became usable in 1972, covering advantages and challenges.

[The recorder is paused briefly.]

Next, Dr. Podoloff explains how imaging aids in drugs treatments. He notes that the MUGA scan enabled MD Anderson researchers to adjust the dosages of Adriamycin.

Dr. Podoloff explains the next big advance, the PET-CT scan. He notes that cancer is a systemic disease, with the tumor representing the “tip of the iceberg.” The PET-CT scan enables oncologists to look functions within a patient’s physiology that indicate cancer activity beyond that localized area. There is a discussion of how “imaging” must be understood in a very new way as scans do more than visualize concrete anatomical structures.

Finally, Dr. Podoloff comments on how the timeline for the development of new instruments is much shorter than the development period for new drugs.

Segment 10

*Advances in Radiology Continue to Raise Questions about Ethics and Consent*

B: Institutional Change;

Story Codes

A: The Researcher;  
D: Ethics;  
D: On Research and Researchers;  
D: Understanding Cancer, the History of Science, Cancer Research;  
D: The History of Health Care, Patient Care;  
C: Patients;  
C: Patients, Treatment, Survivors;  
B: MD Anderson History;

Dr. Podoloff begins this segment by noting that, originally, radiology was subjected to very little oversight over doses of radiation administered. In 1986, however, the institution created new consent forms for obliterating patients. Dr. Podoloff explains that this instituted a new process that eventually “humanized” radiology research by building in a view of the patient receiving experimental treatment.

As part of this discussion, Dr. Podoloff talks about the ethical complexities in Dr. Emil J Freireich’s work [Oral History Interview] and work in Developmental Therapeutics, where researchers often gave extremely high doses of drugs.

Dr. Podoloff says he faces a current dilemma in his own research, and he is considering whether questions about dosages of IPQA will prevent him moving forward with clinical trials.

Dr. Podoloff next observes that if you’re purely scientific about medicine, you treat a patient like a test tube, but “we have to be human.” He talks about attitudes of cancer patients when considering issues of consent: they want to feel better and function as they did before their illness. He also notes that it is hard to “sell” imaging to a patient as an experimental element of a treatment plan, as there is no direct outcome. He notes that he is very dependent on patients’ altruism.

#### Segment 11

##### *A Brief History of PET Scans at MD Anderson*

A: Overview;  
about 7 minutes

##### Story Codes

A: Overview;  
A: The Researcher;  
D: Understanding Cancer, the History of Science, Cancer Research;  
D: The History of Health Care, Patient Care;  
D: Business of Research;  
D: Fiscal Realities in Healthcare;  
D: The Healthcare Industry;

In this segment, Dr. Podoloff explains why PET scans were difficult to offer at MD Anderson. First, financial difficulties at the institution resulted in the PET program being closed between 1988 and 1994. Next, insurers were not reimbursing PET scans because there was no data to document their advantages. Dr. Podoloff discusses insurance and the damaging influence insurance policies can have on treatment. He notes that the PET program was restarted at MD Anderson in 1999 and currently does seventy to eighty scans per day.

#### Segment 12

##### *A View of New Collegial Leadership*

B: Institutional Change;

##### Story Codes

B: MD Anderson Culture;  
B: Building/Transforming the Institution;  
B: Growth and/or Change;

C: Professional Practice;  
C: Leadership;  
C: Understanding the Institution;  
C: Portraits;

Dr. Podoloff begins this segment by observing that he didn't seek his current job as Head of the Division of Radiology, but has built clinical program to handle the workload and is now working on developing the research program.

Next he observes that the recruitment of David Pimwica-Worms and Helen Pimwica Worms has been very positive for the institution. David Pimica-Worms, now Head of Diagnostic Imaging, brings a collegial leadership style that contrasts with Dr. Yuri Galivani's "top down" approach.

Interview Session Two: 23 April 2015, about 1:30

Segment 00B  
*Interview Identifier*

Segment 13  
*Training Radiology Residents and MD Anderson as an Educational Institution*  
A: The Educator;  
about 12 minutes

Story Codes  
A: Career and Accomplishments;  
A: The Educator;  
C: Research, Care, and Education;  
A: The Administrator;  
A: Overview;

In this segment, Dr. Podoloff discusses his role as Education Coordinator of Resident Training for the Department of Nuclear Medicine and related issues in education.

He begins by emphasizing the apprentice-style education of residents and the difference between looking at a radiology film and interpreting the images there. He notes that he became Education Coordinator because residents requested that he serve that role. He talks about developing a template for evaluating education effectiveness. He also explains why MD Anderson's education of residents is unusual because they don't interpret films and talks about the pros and cons of this.

Dr. Podoloff then talks about changes to medical education. He observes that MD Anderson offers education to individuals at the advanced fellowship level. He also notes that he talks to students about ethics and economics.

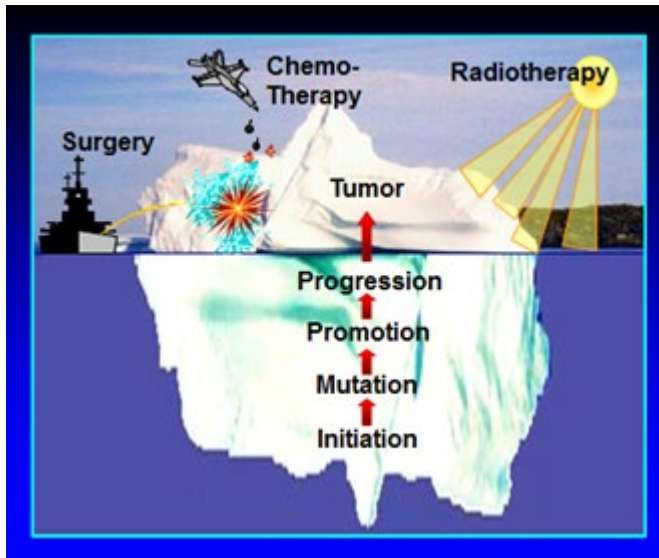
Segment 14  
*The Center for Advanced Biomedical Imaging: an Opportunity to Realize a Vision of Imaging for MD Anderson*

B: Building the Institution;

Story Codes

A: Career and Accomplishments;  
A: Professional Values, Ethics, Purpose;  
B: Building/Transforming the Institution;  
C: Leadership;  
B: Industry Partnerships;

After a brief discussion of his role as Deputy Chair of the Department of Nuclear Medicine, Dr. Podoloff tells the story of the Center for Advanced Biomedical Imaging (CABI). He explains that in 2000 conversations with Dr. John Mendelsohn [Oral History Interview] and Joe Hogan, the head of GE Medical resulted in a deal to develop CABI. This was also a recruitment incentive for him to take on the role as head of the Division of Radiology. Dr. Podoloff explains his vision for imaging at MD Anderson, referring to the image below.



Dr. Podoloff then explains why he wanted to take the position of Division Head and create the Center for Advanced Biomedical Imaging. He notes that he had the support of both Dr. Mendelsohn and GE Medical.

Segment 15

*Developing and Opening the Center for Advanced Biomedical Imaging: Challenges and Complexities*

B: Building the Institution;

Story Codes

A: Career and Accomplishments;  
A: Professional Values, Ethics, Purpose;  
B: Building/Transforming the Institution;  
C: Leadership;  
B: Industry Partnerships;

In this segment, Dr. Podoloff explains why it took ten years to open the Center for Advanced Biomedical Imaging, despite strong support from the institution and partners. He explains legal issues that emerged between MD Anderson and GE Health. He describes the process of finding a location for CABI.

Dr. Podoloff observes that the centers are located on South Campus for synergy: he lists the departments with strong connections to CABI.

#### Segment 16

*The Center for Advanced Biomedical Imaging: More on the Story of Establishing CABI*

B: Building the Institution;  
about 10 minutes

#### Story Codes

B: Building/Transforming the Institution;  
C: Leadership;  
B: Industry Partnerships;  
B: Multi-disciplinary Approaches;  
D: Fiscal Realities in Healthcare

Dr. Podoloff begins by explaining that the Center for Biomedical Imaging is ready to begin promoting its services within MD Anderson. He notes the importance of talking to clinicians and researchers about their imaging needs. He gives the example of how a research project in the Department of Head and Neck Surgery led to a new standard of care.

Dr. Podoloff He talks about financial challenges of running CABI and legal challenges involved with acquiring instruments from GE Health. He explains the decision to offer standard of care imaging with research imaging tacked on in order to avoid “hemorrhaging money.” Dr. Podoloff talks about the different between a non-profit and a not-for-profit institution.

#### Segment 17

*The Center for Advanced Biomedical Imaging: Part of the Changing Institutional Vision of Cancer Care*

B: Building the Institution;

#### Story Codes

B: Building/Transforming the Institution;  
C: Leadership;  
B: Industry Partnerships;  
B: Multi-disciplinary Approaches;  
D: Fiscal Realities in Healthcare;  
B: Institutional Mission and Values

After discussing some controversies over establishing CABI, Dr. Podoloff explains how CABI fits in with the visions of cancer care developed by MD Anderson’s presidents. He discusses how CABI fits in with Dr. John Mendelsohn’s view of the “cancer care cycle” and how a system of research centers could offer a comprehensive approach to cancer prevention and treatment (see image next page). He then talks about its relationship to Dr. Ronald DePinho’s approach to research and targeted therapy.

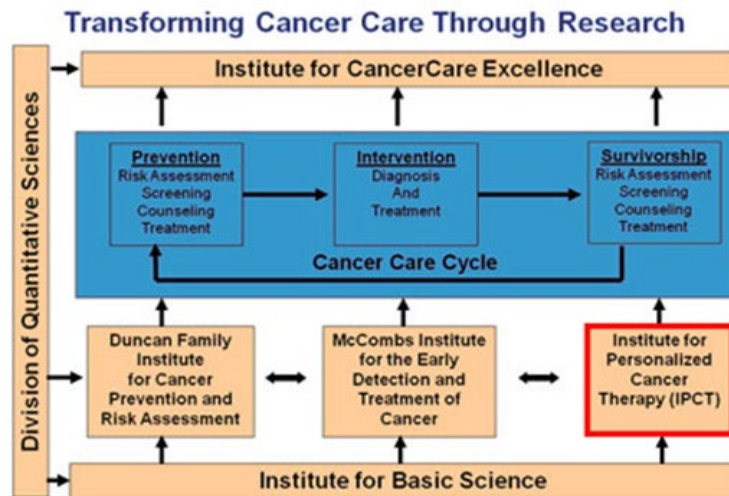


Diagram designed by Dr. John Mendelsohn, provided with his permission.

Segment 18

*The Center for Advanced Biomedical Imaging: A View at the Five Year Anniversary and Role as Medical Director*

B: Building the Institution;  
about 10 minutes

Story Codes

B: Building/Transforming the Institution;  
C: Leadership;  
B: Industry Partnerships;  
B: Multi-disciplinary Approaches;  
D: Fiscal Realities in Healthcare;  
B: Institutional Mission and Values;  
C: Patients, Treatment, Survivors;  
C: Patients;  
C: Donations, Gifts, Contributions;

Dr. Podoloff lists some of the immediate issues that have to be addressed in developing the Center for Advanced Biomedical Imaging and then discusses major accomplishments in the first five years of the Center's operation, summarized in the McCombs Report. He first notes some financial issues must be resolved involving the cyclotron. Next he explains that the Center is considering working with inpatients. He explains how this came about and issues that will arise as they move ahead.

Next Dr. Podoloff talks about the difficulties of securing philanthropic dollars to support imaging studies. He uses the example of his own research and notes the altruism of patients.

He briefly sketches his role as Medical Director of CABI.



Segment 19

*Overview of Administrative Roles; The Moon Shots; Translational Research and the Future of Targeted Therapy*

A: Overview;

Story Codes

A: Overview;

A: The Researcher;

C: Cancer and Disease;

B: Discovery and Success;

D: Understanding Cancer, the History of Science, Cancer Research;

D: The History of Health Care, Patient Care;

C: Research, Care, and Education;

Dr. Podoloff covers several topics in this segment.

He first sketches his role as Director of Clinical Research and his related work on the Institutional Executive Research Committee. He then sketches his role as Director of Clinical/Translational Research for the Division of Diagnostic Imaging (role assumed in 2010).

Dr. Podoloff then sketches the evolution of translational research under Dr. Ronald DePinho and gives his impressions of the Moon Shots program. He talks about early data produced a multi-disciplinary group of diagnostic studies conducted within the Lung Cancer Moon Shot.

Next Dr. Podoloff reflects on the evolution of cancer care. He then talks about how the genetic mutability of cancer tumors in relation to tailored therapies and the Moon Shots.

Segment 20

*Administrative Roles, Views on the Multi-disciplinary Environment of Centers and Institutes, and A Radiologist's Contribution to a Care Team*

A: The Administrator;

Story Codes

A: The Administrator;

A: Overview;

A: The Clinician;

B: Building/Transforming the Institution;

B: Multi-disciplinary Approaches;

B: Growth and/or Change;

B: MD Anderson Culture;

C: Professional Practice;

C: The Professional at Work;

Dr. Podoloff first talks about his role as Chair of the Department of Nuclear Medicine and his related work as Chair of the Executive Committee of the Medical Staff. He explains that as Head of the Division of Radiology he was helped plan occupancy of the Alkek Hospital and the Mays Ambulatory Clinic. He was helped develop strategies to structurally integrate the Centers and Institutes in the Cancer Care System.

He then explains that the basic sciences are still organized around departments but the clinical functions are organized in multi-disciplinary care centers and environments. He explains the implications of this structure for Radiology, which does not operate in a multi-disciplinary environment. He sketches the pros and cons of this and talks about the importance of having a radiologist on a clinical team.

### Interview Session Three: 4 June 2015

#### Segment 00C *Interview Identifier*

Segment 21  
*Next Steps --for the Division of Radiology and the Field*  
B: Building the Institution;  
--12:53

Story Codes  
A: The Researcher;  
A: Overview;  
A: Definitions, Explanations, Translations;  
B: Building/Transforming the Institution;  
B: Multi-disciplinary Approaches;  
B: Growth and/or Change;  
C: Healing, Hope, and the Promise of Research;  
C: Discovery and Success;  
D: Understanding Cancer, the History of Science, Cancer Research;  
D: The History of Health Care, Patient Care;

Dr. Podoloff sketches what's on the horizon for radiology at MD Anderson and for the development of the field.

He first talks about "big data" advances made via the Quantitative Image Analysis Core by linking molecular and computational imaging. He observes that as Radiology's focus has shifted from form to function, it is serving a data storage function for many fields. To demonstrate the form to function shift, Dr. Podoloff uses examples from the Lung Cancer Moon Shot and his own research.

He talks about the "spin lab" where living systems can be imaged using new technologies. He explains the process.

Segment 22  
*Medical Education, Radiology Researchers, and The Future of Radiology Research (in the Healthcare Economy)*  
A: Overview;  
12:53 – 25:11

Story Codes

A: The Researcher;  
A: Overview;  
A: Definitions, Explanations, Translations;  
D: Understanding Cancer, the History of Science, Cancer Research;  
D: The History of Health Care, Patient Care;  
D: On Research and Researchers;  
A: Character, Values, Beliefs, Talents;  
A: Personal Background;  
A: Inspirations to Practice Science/Medicine;  
D: Fiscal Realities in Healthcare;  
D: The Healthcare Industry;

Dr. Podoloff speaks broadly of advances in radiology research.

He first states that conservatism in medical education is the major reason that medicine does not advance rapidly. He talks about the qualities that an innovative researcher must have, reflecting on his own curiosity.

He makes final comments on how radiology's shift in focus from form to function will give rise to entirely different kinds of inquiry in the future. He notes that the biggest influence on research will be changes in the healthcare systems. He talks about healthcare costs and policy.

#### Segment 23

##### *MD Anderson Growth as an Impact on Institutional Culture and on Radiology*

B: Institutional Change;  
25:11 – 43:58

#### Story Codes

B: Institutional Mission and Values;  
B: MD Anderson Culture;  
B: Institutional Processes;  
B: Growth and/or Change;  
A: Overview;  
A: Definitions, Explanations, Translations;

Dr. Podoloff talks about the need for growth at MD Anderson and sketches expansion has had an impact on how radiology is conceptualized as a practice.

He first talks about the need for regional care centers to better serve patients, then sketches changes to the institution as it has grown, with particular attention to the increases in regulation.

Dr. Podoloff then notes that the field of radiology is addressing a question: Is radiology a legitimate field of medical study or a technology? He gives background on why radiology can be seen as superfluous, and notes that other specialties have their methods of reading films. He talks about strategies for integrating radiologists into multi-disciplinary teams.

Dr. Podoloff praises MD Anderson's method of paying physicians to take the profit motive out of care deliver. He addresses the period of turbulence at the institution since Dr. DePinho became president, noting the he is satisfied with his leadership with one exception.

Segment 24

*Legacy Left at MD Anderson; A Love of French Cooking; Life and Work Fed by Spirituality*

A: View on Career and Accomplishments;

Story Codes

A: Character, Values, Beliefs, Talents;

A: Faith;

A: Career and Accomplishments;

A: Post Retirement Activities;

A: Professional Values, Ethics, Purpose;

When asked about the legacy he will leave at MD Anderson, Dr. Podoloff immediately lists the individuals in leadership positions whom he trained or recruited. He sketches what he wishes to accomplish prior to retirement and expresses his views of a working with MD Anderson.

Next, Dr. Podoloff talks about favorite activities: he loves to cook French food, for example.

Finally, he talks about his relationship with Judaism and the importance of spirituality in his life and his work.

# **Donald A. Podoloff, MD**

## **Interview Session One: 2 April 2015**

### **A note on transcription and the transcript:**

This interview had been transcribed according to oral history best practices to preserve the conversational quality of spoken language (rather than editing it to written standards).

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## **Chapter 00A** **Interview Identifier**

***Tacey A. Rosolowski, PhD***

00:00:00

Okay we're now officially recording. And I'm Tacey A. Rosolowski and I am interviewing Dr. Donald A. Podoloff for the Making Cancer History Voices Oral History Project run by the Historical Resources Center at MD Anderson Cancer Center in Houston, Texas. Dr. Podoloff came to MD Anderson in 1986 as an associate professor in Radiology and Nuclear Medicine. Is that correct?

***Donald A. Podoloff, MD***

00:00:26

It is correct.

***Tacey A. Rosolowski, PhD***

00:00:26

Great. He served as Deputy Chairmen in the Department of Nuclear Medicine in the Division of Diagnostic Imaging at that time as well. Today he is the Director of Clinical and Translational Research in that division and this is the Division of Nuclear Medicine. Yes? No? What is it the division of?

***Donald A. Podoloff, MD***

00:00:44

It is the Division of Diagnostic Imaging.

***Tacey A. Rosolowski, PhD***

00:00:46

Okay

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**Donald A. Podoloff, MD**

00:00:46

And you skipped about ten and a half years when I was the Division Head of Diagnostic Imaging. You didn't say that.

**Tacey A. Rosolowski, PhD**

00:00:53

Right. Okay. We will cover that later but I am happy to have you add that preview of coming attractions.

**Donald A. Podoloff, MD**

00:00:59

Right. It's just that there was a hole in my life.

Laughter

**Tacey A. Rosolowski, PhD**

00:01:04

My apologies for creating that hole. Alright. Dr. Podoloff also serves as Medical Director for the Center for Advanced Biomedical Imaging. And I am going to list your joint appointments, and this is always tricky. The Departments of Nuclear Medicine. Diagnostic Radiology and Clinical Systems Imaging.

**Donald A. Podoloff, MD**

00:01:26

Cancer Systems Imaging.

**Tacey A. Rosolowski, PhD**

00:01:27

Cancer Systems Imaging. All in the Division of Diagnostic Imaging. Okay.

00:01:32

**Donald A. Podoloff, MD**

That is correct. I'm also the Director of Clinical Translation Research.

**Tacey A. Rosolowski, PhD**

00:01:38

Okay. Great. This session is being held in Dr. Podoloff's office in the Center for Advanced Biomedical Imaging in SCRB 3 and that's South Campus Research Building 3 on MD Anderson's South Campus also known as Research Park. And this is the first of two planned sessions. Today is April 2, 2015 and the time is about nine minutes after ten. So thank you, Dr. Podoloff, for agreeing to take part in all of this.

**Donald A. Podoloff, MD**

00:02:08

... most welcome.

00:02:08

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## **Chapter 01**

### ***The First Person to Go to College***

#### **A: Personal Background;**

#### **Story Codes**

A: Personal Background;

***Tacey A. Rosolowski, PhD:***

00:02:08

... very much appreciated. And I wanted to start in the traditional place as I mentioned before we turned on the recorder which is really with basic background, personal background, educational background. So if you can tell me where you were born and when?

***Donald A. Podoloff, MD***

00:02:25

I was born in the French Hospital in New York City on December 23, 1937 [Pause] at 9:30 in the morn, er, evening.

***Tacey A. Rosolowski, PhD***

00:02:35

[Laughter] Boy. You know all those details. Is that part of family history that was passed down?

***Donald A. Podoloff, MD***

00:02:39

Yeah.

***Tacey A. Rosolowski, PhD***

00:02:40

That's cool. That's cool. Now where do you grow up?

***Donald A. Podoloff, MD***

00:02:42

New York City.

***Tacey A. Rosolowski, PhD***

00:02:43

Okay. And how long where you there? Your entire young life?

***Donald A. Podoloff, MD***

00:02:48

Yes. I was there from the time I was born until I was about six years old. By that time we were in the midst of World War II and my parents moved out to Great Neck, Long Island to be with my aunt who had a big house and no husband 'cause he was off in the service. So I spent two years in Great Neck, then we

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came back to New York City. Most of my childhood and young adult life I was at the Upper West Side of New York City.

***Tacey A. Rosolowski, PhD***

00:03:20

Oh, okay. And what did your parents do?

***Donald A. Podoloff, MD***

00:03:22

My father was a salesmen of piece goods - things you make ladies underwear out of. My mother worked as a sales person and eventually as the manager of the Five Four shop at Lorde and Taylor on Fifth Avenue in New York City.

***Tacey A. Rosolowski, PhD***

00:03:22

Was anyone in your extended family involved in the sciences or in medicine at all?

***Donald A. Podoloff, MD***

00:03:51

Well, I had an uncle once removed who was a proctologist. But nobody else in the family. In fact, I think I was the first person in my family to go to college.

***Tacey A. Rosolowski, PhD***

00:04:04

Really? Wow. Wow. That must have been a matter of great pride for the family I can imagine.

***Donald A. Podoloff, MD***

00:04:10

It was. The only thing that superseded it was getting into medical school.

***Tacey A. Rosolowski, PhD***

00:04:14

Oh, wow. Yeah. Now, your name, Dr. Podoloff, is Eastern European. What's the extraction of that name?

***Donald A. Podoloff, MD***

00:04:20

My father's father was born in Kiev.

***Tacey A. Rosolowski, PhD***

00:04:25

Ah, okay. Now were your parents immigrants or first generation?



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**Donald A. Podoloff, MD**

00:04:30

My father's side of the family were immigrants from the pogroms during the csar's times. I think they came in 1906. And my mother's side was already here for a generation. They were of English and German extraction.

**Tacey A. Rosolowski, PhD**

00:04:51

Okay. So tell me a bit about your education?

**Donald A. Podoloff, MD**

00:04:55

I went to public school in New York City until high school. And then went to a private school called New Lincoln which was a progressive private school - no grades.

**Tacey A. Rosolowski, PhD**

00:05:08

Why did your parents elect to send you there?

**Donald A. Podoloff, MD**

00:05:17

You'd have to ask them. [Laughter

**Tacey A. Rosolowski, PhD**

00:05:19

I mean that's an interesting choice. Yeah. I mean, what kind of people were your parents that they would have made a decision like that for their child?

**Donald A. Podoloff, MD**

00:05:29

I think they were liberal - social liberals, fiscal conservatives I would describe them as. And I think there were things ab - They had a friend who had a son about my age and he was going to that school. Danny and I were pretty close so that's how I got there.

**Tacey A. Rosolowski, PhD**

00:05:49

I see. And so what grade were you when you started going to the New Lincoln School?

**Donald A. Podoloff, MD**

00:05:55

I was in the first year of high school.

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## **Chapter 02**

### ***Chemistry and an Early Mentor Lead to a Focus on Medicine***

#### **A: Educational Path;**

##### **Story Codes**

A: Personal Background;

A: Influences from People and Life Experiences;

***Tacey A. Rosolowski, PhD***

00:05:58

Okay. Oh wow. Okay. Wow, that's really a formative time for that kind of thing too. Interesting. What about your interests in elementary school? How did your interest in the sciences evolve?

***Donald A. Podoloff, MD***

00:06:11

Through chemistry. I started to play with a chemistry set when I was a kid. They had -- I don't even remember the names of them now, but I remember I had a shelf full of chemicals in my room.

***Tacey A. Rosolowski, PhD***

00:06:24

Huh.

***Donald A. Podoloff, MD***

00:06:25

And I had a mentor, although I didn't realize he was a mentor, he was my family physician. And I had asthma when I was a kid. So I spent a lot of time with Dr. [Arthur] Lucen.

***Tacey A. Rosolowski, PhD***

00:06:40

Dr. Lucen?

***Donald A. Podoloff, MD***

00:06:42

That was his name. Yes. He was an ob-byn but h was also a general practitioner. And I think that's where I got my interest in science. I was always pretty good in the sciences, too, in school. English and the arts and stuff? Not so much. I took probably until I was in late high school to get me interested in opera and things of that sort.

***Tacey A. Rosolowski, PhD***

00:07:14

So tell me about Dr. Lucen. How did he mentor and inspire you?

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**Donald A. Podoloff, MD**

00:07:18

I just was very attached to him, probably because every time I saw him I was sick and by the time he left I was better. [Laughter] He used to give me intravenous diluted epinephrine for my bronchospasm. And I got interested in medicine because of that. So I took a pre-med course, you know, a curriculum for pre-med. At the University of Rochester. And then I went to - I finished at NYU, New York's, uh, [inaudible] university. And the reason for that transition was that my dad heart attack between my [pause] freshman and sophomore years in college.

**Tacey Ann Rosolowski, PhD**

00:00:22.019

This is very odd. Let me just check this recorder. I, uh, it's, I think it's making new files. I want to make sure it's doing the right thing here.

**Donald A. Podoloff, MD**

00:00:28.978

Sure.

**Tacey A. Rosolowski, PhD**

00:00:00

All right. My apologies for interrupting you.

**Donald A. Podoloff, MD**

00:00:03

Not a problem.

**Tacey A. Rosolowski, PhD**

00:00:05

OK. So you were talking about how the change came—took place there.

**Donald A. Podoloff, MD**

00:00:10

Right. My father had a heart attack. So I thought it would probably be best if I could save some money. And living at home could accomplish that.

**Tacey A. Rosolowski, PhD**

00:00:20

Oh, OK.

**Donald A. Podoloff, MD**

00:00:21

So I switched schools. I graduated from New York University in 1959 with a degree—an honors degree in chemistry. Bachelor of Arts with honors in chemistry.

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***Tacey A. Rosolowski, PhD***

00:00:37

Now when during this educational path did you decide you were going to become a doctor? I mean when you took premed were you set on that as a career?

***Donald A. Podoloff, MD***

00:00:46

Yeah, pretty much. My family tells me that they thought I was going to be a doctor from the time I was five years old. That's all I ever talked about.

***Tacey A. Rosolowski, PhD***

00:00:50

Oh, really?

***Donald A. Podoloff, MD***

00:00:52

But I don't remember that.

***Tacey A. Rosolowski, PhD***

00:00:53

Huh, that's interesting. Let me ask too. I mean I had a real interesting conversation with Jim Cox. This is a question I often ask. It's about visual thinking. And I mean obviously in a field like yours you're very visually attuned. And so I'm wondering when did you know about that part of yourself and that that was a strength that you were going to use in your career.

***Donald A. Podoloff, MD***

00:01:21

I would say that I wasn't really very visual when I was in school.

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## **Chapter 03**

### ***A Switch from Internal Medicine to Diagnostic Imaging (Never Losing the Internist's Perspective)***

#### **A: Professional Path;**

#### **Story Codes**

A: Military Experience;

A: Influences from People and Life Experiences;

A: Personal Background;

A: Overview;

C: Evolution of Career;

C: The Professional at Work;

C: Professional Practice;

***Donald A. Podoloff, MD***

00:01:21

I actually started out being an internist, not a radiologist.

***Tacey A. Rosolowski, PhD***

00:01:34

Really? Wow.

***Donald A. Podoloff, MD***

00:01:34

Yeah. And I—let's see. What changed my mind was an experience that I had in the military. I graduated and finished my residency in internal medicine at the time of the Vietnam War. It was 1968 when I finished. And I was exempted from service because I qualified for something called the Fisk Plan, which was they'll defer you until you finish your training, and then they'll take you as a trained physician rather than a general medical officer. Sometime in the course of my medical residency I got very interested in psychiatry. And I did very well in psychiatry in school. I took it as an elective. I was very Freudian in my orientation about things.

And once I got into the air force, I was in a very small base. You probably don't remember the Vietnam War.

***Tacey A. Rosolowski, PhD***

00:02:51

I do, actually.

***Donald A. Podoloff, MD***

00:02:51

OK. This was a SAC base.

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***Tacey A. Rosolowski, PhD***

00:02:57

Just for the record, this was Lackland Air Force Base in San Antonio?

***Donald A. Podoloff, MD***

00:03:01

No. It was actually Clinton-Sherman Air Force Base in Oklahoma.

***Tacey A. Rosolowski, PhD***

00:03:06

Oh, OK. So I didn't know. So what were the dates when you were there?

***Donald A. Podoloff, MD***

00:03:09

From 1968 till 1969.

***Tacey A. Rosolowski, PhD***

00:03:14

To '69, OK, and the name of that base again?

***Donald A. Podoloff, MD***

00:03:17

Clinton-Sherman.

***Tacey A. Rosolowski, PhD***

00:03:17

Clinton-Sherman.

***Donald A. Podoloff, MD***

00:03:19

In Clinton, Oklahoma, which is 147 miles due west of Oklahoma City.

***Tacey A. Rosolowski, PhD***

00:03:25

Wow.

***Donald A. Podoloff, MD***

00:03:25

It's the cultural and artistic armpit of the United States. It was described that way to me by one of the guys that preceded me there, and it lived up to those expectations.

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***Tacey A. Rosolowski, PhD***

00:03:40

I think my dad would say that about Troy, New York. (laughter) I think there are many of those places.

***Donald A. Podoloff, MD***

00:03:45

The first encounter we had at the base going in, they stopped you, you have to produce credentials, why you're here. And the guard says to me, "Do you have children?" I said, "No." He said, "You will before you leave here, there's nothing else to do."

***Tacey A. Rosolowski, PhD***

00:04:02

(laughter) That's quite the welcome.

***Donald A. Podoloff, MD***

00:04:05

And he was right.

***Tacey A. Rosolowski, PhD***

00:04:07

So you were married at the time.

***Donald A. Podoloff, MD***

00:04:08

Yeah.

***Tacey A. Rosolowski, PhD***

00:04:09

And when did you get married, just to put that into the record?

***Donald A. Podoloff, MD***

00:04:12

Let's see. We'll be married fifty years this coming January, so 1966 I guess.

***Tacey A. Rosolowski, PhD***

00:04:17

Wow. All right. And your wife's name?

***Donald A. Podoloff, MD***

00:04:22

Mary Ellen, two words.

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***Tacey A. Rosolowski, PhD***

00:04:24

All right, great. So you were telling me about this mind-changing experience that you had there.

***Donald A. Podoloff, MD***

00:04:31

Yeah. So while I was at this small base in Oklahoma, the way the war was arranged, as you know it was politically unpopular. Well, one of the ways that the government kept the troop count down is they sent people on TDYs, temporary duty assignments. If you were gone from your base overseas for 179 days, it didn't count as an overseas assignment.

***Tacey A. Rosolowski, PhD***

00:05:04

Oh my God.

***Donald A. Podoloff, MD***

00:05:05

So the wing would go away for six months, all the men. It left all the women on the base. And they came in with their various internal medicine complaints which were all psychiatric pretty much. And I started to—I was very good at that. And so I got more and more patients. And I hated it. I was sitting there listening to people—I guess my grandmother would say kvetching, although—and about the same time the base was being serviced by some radiologists from Oklahoma University. So once a week they would come out and they would read the X-rays. And it was costing the government and the base about \$50,000, \$60,000 a year to pay for this. And they decided they wanted to go to \$80,000. One of the sergeants, a master sergeant—who actually run the air force as you know probably—

***Tacey A. Rosolowski, PhD***

00:06:20

I didn't know that.

***Donald A. Podoloff, MD***

00:06:21

Yeah, they run the—those top sergeants run everything. So he looked the regulation up. And it said an isolated base that has a board-certified radiologist can make that person the temporary base radiologist with six weeks of training. So my commanding officer armed with that knowledge calls me in. He said, "Don, how would you like to do the radiology out here for the rest of your tenure?" And I said, "Well, not really. I'm going to be a cardiologist when I get back, and I'm not going to stay in the service." He said, "OK, well, how would you like to go to Vietnam?" I said, "Radiology looks very good." So that's how I became the base radiologist.

***Tacey A. Rosolowski, PhD***

00:07:08

(laughter) Interesting.



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**Donald A. Podoloff, MD**

00:07:09

And when I was mentored—this is the time when we wore fluoroscopic glasses and all the things that—the residents if I tell them the story now laugh at me like I was from the twelfth century. The people who were at the University of Oklahoma were very very good teachers. And they taught me. And I liked. And one of the particular people was a board-certified internist, a gastroenterologist, who was also a radiologist. Bingo, that's what I want to do.

So there were six slots available for the entire residency program the year I applied. And I guess because I had internal medicine background they chose me. And so I became a radiologist at Wilford Hall and that's where I trained.

And as things happen in the service, I got interested in nuclear medicine, again something I was very good at during my residency, I think because it was quite cognitive, not necessarily as visual.

**Tacey A. Rosolowski, PhD**

00:08:19

How would you describe that difference? What do you mean it's very cognitive?

**Donald A. Podoloff, MD**

00:08:23

Well, nuclear medicine is called by many people unclear medicine, because the information content of the scans, because you're using radiation, can't give too much. So it's not like a full developed X-ray. It looks like a blob. So that's what I was going to do. I was going to do nuclear medicine. And that required a fellowship.

**Tacey A. Rosolowski, PhD**

00:08:56

I'm sorry. Can I just stop you? Because I'm really interested in this. You said the information comes in and it looks like a blob. So the cognitive part is that you have to know how to sort that out and make a mental picture of it?

**Donald A. Podoloff, MD**

00:09:09

Yeah. Exactly.

**Tacey A. Rosolowski, PhD**

00:09:10

OK.

**Donald A. Podoloff, MD**

00:09:11

I think I can probably demonstrate it for you better than I can explain it. So let me find a scan.

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**Tacey A. Rosolowski, PhD**

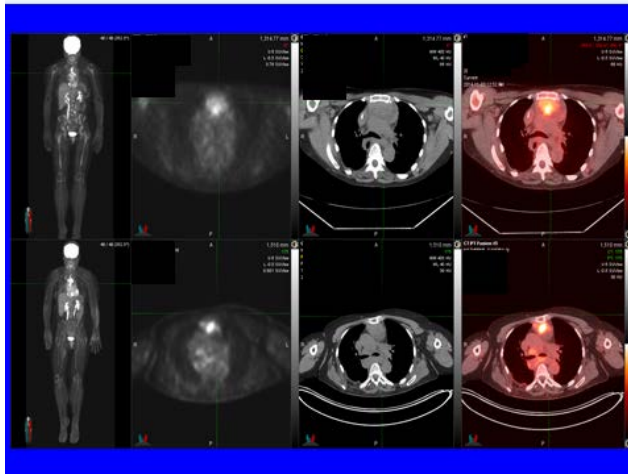
00:09:36

And actually it'd be really cool if I can put images into your transcript. And so if you want to provide me with a copy of whatever you're talking about, then whoever's listening to your interview, reading your transcript, can follow along. That would be neat.

**Donald A. Podoloff, MD**

00:10:01

OK. So here's a good example. That's what a PET scan looks like.



**Tacey A. Rosolowski, PhD**

00:10:05

OK, yeah, it does look like a blob with a little bright spot of light in it.

00:10:09 Dr. Podoloff's Caption for the image to the left:

Whole body PET, 2 PET, 3 CT and 4 PET/CT fusion images of a patient with mediastinal lymphoma.

This scan is in Dr. Podoloff's materials as Podoloff Scan 1.

**Donald A. Podoloff, MD**

It actually happens to be a big tumor.

**Tacey A. Rosolowski, PhD**

00:10:12

OK.

**Donald A. Podoloff, MD**

00:10:12

When you put it together with the CT scan now you've got some anatomic landmarks and you can see what—but that's what I meant.

**Tacey A. Rosolowski, PhD**

00:10:19

I see. I got it.

**Donald A. Podoloff, MD**

00:10:21

So anyhow, and because of my internal medicine background, nuclear medicine, that was one of the

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pathways into nuclear medicine back then. You could either do it as a pathologist, a radiologist, or an internist. So I took another residency. And because the service is the service and things get strange, I ended up the day after I finished my residency being the head of nuclear medicine at Wilford Hall.

***Tacey A. Rosolowski, PhD***

00:10:59

Wow.

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## **Chapter 04**

### ***Private Practice and an Opportunity to Develop a Radiology Department***

#### **A: Professional Path;**

#### **Story Codes**

A: Professional Path;

A: Overview;

A: Definitions, Explanations, Translations;

A: The Researcher;

***Donald A. Podoloff, MD***

00:11:00

Yeah. So I was like three pages ahead of the residents in the book. That will come to be very important later on, that fact that I am both an internist and a radiologist. So anyhow that was it. We planned—so it's now, let's see, it's now 1975. I've finished my residency, I am now an attending at Wilford Hall. I'm about to get out of the service. And I don't have a job. So I said to my wife, "Well, why don't we just stay in the service a while? It's not a bad life. We like it. We'll go to England." So that's what we were going to do. And I guess it was my destiny to do something else, because I walked into an office, and the guy was on the phone. He said, "No, I'm not a nuke, but one of them just walked into my office, you want to talk to him?"

So I spoke to this guy named Dave Lawrence, who was also from the air force, and was practicing in Houston at the Diagnostic Clinic of Houston. The Diagnostic Clinic of Houston was composed of two pathologists, a whole bunch of internists, and about ten radiologists. And they decided in 1973, 4, 5 that they wanted to get into the nuclear medicine business. Well, the internists wanted an internist to do it and the radiologists wanted a radiologist to do it. I was both.

***Tacey A. Rosolowski, PhD***

00:12:43

Interesting.

***Donald A. Podoloff, MD***

00:12:44

Yeah. My grandmother used to say that man plans and God decides. So God decided well for me. That's how I got the job.

***Tacey A. Rosolowski, PhD***

00:12:51

Cool. So this is obviously one of those moments when being both a radiologist and an internist was very important. So tell me what is it that dovetails for those two specialties.

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**Donald A. Podoloff, MD**

00:13:04

Well, in the case of the Diagnostic Clinic you had two warring factions. The radiologists, “No, he’s got to be a radiologist,” and the internists, “No, he’s got to be an internist.” They were at an impasse and there aren’t that many people who have dual boards like that. There are more now than there were in the 1970s.

**Tacey A. Rosolowski, PhD**

00:13:22

But what does it give to you as a practitioner to have both boards?

**Donald A. Podoloff, MD**

00:13:23

Oh, you understand patient care because you’re not spending your whole life looking at films. You’ve actually treated some diseases. And you understand the science of the disease through the nuclear medicine, because nuclear medicine makes its images by taking advantage of some physiologic property. You label something with a tracer that doesn’t have physiologic effect but mimics some function of the body. You want to study the heart, you label the blood cells so that they stay inside the heart labeled, and you can see the heart pumping. You want to look at the brain, you give glucose. Brain uses glucose all the time. So if you give it an analogue of glucose, you can light the brain up.

If you want to do a liver scan, liver is composed of hepatocytes and Kupffer cells. You can give it something that the Kupffer cells eat, sulfur colloid. You can see the liver that way. If you want to see the hepatocytes you give them an agent that is like bilirubin, bile. So you can see it that way.

Bone scanning looks at the remodeling of bone, the destruction and remodeling that goes on all the time. So it’s a very—it’s not anatomic, they’re blobs. But it’s very physiologic. So the internist in me liked that. And the radiologist in me liked it even better when they combined CT, which is radiology, with PET, which is nuclear medicine, and developed PET/CT, which is the standard of how we look at that.

And that’s why you get an image like that, because that orange image is a merger of these two images.

**Tacey A. Rosolowski, PhD**

00:15:19

Yeah, I was reading.

**Donald A. Podoloff, MD**

00:15:20

And if I hadn’t been an internist first or second, I mean the order doesn’t matter, I wouldn’t have had that appreciation.

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***Tacey A. Rosolowski, PhD***

00:15:28

Interesting. So tell me about your role in the Diagnostic Clinic of Houston. So you started with them in 1975 and actually were with them until 1986 as I understand.

***Donald A. Podoloff, MD***

00:15:42

Correct.

***Tacey A. Rosolowski, PhD***

00:15:43

Yeah. And you were director of the department of nuclear medicine.

***Donald A. Podoloff, MD***

00:15:46

That is correct. And that was my role. My instructions were within reason we'll give you all the money that you need. You build us a nuclear medicine department. And that's what I did, with help, with support. There were two really big parts of the nuclear medicine department at that time. One was the imaging, and the other was radioimmunoassay. Again each of them are using small amounts of radioactive materials. And that's what the nuke does. Nuclear medicine is different from radiation oncology in that radiation oncology uses sealed sources. Nuclear medicine uses open nonsealed sources, liquids, things of that sort. So you need special training to handle them for safety purposes.

Radiology doesn't use anything radioactive. It takes radiation energy and passes it through your body and by the differential absorption of those X-rays makes pictures, because bone comes out white and air comes out black. And everything else in between is gray, and that's why an X-ray looks like that. The white stuff is the bones, the black stuff is the lungs, that's air, and then all this gray stuff is the soft tissue between them.

***Tacey A. Rosolowski, PhD***

00:17:14

I was going to say with that blob, it looked like you're an interpreter of shadows. (laughter)

***Donald A. Podoloff, MD***

00:17:19

To some degree, yeah. That's right.

***Tacey A. Rosolowski, PhD***

00:17:23

Yeah, interesting. Well, tell me about that time. I mean that's a long period of time that you were with that clinic. What did you feel you accomplished during that period? What did you learn?

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***Donald A. Podoloff, MD***

00:17:36

I built them a huge successful nuclear medicine department. When I came there the term was that I'd be a senior partner in seven years. I made it in two and a half.

***Tacey A. Rosolowski, PhD***

00:17:48

Wow. What was your formula for doing that?

***Donald A. Podoloff, MD***

00:17:54

I made a lot of money for them. And I was personable and people like me. One of the docs when I had announced that I was coming over here, they said, "How long is it going to take for you to be in charge of something at MD Anderson?" And I laughed and said, "I don't know." Well, it took till I got to be the division head, took eight years.

***Tacey A. Rosolowski, PhD***

00:18:18

Interesting.

***Donald A. Podoloff, MD***

00:18:18

And that's just me going from place to place, and they're very different places. So there's something about me that people respond to in a positive way.

***Tacey A. Rosolowski, PhD***

00:18:34

So I mean obviously you came in when there were warring factions at that clinic and were able to get people to work together. And that's your personable nature in action I'm sure.

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## **Chapter 05**

### ***Discovering How to Image a Beating Heart; Reflections on Radiology's Shift in Focus from Form to Function***

#### **A: The Researcher;**

#### **Story Codes**

A: The Researcher;

C: Discovery and Success;

D: Understanding Cancer, the History of Science, Cancer Research;

D: The History of Health Care, Patient Care;

***Tacey A. Rosolowski, PhD***

00:18:34

What were some of the other measures? I'm just interested like how much did the department grow, what was the increase in patient volume.

***Donald A. Podoloff, MD***

00:18:53

It went from zero to one of the busiest nuclear medicine departments in the country.

***Tacey A. Rosolowski, PhD***

00:18:58

Really. Wow.

***Donald A. Podoloff, MD***

00:19:01

I was doing more cardiac scans at my place than MD Anderson was doing when I came over here. I think. I didn't do as many bone scans, because they were doing like sixty or eighty a day. But at that particular moment in time cardiac nuclear medicine was just taking off. I actually did the first MUGA scan in Houston.

***Tacey A. Rosolowski, PhD***

00:19:30

What's a MUGA scan?

***Donald A. Podoloff, MD***

00:19:32

Stands for multiple-gated acquisitions. Basically you label red cells with a detectable tracer and you hook the patient up to an EKG and you gate the camera so that during different phases of the EKG it's either on or off. And you can make a picture of the beating heart doing that.



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***Tacey A. Rosolowski, PhD***

00:19:55

Wow, that's exciting.

***Donald A. Podoloff, MD***

00:19:57

Yeah, it's an interesting story how I actually discovered that.

***Tacey A. Rosolowski, PhD***

00:20:05

So this was your process.

***Donald A. Podoloff, MD***

00:20:07

Yeah.

***Tacey A. Rosolowski, PhD***

00:20:08

Wow. Well, tell me how did you discover that?

***Donald A. Podoloff, MD***

00:20:13

Well, the traditional way to label red cells was to use albumin to do it. And it required an electrolytic process whereby you exposed the albumin to the blood cells and it formed a bond and then the blood got labeled that way. They weren't very good pictures. Quite accidentally we did a bone scan on a patient one day and the next day they ordered a brain scan, which you used a particular radiopharmaceutical for that. It was called naked or free sodium pertechnetate.

When I looked at that scan 24 hours after the bone scan, I didn't see the brain. All I saw were the vascular structures. I saw the heart, I saw all the vessels in the head. But I didn't see brain. And it occurred to me oh my goodness, this is like albumin only it's a much better picture. Let's look at the heart.

So we took the camera down, looked at the heart. Yay, there it was. Well, for about a year and a half I was injecting people with the unlabeled bone agent the night before, because that's how this worked, right?

Well, then an article comes out in the Nuclear Medicine Journal. And it basically says, "We found a new way of labeling technetium and making it into a blood pool agent. There's some guys up at Harvard that were doing this.

Well, that's what I did. You don't have to wait twenty-four hours though, so you can give them the cold stuff, wait thirty minutes. I didn't know that.

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***Tacey A. Rosolowski, PhD***

00:22:08

OK.

***Donald A. Podoloff, MD***

00:22:08

But somebody recognized that I did that, a very famous radiologist here in town, and he must have been very complimentary to somebody, because that's how I ended up eventually getting interviewed over here. So again it's like do I plan my life, no, I just wait and see what happens.

***Tacey A. Rosolowski, PhD***

00:22:37

(laughter) I'm writing that quote down because that's just such a good one.

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## **Chapter 06**

### ***An Opportunity for Intellectual Challenge at MD Anderson***

#### **A: Joining MD Anderson/Coming to Texas;**

##### **Story Codes**

B: MD Anderson History;

C: Diversity at MD Anderson;

***Donald A. Podoloff, MD***

00:22:40

Well, there's more to that story.

***Tacey A. Rosolowski, PhD***

00:22:44

Well, tell me.

***Donald A. Podoloff, MD***

00:22:45

So anyhow, we're here. And I'm pretty happy at Diagnostic. But I built a department, and now it's running on automatic pilot. And I'm not really learning anything new. I'm teaching a lot. I actually had an appointment as a clinical professor over at the medical school.

***Tacey A. Rosolowski, PhD***

00:23:02

Yeah, I noticed that.

***Donald A. Podoloff, MD***

00:23:04

Yeah. Because the cardiologist over at the medical school took nuclear cardiology away from the radiologists and I was able at my clinic to have the students come over and I could show them these MUGA scans that I was talking about. And so I always for a couple years—well, it says it in there. I don't remember when.

***Tacey A. Rosolowski, PhD***

00:23:28

Seventy-three to '75?

***Donald A. Podoloff, MD***

00:23:29

Right.

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***Tacey A. Rosolowski, PhD***

00:23:30

Associate professor of—that was San Antonio.

***Donald A. Podoloff, MD***

00:23:32

That was when I was in San Antonio.

***Tacey A. Rosolowski, PhD***

00:23:33

Right. And this was '76 to '85.

***Donald A. Podoloff, MD***

00:23:37

Exactly. In '86 I came over here. So the whole time I was there I was doing something academic.

***Tacey A. Rosolowski, PhD***

00:23:42

Right. And just for the record that was clinical associate professor of nuclear medicine and radiology at the University of Texas Health Science Center in Houston.

***Donald A. Podoloff, MD***

00:23:50

Correct.

***Tacey A. Rosolowski, PhD***

00:23:51

OK. And so that was—you weren't actually like doing full-scale classes. You were instructing when people sent them to you to—

***Donald A. Podoloff, MD***

00:23:58

I was doing an apprenticeship, which is the way most radiologists teach young radiologists. You sit by somebody and you watch them and you talk to them, and then they let you read. So I took all the cardiac students.

***Tacey A. Rosolowski, PhD***

00:24:13

It seems like a really subtle skill. I mean just looking at the images that you have up there, that would take handholding.

***Donald A. Podoloff, MD***

00:24:24

That's why I tell people all the time that's why it's a four-year course. Because I've had a lot of people

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over the years say, “Can you teach me how to read X-rays? I’ll come down for a couple weeks.” Well, I can teach you how to look at an X-ray in a couple weeks. But if you want to learn how to read one I’ll have to send you through a residency.

***Tacey A. Rosolowski, PhD***

00:24:46

Right. Now how would you compare the skill of doing that with say a pathologist’s eye? When I interview pathologists they say that you have an eye or you don’t. And it’s really hard to develop it if you don’t have it. Is there something similar in this work?

***Donald A. Podoloff, MD***

00:25:02

Yeah. I mean first of all you have to be drawn to it. You have to like structure and form. And you don’t necessarily—although it’s changing now. But early on form and function were two different things. So the anatomists did the form and the function was done by the physiologists. That’s again a reason why if you’re both an internist and a radiologist you have both form and function training. The original training of radiologists was totally anatomic. Just like the original training of pathologists was totally. And either you like that or you don’t. You’re either facile at it—they can teach you how to look for things. But they can’t teach you to find them. You have to have that particular eye-brain map.

***Tacey A. Rosolowski, PhD***

00:26:10

I mean I always find it fascinating when I talk to people through these interviews what enables them to do what they do. It can be a very subtle gift. It doesn’t show. But when you get them talking about it, it’s a pretty—

***Donald A. Podoloff, MD***

00:26:25

You have to like it. So anyhow, I was getting bored. And it’s now 1984. So I’ve been there nine years. But I was making a real good living. Making a lot more money than anybody over here was making, because that was the golden age of radiology. So I’m walking around in the southwest part of town one day, and I went to the Jewish community center to pick my son up. And I look up and I see this mane of white hair. And I recognized the guy immediately as Marv Chasen. He was my intern at Wilford Hall. And so we took up a friendship. They were relatively new in town. He couldn’t find a job in San Antonio. So he came to MD Anderson. And Marv and me and my wife and his wife palled around a lot. And our kids were about the same age. They’re still friendly.

And Marv started to talk to me about—he noticed that I was bored. And how would I like to come over to MD Anderson? I’m not crazy about that. Well, go talk to Gerry Dodd. Well, what happened was the exact same thing that happened at Diagnostic Clinic eleven years earlier. Nuclear medicine was part of the Department of Internal Medicine at MD Anderson. A guy named Tom Haynie, who was the head of medicine, was running it.

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It had nothing to do with radiology. And Gerry Dodd, the head of radiology, was getting needled by all his friends as to why he didn't have a nuclear medicine department. Well, he asked Tom Haynie to join him. And Tom said, "Well, I'm the department chair." And Jerry said, "Well, I'll make you department chair. We'll develop a department of nuclear medicine." It's a section everywhere else in the world but at MD Anderson it's a department. And that was the reason for that, to get Tom to come over.

Well, Gerry wanted a radiologist in the nuclear medicine department, because all he had was internists. They didn't smell like him, they didn't think like him. So we started to talk, Jerry and I. And after about a year of negotiations I agreed to come over here, at a huge salary cut. And I got kids that are going off to college. I mean I literally lost half my income by coming over here.

**Tacey A. Rosolowski, PhD**

00:29:25

Wow.

**Donald A. Podoloff, MD**

00:29:26

So I sent my wife back to work. Didn't send her. She willingly went back to work.

**Tacey A. Rosolowski, PhD**

00:29:31

What does she do?

**Donald A. Podoloff, MD**

00:29:32

She's an RN.

**Tacey A. Rosolowski, PhD**

00:29:34

OK. (laughter) Now to take that, I mean obviously taking a job at MD Anderson meant a number of compromises. So what was the appeal?

**Donald A. Podoloff, MD**

00:29:46

Intellectual appeal. I was an unfulfilled author. I was an unfulfilled scientist. There's a lot of things that I wanted to do that I couldn't do in private practice. Or I couldn't do them easily.

**Tacey A. Rosolowski, PhD**

00:30:02

You said you were an unfulfilled author. Meaning?

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**Donald A. Podoloff, MD**

00:30:04

I like to write papers.

**Tacey A. Rosolowski, PhD**

00:30:07

Papers. Right. So what did they feel you brought? I mean why were you such a catch at that point?

**Donald A. Podoloff, MD**

00:30:16

Again it had to do with the internal medicine radiology background and the merging of those two disciplines. It was very appealing to Tom the internist. And it was very appealing to Jerry the radiologist. Not for monetary reasons, but for intellectual and scientific reasons. And Tom became my mentor. And literally every success that I've had at MD Anderson over the past twenty years I owe to those two guys, because they were marvelous mentors.

**Tacey A. Rosolowski, PhD**

00:30:52

Wow. How did they mentor you? What was that like?

**Donald A. Podoloff, MD**

00:30:58

Well, I used to meet with Tom almost every Saturday and we'd just talk about work at first and then other things. We got to know each other very well. If I had a problem, if I had something to negotiate within the institution, he'd been there since 1966. And I had a similar but less intense relationship with Jerry because Jerry doesn't emote very well, whereas Tom did. So again as I say that's God's working again.

**Tacey A. Rosolowski, PhD**

00:31:38

What was your impression of MD Anderson when you arrived?

**Donald A. Podoloff, MD**

00:31:44

Well, it was colored by my impression of it before I got here.

**Tacey A. Rosolowski, PhD**

00:31:48

And what was that?

**Donald A. Podoloff, MD**

00:31:50

You send a patient over there and you never heard from them again. It was the place where people went to die. It was a depressing horrible place. Who the hell wants to work there? And in the 1970s that was a pretty pervasive impression of MD Anderson in the community, because people were flocking to

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Methodist with their cancers, because they didn't want to go to MD Anderson. It was a death sentence. I don't know if you were watching The Emperor of All Maladies. But in the 1970s cancer was a death sentence.

So I came with a very—well, I'll see what this place really is like. I'll learn something. And I was welcomed. It became pretty quickly evident to me that I had some really smart people around me.

And I remember this conversation because it taught me something. I said to Tom one day, I said, "There's an awful lot of foreigners on your staff." Because almost everybody in private practice was a white American. And Tom said, "That's part of the strength of MD Anderson, that diversity." And it was an eye-opening way to look at things for me.

And it continues to be that way. Now my medical school, when I went to medical school in Brooklyn at Downstate, in my class we had two women, both pretty ugly as I remember, and we had one black kid from somewhere, I don't remember where, African American. Everybody else was either Jewish or Italian. I went back there last year for my fiftieth anniversary. They have 163 students in the freshman class and they speak twenty-seven languages.

***Tacey A. Rosolowski, PhD***

00:34:01

Wow. The world has definitely changed, it really has.

***Donald A. Podoloff, MD***

00:34:06

Yeah, in a really good way.



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## **Chapter 07**

### ***Building a Clinical Nuclear Medicine Program***

#### **B: Building the Institution;**

##### **Story Codes**

A: Professional Path;

B: MD Anderson History;

B: MD Anderson Culture;

***Tacey A. Rosolowski, PhD***

00:34:11

Amazing. So when you arrived at MD Anderson what were your roles? And what were the challenges you set yourself?

***Donald A. Podoloff, MD***

00:34:20

So I came here to be the deputy chairman of the Department of Nuclear Medicine. And Tom basically turned the entire clinical operation over to me. So I was responsible for the day-to-day scanning, for the development of new techniques, for the eighty bone scans that we did every day. I had to make sure that they started and stopped on time, and was basically running a small clinical operation.

***Tacey A. Rosolowski, PhD***

00:35:00

Now just a technical detail. Were these functions, the radiology functions, an income-generating stream for the institution at the time? Or was it a service, internal service?

***Donald A. Podoloff, MD***

00:35:13

It was an income-generating stream. But it wasn't the biggest income. It was pathology, and first was pharmacy I guess. And then internal medicine or cancer medicine at that time was so big compared to radiology. I think when I first came we had twenty radiologists. We have 173 now.

***Tacey A. Rosolowski, PhD***

00:35:40

Oh my God, that's enormous growth. I mean I asked about the income piece because I imagine at certain times that becomes a factor.

***Donald A. Podoloff, MD***

00:35:49

Not at MD Anderson. No. Well, it does, but it's like we're all in the same boat. So we're all on salary. I don't make one dime more because I did more scans or I did another operation today. And very few patients come here to see a doctor. They come here to be at MD Anderson. And we do our care in

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multidisciplinary care groups. Well, you can only do that if your income stream is not affected by the volume of patients that you see. Now that's the way it was then. It's changing, because the world is changing.

But my daily challenge was running a clinical nuclear medicine department, make sure that the wheels stayed on. And it was fun. It was a lot—and then I started an academic career. So I started to write. I started to do research. I started to consult for drug companies. Nobody ever asked me to go anywhere when I was at Diagnostic Clinic. And now all of a sudden everybody was asking me to go everywhere.

***Tacey A. Rosolowski, PhD***

00:37:01

I wanted to get some more detail though about how you developed the clinical operations. I mean what was the situation?

***Donald A. Podoloff, MD***

00:37:07

Well, it was pretty well developed. It was a pretty efficient machine when I got here. What I basically did is I modernized it.

***Tacey A. Rosolowski, PhD***

00:37:15

And what did that entail?

***Donald A. Podoloff, MD***

00:37:16

It meant getting newer equipment. It meant getting additional resources, staff, and personnel. And I got a lot of support from both Tom and Jerry to do that. So that was my job.

***Tacey A. Rosolowski, PhD***

00:37:35

Now I mean just so I understand. Were you beginning to focus much more on the imaging of tumors? Or were you doing a full palette for patients that had comorbidities?

***Donald A. Podoloff, MD***

00:37:48

Mostly all tumor.

***Tacey A. Rosolowski, PhD***

00:37:50

OK. And was that a new area? Was there a learning curve for you?

***Donald A. Podoloff, MD***

00:37:55

Oh yeah.

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***Tacey A. Rosolowski, PhD***

00:37:56

OK. Well, tell me about that.

***Donald A. Podoloff, MD***

00:37:56

There were some scans that I'd never done before. I'd never done a venogram when I was in private practice. There's no reason to. And they don't do them anymore anyhow. Now you use ultrasound for it. But we used to do a fair amount of radionuclide venograms looking for thrombosis because of the catheters and stuff.

I did do MUGA scans. They were not doing any thallium scans when I got here and I started that here.

***Tacey A. Rosolowski, PhD***

00:38:22

What's the advantage of a thallium scan?

***Donald A. Podoloff, MD***

00:38:24

Well, it looks at your heart at rest and stress. So it's like a nuclear stress test. Whereas with the MUGA studies all you get was a fixed number that's the amount of blood you're ejecting with each beat of the heart. Should be somewhere between fifty and seventy-five percent. If it's less than that it's—and why was that important? Because we were giving Adriamycin. And Adriamycin is cardiotoxic. So this was a wonderful way to look at that.

***Tacey A. Rosolowski, PhD***

00:38:52

So I mean I'm getting an impression that this was immersion really into a very unfamiliar territory in a sense.

***Donald A. Podoloff, MD***

00:39:01

No.

***Tacey A. Rosolowski, PhD***

00:39:01

No?

***Donald A. Podoloff, MD***

00:39:02

The disease that I was studying was different. The people were all the same. The same skills that got me wherever I'd got, because of my ability to interact with other human beings, was still there. And like everything else if you can't get along with people, you can't be successful anymore, because now we're

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all about team science. Well, that was not true in the '70s. We still had superstars. So it didn't seem like such a big change to me.

I was always very good at developing the technical aspects of a scan and reading them. They weren't so hard to read. They were blobs, remember. It's either present or not. The biggest difference in my day-to-day life was that I spent a lot more time at work here than I did at private practice, because there was a lot more to do. I had to write.

One of the interviews that I had with Gerry Dodd when we were talking about taking the job, I said, "Well, right now I only have two publications. Is that a problem?" He said, "No, but if you're here for five years and you still only have two that'll be a problem."

So I spent time doing that.

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## **Chapter 08**

### ***Contributions to the Institution: Leadership and Diversity; A New Research Project***

#### **A: View on Career and Accomplishments;**

#### **Story Codes**

C: Diversity at MD Anderson;

C: Women and Minorities at Work;

A: Contributions;

***Donald A. Podoloff, MD***

00:39:02

And then I got involved in the institution very quickly. And again this was Tom's mentoring and it was his opening doors for me. But I got to be on a lot of committees. And I learned a lot about the institution that way.

***Tacey A. Rosolowski, PhD***

00:40:55

What were some of the early committees you served on?

***Donald A. Podoloff, MD***

00:40:58

It's in my CV. I can't even remember. But it's all there. I'm pretty sure I was on the RDDC, what is it called now? Radiopharmaceutical Drug Delivery Committee. I know I was on the—we used to call it the Isotope Committee. It's now called the Radiation Safety Committee. I was on the Credentials Committee of the Medical Staff as Tom's representative. And that led me into a medical staff pathway. I was the chairman of the Executive Committee of the Medical Staff here for seven years. I think it's seven, it says right there.

***Tacey A. Rosolowski, PhD***

00:41:48

I'm sorry. This one? Oh yeah, Medical Staff Credentialing Committee, that's 1997 to 2002. Vice chairman from 1995 to '97.

***Donald A. Podoloff, MD***

00:41:56

So eight years after I got here I was at the top of the medical staff hierarchy, the organizational hierarchy of the medical staff.

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***Tacey A. Rosolowski, PhD***

00:42:06

And what was the significance of working on that committee? I mean what is the reason for that committee? What's its importance?

***Donald A. Podoloff, MD***

00:42:13

You have to have a credentials committee if you have a medical staff because somebody has to pass on is this person qualified to do what they say they're doing. So that's what the Credentials Committee does. The Executive Committee of the Medical Staff is the direct line from the medical staff to the president of the institution. And there has to be—because of Joint Commission you have to have that kind of a structure. So it's a very important committee.

And my greatest contribution on that committee was when I started there were no women on it and when I left half the committee was female.

***Tacey A. Rosolowski, PhD***

00:43:04

Why is that important?

***Donald A. Podoloff, MD***

00:43:06

Diversity.

***Tacey A. Rosolowski, PhD***

00:43:08

Diversity, but I mean do you feel that—I mean this is a question I ask women as well. I mean do you think that women bring something different?

***Donald A. Podoloff, MD***

00:43:14

Oh, definitely.

***Tacey A. Rosolowski, PhD***

00:43:14

What?

***Donald A. Podoloff, MD***

00:43:17

Well, they look at—they solve problems differently than men. And they do it with a different approach. Men tend to be combative. Women tend to be cooperative. There are exceptions to that everywhere. But yeah, generally men. I believe if you woke up every man in the world at the right time you'd find a tiger coming at you. And I don't sense that about women.

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***Tacey A. Rosolowski, PhD***

00:43:52

Interesting, huh, interesting.

***Donald A. Podoloff, MD***

00:43:54

But my deliberate intervention was that I thought women were underrepresented on the faculty at leadership positions. And now everybody's coming around to that way of thinking.

***Tacey A. Rosolowski, PhD***

00:44:14

Yeah. When did you decide that that was an issue in leadership at MD Anderson or even in other medical institutions you observed?

***Donald A. Podoloff, MD***

00:44:23

Well, I just told you I went to medical school with two girls.

***Tacey A. Rosolowski, PhD***

00:44:26

But I mean at that time did you feel oh, this is wrong, we need to—

***Donald A. Podoloff, MD***

00:44:31

No. When I was in medical school? I thought it was absolutely right. That's how medical schools were.

***Tacey A. Rosolowski, PhD***

00:44:35

Yeah. OK, yeah. So when did your idea about that change?

***Donald A. Podoloff, MD***

00:44:39

Probably after living with my wife for five or ten years. My wonderful wife, who a roommate introduced us during my first year of residency. She says, "Mary Ellen, this is Dr. Podoloff. He was voted intern of the year." And my wife looks me right in the eye and says, "So what?" She's kept me in line for forty-nine years.

***Tacey A. Rosolowski, PhD***

00:45:08

(laughter) That's a good story.

***Donald A. Podoloff, MD***

00:45:14

Yep.

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***Tacey A. Rosolowski, PhD***

00:45:18

What were some things that you learned about the institution? I mean those are pretty high-powered committees. I mean what did you learn? I mean not about the institution but about your own abilities? How did your own abilities as a leader evolve during that time?

***Donald A. Podoloff, MD***

00:45:31

It struck me that wherever I was for whatever reason I ended up in a significant leadership position. And I thought about that some, and then I dismissed it, because I couldn't do anything about it. And I don't dwell a lot on things that I can't change or fix. And this particular trait I don't think you want to fix.

***Tacey A. Rosolowski, PhD***

00:45:57

Right, sure. Where would you like to go next in terms of talking? I mean we're focusing a lot on your administrative roles. But there's also the evolution of your research. Which line would you like to pursue right now? Where do you feel is the best way to tell the story?

***Donald A. Podoloff, MD***

00:46:20

Well, I think my major contributions to MD Anderson are not through research but through clinical practice and the leadership track. The legacy that I'll leave to MD Anderson when I eventually get out of here is that four of the five department chairs in diagnostic imaging are people that I mentored. The current division head, the head of physics, the head of nuclear medicine, the chairman, and the chairman of the Radiology Department were all people that I mentored.

***Tacey A. Rosolowski, PhD***

00:47:01

Wow. Wow, that's—

***Donald A. Podoloff, MD***

00:47:04

Yeah. One of the groups, the Sperling group, the group that looks at behavior and a lot of the department—every time I see Steve Sperling in the hall he says, "You're going to leave a hell of a legacy." And I'm very proud of it actually, I am.

So the research that I did, probably the best thing I ever did in research was that discovery about the heart that I never got any credit for. I did a lot of clinical trial research. I'm doing one now where I'm the principal investigator on a compound. It's a PET imaging agent that looks at the EGFR, the epidermal growth factor receptor, mutation that predicts whether you're going to respond when you have lung cancer to Iressa or Tarceva.



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***Tacey A. Rosolowski, PhD***

00:48:02

Now is this the solution? Is this that 18F-PEG?

***Donald A. Podoloff, MD***

00:48:06

Yeah, that's it.

***Tacey A. Rosolowski, PhD***

00:48:08

OK. Let me just read it for the recorder. It's 18F-PEG6-IQA. That's it. OK. And it has no easy acronym.

***Donald A. Podoloff, MD***

00:48:19

Yeah. We call it IPQA.

***Tacey A. Rosolowski, PhD***

00:48:21

IPQA. OK. Now tell me about that. How did you discover this solution and decide that you wanted to pursue it?

***Donald A. Podoloff, MD***

00:48:30

I didn't discover this.

***Tacey A. Rosolowski, PhD***

00:48:32

I mean discovered it existed, yeah.

***Donald A. Podoloff, MD***

00:48:33

Well, it comes from Israel. And it was one of the pet projects of the person who was the head of experimental diagnostic imaging, who I also recruited here.

***Tacey A. Rosolowski, PhD***

00:48:48

And that person's name?

***Donald A. Podoloff, MD***

00:48:50

Juri Gelovani. And Dr. Gelovani is no longer here because he was too smart for the place in my judgment. And he couldn't get along with people. But brilliant, absolutely brilliant. He wanted to do a clinical trial with this but he didn't have a license to do a clinical trial. He's not a practicing physician.

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He didn't pass the Texas—he was educated in Europe. So I came and I said, "I'll do the clinical part for you. I'll do the clinical research."

It's a phase I study in which we want to demonstrate safety, radiation dosimetry, and the typical things that you do in a phase I study, with an eye that if it works and the radiation dose is low enough, and we don't hurt anybody, and we haven't so far, then we'd go on to how good does this thing behave, an efficacy study, a phase II study.

***Tacey A. Rosolowski, PhD***

00:49:54

Now explain to me exactly what IPQA does.

***Donald A. Podoloff, MD***

00:49:59

IPQA.

***Tacey A. Rosolowski, PhD***

00:50:01

And I mean why it's an advantage over other existing solutions.

***Donald A. Podoloff, MD***

00:50:04

Well, it's actually imaging a specific genetic mutation. It's not imaging a physiologic process. Chemically it's a drug that's very similar to Tarceva, which is a drug that's used to treat lung cancer. So its biochemistry is similar to that. And its physiology is similar to that. So what we're seeing is a gene mutant. You don't see that every day in nuclear medicine or in radiology.

***Tacey A. Rosolowski, PhD***

00:50:38

Boy, no kidding. Yeah. And this genetic mutation could lead to what kinds of cancers?

***Donald A. Podoloff, MD***

00:50:47

It does lead to non-small cell lung cancer, often in nonsmokers, often in females. Which is not the typical phenotype of the usual smoking male who gets lung cancer. And because of its analogy to Tarceva it is a drug that in clinical practice will say, "Do or don't use this very expensive drug for a full course. Because if I don't image, it means it's not going to work." At least that's what we think.

***Tacey A. Rosolowski, PhD***

00:51:25

Interesting.

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**Donald A. Podoloff, MD**

00:51:25

So this is a first-in-man study. And to my knowledge it's the first radiopharmaceutical first-in-man study that's ever been done at MD Anderson.

**Tacey A. Rosolowski, PhD**

00:51:38

And I'm sorry. You're saying in-man study meaning in-human study.

**Donald A. Podoloff, MD**

00:51:42

Yeah. Right. We have a lot of monkey and dog data. We didn't have any human data.

**Tacey A. Rosolowski, PhD**

00:51:44

Right, I had never heard that phrase before.

**Donald A. Podoloff, MD**

00:51:47

First-in-man? Yeah.

**Tacey A. Rosolowski, PhD**

00:51:48

In-man, first-in-man.

**Donald A. Podoloff, MD**

00:51:48

First-in-man, it's a phrase for describing the first time you use a drug in a human being.

**Tacey A. Rosolowski, PhD**

00:51:58

In a human being, yeah.

**Donald A. Podoloff, MD**

00:52:00

I need to get some more coffee.

**Tacey A. Rosolowski, PhD**

00:52:00

Absolutely. Let me pause the recorder for a moment. [The recorder is paused.]

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Segment 09

Technological Advances that Have Transformed Diagnostic Imaging

A: Overview;

Story Codes

D: Technology and R&D;

A: The Researcher;

C: Discovery and Success;

A: Overview;

A: Definitions, Explanations, Translations;

D: Understanding Cancer, the History of Science, Cancer Research;

D: The History of Health Care, Patient Care;

D: Business of Research;

***Tacey A. Rosolowski, PhD***

00:52:00

Start us off recording again. OK. We're back after a little bit of a break, about ten-minute break. It is now 11:15. And we were strategizing a bit before we turned the recorder on and thought it might be a good idea at this time to set a little bit of context.

So if you could tell me, give me an overview really of the evolution of technology and how that's had an impact on your own work. And obviously we'll be touching on how it's had an impact on the various institutions that you've worked in.

***Donald A. Podoloff, MD***

00:52:38

Sure. Well, the development of computerized tomography is probably the most significant thing that happened in cancer diagnosis in this century—or last century.

***Tacey A. Rosolowski, PhD***

00:52:54

And when did that—

***Donald A. Podoloff, MD***

00:52:56

It became a clinically usable tool around 1972.

***Tacey A. Rosolowski, PhD***

00:52:59

Wow.

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***Donald A. Podoloff, MD***

00:53:00

And it was originally just done for brain. But then body scanners came out like '75, '76. They were slow. The first ones took four minutes to make a slice.

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## **Chapter 09**

### ***Technological Advances that Have Transformed Diagnostic Imaging***

#### **A: Overview;**

#### **Story Codes**

D: Technology and R&D;

A: The Researcher;

C: Discovery and Success;

A: Overview;

A: Definitions, Explanations, Translations;

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**Donald A. Podoloff, MD**

00:53:00

And it was originally just done for brain. But then body scanners came out like '75, '76. They were slow. The first ones took four minutes to make a slice.

**Tacey A. Rosolowski, PhD**

00:53:13

Really.

**Donald A. Podoloff, MD**

00:53:14

Yeah. And overnight it had enormous impact. We used to do seventy liver scans a day with nuclear stuff. When CT came along, it went to zero, because you could see the entire body, not just the liver. They actually performed the same, the early versions, in terms of liver lesions. But you saw so many other things, so many other organs, with the CT that almost overnight it went away. Same with the brain scan. We used to do forty, fifty brain scans a day. CT took that business entirely away.

So at the same time that was happening cardiology was coming up and—

**Tacey A. Rosolowski, PhD**

00:54:00

Now just so I understand, what's the advantage for the clinician to see the broad context of the body?

**Donald A. Podoloff, MD**

00:54:08

Well, for the surgeon it's self-evident. They can see the whole organ system they're going to be operating on. For the internist you could find other diseases in other organs. You could find that you had metastasis in your peritoneum, which you could never see that on a liver scan, even though you find liver mets. And for a while, some would say still, for a while our ability to see these things didn't have a useful correlate clinically in terms—we didn't have anything to treat.

We went from doing liver scans to doing CTs of the liver, but we still had the same rudimentary kind of treatments. So if you keep that thought in mind, what you will see is that the biology starts to catch up with the anatomy.

**Tacey A. Rosolowski, PhD**

00:55:03

Oh, interesting.

**Donald A. Podoloff, MD**

00:55:10

Yeah. And that's not true only for cancer. It's true for all diseases.

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***Tacey A. Rosolowski, PhD***

00:55:13

Interesting. Do you need to take a minute to check in on what's going on?

***Donald A. Podoloff, MD***

00:55:20

Yeah, I want to make sure that I don't have a really serious—

***Tacey A. Rosolowski, PhD***

00:55:20

OK, let me just— [The recorder is paused.] All right. So we just paused for a few seconds. So the CT is obviously a huge advance. I mean what are some other advances that were taking place? Because obviously I mean there was development. That was in the 1970s. So there had to be others.

***Donald A. Podoloff, MD***

00:55:38

Well, in the 1970s we learned how to use drugs better. I told you early on that cardiotoxicity used to be a huge problem with Adriamycin. The MUGA scan taught us when to stop giving it, or how to adjust the dose. And then we learned that if you give it over twenty-four hours rather than as a bolus the cardiotoxicity decreases.

And they did that, that work came out of here. That was Bob Benjamin did that work here. So it changed therapy. But it was the imaging that helped with that.

Before you had CT, the only way you could measure a lesion was on a chest X-ray in a two-dimensional way. CT gave you the ability to look at x, y, and z, the three-dimensional aspects. And tumors are three-dimensional creatures, they're not two-dimensional.

So that marriage of the technology to the diagnosis of the disease evolved very quickly because of improvements in the CTs. They got faster. They got better resolution. So there's always been this technology-disease interaction that over time improves the detection.

***Tacey A. Rosolowski, PhD***

00:57:20

What was the next big landmark advance?

***Donald A. Podoloff, MD***

00:57:20

PET/CT.

***Tacey A. Rosolowski, PhD***

00:57:21

PET/CT. OK. So tell me about that. You mentioned it earlier.



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**Donald A. Podoloff, MD**

00:57:25

We had PET. The blobs I showed you. And we had CT. And you would have to do that to merge it. Or you could write software that would do it, computer. That's the other big thing I forgot. The computer made computational things that used to take months to do easy to do in days or minutes or hours.

**Tacey A. Rosolowski, PhD**

00:57:49

What kinds of computations are we talking about?

**Donald A. Podoloff, MD**

00:57:51

Well, today we're talking about sequencing a gene. It used to take a month to sequence a gene. Now it takes five minutes. And that's all computational.

**Tacey A. Rosolowski, PhD**

00:58:03

But I mean computational in terms of the imaging.

**Donald A. Podoloff, MD**

00:58:06

Well, the early images were very crude, sixty-four-by-sixty-four matrix. Now things are done 512-by-512 routinely.

**Tacey A. Rosolowski, PhD**

00:58:21

I'm sorry. What does that mean?

**Donald A. Podoloff, MD**

00:58:24

It's the resolution. It's how little a lesion you can see.

**Tacey A. Rosolowski, PhD**

00:58:27

Oh, I see, OK.

**Donald A. Podoloff, MD**

00:58:30

And probably one of the most important things that I've learned while I've been here is cancer is a systemic disease. The tumor that you see is a local manifestation of that disease but it's like an iceberg. What's really going on with that tumor is hidden from view most of the time. That's why our therapies have been so inadequate, even though they were very startlingly—and they changed childhood leukemia from a universally fatal disease to one that's eighty percent, ninety percent curable today. And that was J Freireich [Emil J Freireich, Oral History Interview] who did that. And I'm sure you're interviewing him.

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***Tacey A. Rosolowski, PhD***

00:59:15

I have interviewed him, yes.

***Donald A. Podoloff, MD***

00:59:16

That must have been interesting and entertaining.

***Tacey A. Rosolowski, PhD***

00:59:19

(laughter) He is a character, as everyone says. But delightful guy to interview, yeah.

***Donald A. Podoloff, MD***

00:59:27

Yeah, I adore him. I wrote a note to him Sunday. I said, “J, it was a pleasure to see your smiling face on the front page of the Chronicle. You’re to be congratulated for your awesome work.” I said, “And secondarily it’s the first time in my remembrance that Todd Ackerman has ever said anything nice about somebody at MD Anderson, and by inference the institution.”

***Tacey A. Rosolowski, PhD***

00:59:54

(laughter) That’s funny. So you were talking about a tumor being like the tip of an iceberg. So how have advances in imaging helped with that issue?

***Donald A. Podoloff, MD***

01:00:10

Because we can now look at the function. Rather than just the anatomy, we can look at the genome, we can look at the metabolites and metabolomics. We can image the Krebs cycle, which is a chemical event by which tumors are nourished. So we’re beginning to merge, just like we do with PET/CT, medically in the real, nonimaging, world we are merging function and form. And that has led, along with the computational power, to answering questions that we didn’t have a clue about.

The way chemotherapy was invented—and Jay can tell you about this better than I can because he did it—is that they poisoned cells. And because cancer was more rapidly dividing, it was more sensitive to the poison. But the poison killed everything. Jay has a bunch of postulates. And I think his number one postulate is responders do better than nonresponders unless they die of toxicity.

And so with this new class of drugs we’re getting away from the toxic effects because we’re targeting things better. We’re only going after cancer cells in some of these targeted therapies. It’s a great time to be an oncologist. I wish I was fifty instead of seventy.

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***Tacey A. Rosolowski, PhD***

01:01:47

It's interesting. I think I'm probably like a lot of people in that when I began doing the background research for this, even though I've heard words like PET/CT and that's been in my consciousness, I still had this intuitive and misinformed sense that imaging is really a picture of something physical and static, and not that it's a picture of a process or of the possibility for a process.

***Donald A. Podoloff, MD***

01:02:19

I'm glad you're learning that. Now don't get me wrong. Ninety-five percent of both pathology and radiology is still looking at static images.

***Tacey A. Rosolowski, PhD***

01:02:31

Right. And I imagine that's going to be the workhorse still for a long time. But the idea that now technology has expanded that range.

***Donald A. Podoloff, MD***

01:02:40

So you can look at function as well as form.

***Tacey A. Rosolowski, PhD***

01:02:42

You can look at function. It's a totally different way of thinking. I mean I can see how you'd be very intellectually excited by these advances.

***Donald A. Podoloff, MD***

01:02:47

Yeah, it is. And the companies are beginning to think about that this way. So fifteen years ago, and this is relevant to CABI and its formation, GE partnered with us to build this wonderful building, because they thought we would be developing instruments that they could then sell.

***Tacey A. Rosolowski, PhD***

01:03:10

Interesting.

***Donald A. Podoloff, MD***

01:03:12

Well, they have acquired over this fifteen years some biologic companies, and some PET tracers, and so they were changing their focus from pure instrumentation to function, to chemistry.

They ran into a buzz saw when they did that because the timeline for the development of instruments versus drugs is very very different. And the culture amongst pharma versus instrument companies is like North and South during the Civil War.

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***Tacey A. Rosolowski, PhD***

01:03:57

How are they different?

***Donald A. Podoloff, MD***

01:03:59

Well, they're different because the expectations are different. In the instrument world you expect that you'll bring an instrument from a laboratory into clinical use in a year or two.

***Tacey A. Rosolowski, PhD***

01:04:10

OK, so pretty quick.

***Donald A. Podoloff, MD***

01:04:12

Yeah, compared to pharma. Now that's changing too because government regulation is making instrument companies jump through a lot of hoops now too. And it's all related to patient safety. And that's another huge thing that just crept into my mind.

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## **Chapter 10**

### ***Advances in Radiology Continue to Raise Questions about Ethics and Consent***

#### **B: Institutional Change;**

##### **Story Codes**

A: The Researcher;

D: Ethics;

D: On Research and Researchers;

D: Understanding Cancer, the History of Science, Cancer Research;

D: The History of Health Care, Patient Care;

C: Patients;

C: Patients, Treatment, Survivors;

B: MD Anderson History;

***Donald A. Podoloff, MD***

01:04:12

So when I got here in 1986, we didn't consent patients when we were going to ablate their thyroid for thyroid cancer. We just did it. And if I wanted to try a new radiopharmaceutical, I could hop up on the table and have somebody inject me with it.

***Tacey A. Rosolowski, PhD***

01:04:56

So in other words no oversight at all for workhorse imaging.

***Donald A. Podoloff, MD***

01:04:59

Very little, very little. And that's all changed. Some of it for the good, some of it for not so good. We had no EEE yearly event when I got here in 1986.

***Tacey A. Rosolowski, PhD***

01:05:14

What's that?

***Donald A. Podoloff, MD***

01:05:15

That's the Employee Education Event. It's like a four-hour test you have to take every year. Fortunately they're looking at ways of amending that. I mean these are all government regulations. So that's had a huge impact on our understanding of disease in the sense that it's given us—it's humanized us to a degree.

There probably was well, so what, you're going to die of cancer anyhow. Well, now you're likely to live with cancer. It's becoming a chronic disease. People with lymphoma can live for years. So that's

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changed our like who cares about how much radiation a cancer patient gets. They used to walk around with shopping carts full of X-rays. We don't have X-rays anymore. But we're now much more concerned about imaging gently and with the understanding that radiation is not totally innocuous and can under some circumstances be harmful. That's an appreciation that I don't really think the early cowboys as I like to call them had. More is better. Give me more drug. Well, yeah, but now you got a neuropathy and you can't use your arm and your cancer is gone but you're paralyzed. That kind of stuff.

***Tacey A. Rosolowski, PhD***

01:06:57

Very interesting.

***Donald A. Podoloff, MD***

01:07:00

Well, it's a very different slant on things. And I think if you talk to Freireich about that, he won't be as sensitive to those kinds of things as I am. Not that he doesn't care. But he comes from a different generation.

***Tacey A. Rosolowski, PhD***

01:07:19

Yeah. I've picked up on that actually in conversations with folks. Particularly in those discussions of chemo, like what do we have, what can we use, let's just try it, no matter what.

***Donald A. Podoloff, MD***

01:07:30

And the other side of that is the principle from Hippocrates that says above all else do no harm.

***Tacey A. Rosolowski, PhD***

01:07:39

Do no harm, yeah.

***Donald A. Podoloff, MD***

01:07:40

Well, if guys like Freireich believed that, we would never have cured childhood leukemia.

***Tacey A. Rosolowski, PhD***

01:07:48

Right, right.

***Donald A. Podoloff, MD***

01:07:49

Because that's what's so courageous about what he did. He flew in the face of conventional wisdom. He said, "No, you guys, all you professors, you're wrong, you're full of shit, I'm right." That probably I don't want in there.

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***Tacey A. Rosolowski, PhD***

01:08:07

(laughter) That's OK. You're not the first person.

***Donald A. Podoloff, MD***

01:08:10

Yeah, I'm sure. Well, you have a very disarming way of getting people to talk, you're very good.

***Tacey A. Rosolowski, PhD***

01:08:18

Thank you. It's fun.

***Donald A. Podoloff, MD***

01:08:20

Yeah. Well, only if you like to talk. And I do like to talk. Yeah, you asked me before what I thought about MD Anderson. The reputation that MD Anderson had before Charles LeMaistre got here is that these were crazy cowboys who did nutty things to people. There was a guy named Mel Samuels on the faculty. Used to call him Megadose Mel. That was his nickname. He never met a dose escalation he didn't like.

***Tacey A. Rosolowski, PhD***

01:08:54

Wow.

***Donald A. Podoloff, MD***

01:08:56

But he cured testicular cancer, which an intern friend of mine died from in 1969. You don't hear people dying of testicular cancer very much anymore. And that's Mel Samuels who did that.

***Tacey A. Rosolowski, PhD***

01:09:11

Wow. Yeah, that's right. And I think too the other piece, undoubtedly there were some patients, maybe a good number of patients at that time during the cowboy era, who were not entirely apprised of the risks that they were undergoing. But nonetheless they were willing to take whatever risks were there. I mean not all patients were completely passive. They wanted to try whatever was necessary.

***Donald A. Podoloff, MD***

01:09:38

In the '50s, we're not that far away from World War II. And look what the Germans did medically during World War II. And that was to some degree the way we did our stuff here. We didn't bother with informed consent because it was irrelevant. Well, ethically it's no longer irrelevant.

One of the things that I'm going to be struggling with in this next cohort of patients that I do on this protocol is if we don't get any better targeting at a dose that's double what we started with, I'm going to

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have to find out if we can't go any further. Why do another six patients? I'm going to have to have a discussion with somebody about that who can make me see it in a way that perhaps I don't. We didn't use to have conversations like that. You want to do something, you do it, because I'm right, I'm a doctor, I'm a god.

And I heard one particular physician say that to somebody who was questioning him about what they were doing. A regulator.

***Tacey A. Rosolowski, PhD***

01:10:58

Do you think that's a generational thing?

***Donald A. Podoloff, MD***

01:10:59

Yes. Yeah, we're not educating kids like that anymore. Like everything else that we have examined critically in society, the doctor is no longer a priest or a rabbi. He's a scientist or she. And the reputation of—like I thought [Arthur Lucen?], my doctor friend, I thought he was God, I thought he was perfect. And I learned some things about him when I became an intern at the hospital that he worked at that suggested he wasn't perfect. And it was painful to learn that. I don't think anybody thinks about doctors as gods anymore. And that's probably a good thing. There's really only need for one God. And she can do whatever she wants is the rest of that.

***Tacey A. Rosolowski, PhD***

01:12:17

(laughter) I'm appreciative of that. Well, really interesting. I mean this is a really neat turn that the conversation has taken about this issue of consent, and particularly that idea of how this notion, how the shifts of technology within radiology have humanized the patients. I mean how unexpected. It's really quite an unexpected turn.

***Donald A. Podoloff, MD***

01:12:44

If you're purely scientific about medicine, you will not let your emotions do to a patient what it won't do to a protein in a tube. Well, that's not how patients want to be treated. But they do want to get better. And then if you explore that some—I used to get into this with my thyroid cancer patients. Most patients really want to feel better. They're not coming to see you so you'll make them live longer. They want their pain to go away. They want to be able to function the way they did before they got sick.

They don't talk about the fact that they're dying. It's a difficult discussion to have. I've had very few patients in my career say to me, "I want you to cure me." They're usually much more concrete about that. They want this to go away or this to happen. I want to go to my kid's bar mitzvah, something like that. So we have to be human, we can't be totally scientific, I don't believe.



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***Tacey A. Rosolowski, PhD***

01:14:11

Do you find that when you have these consent conversations with patients about the techniques that you're developing within radiology—how easy is it for them to grasp it? How do you invite them into that world?

***Donald A. Podoloff, MD***

01:14:28

Well, first of all your consent document has to be written at the level of seventh grade. So they have to be able to grasp that. I have found—and this may be because of what I do—imaging is a tough sell because there's no tangible benefit. And a phase I study is a tough sell because there's no tangible benefit, but forty percent of our phase I patients improve. But you can't tell them that when you're doing the consent, ethically, because the purpose of a phase I study is to gather data about how much of this can I give you before I make you so sick I have to stop. A phase II study is where you do the efficacy part of it. And that's true in imaging too. So when I talk to a patient I'm very dependent upon their altruism. And there's an enormous amount of that amongst these patients who volunteer for these studies, because I will say to them, "There's no potential for this to benefit you. It may benefit somebody who gets sick with what you have in the future." And they still agree to the study.

***Tacey A. Rosolowski, PhD***

01:15:46

Why do you think that is?

***Donald A. Podoloff, MD***

01:15:47

Because I think patients—I have to be careful how I say this—I think when you get a serious life-threatening illness it changes your perspective, and it makes you think about what kind of a legacy do you want to leave. You want to do something good is what I think.

***Tacey A. Rosolowski, PhD***

01:16:18

Yeah, some good to come out of it. Yeah.

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## **Chapter 11**

### ***A Brief History of PET Scans at MD Anderson***

#### **A: Overview;**

#### **Story Codes**

A: Overview;  
A: The Researcher;  
D: Understanding Cancer, the History of Science, Cancer Research;  
D: The History of Health Care, Patient Care;  
D: Business of Research;  
D: Fiscal Realities in Healthcare;  
D: The Healthcare Industry;

***Tacey A. Rosolowski, PhD***

01:16:18

I wanted to circle back to what brought us onto this conversation, which is the technological advances. And so we were talking about the PET/CT.

***Donald A. Podoloff, MD***

01:16:40

Yeah. Now the PET/CT had an impact almost as much as CT did. In a matter of a year to a year and a half, nobody was making PET scans anymore, they were only making PET/CT scans.

***Tacey A. Rosolowski, PhD***

01:16:56

Wow. Was 2007, was that when it—

***Donald A. Podoloff, MD***

01:17:01

I think the first papers came out in 2006 maybe. But that means they had been working on it probably for three to four years before that. Just nobody knew anything about it. It was always a dream, because as I told you, what we used to do in the old days is we'd have a CT over here and a PET scan over here. Our eyes would do the synthesis for us. But the first machine that actually did it—we didn't get ours until around 2000.

***Tacey A. Rosolowski, PhD***

01:17:30

Oh, really.

***Donald A. Podoloff, MD***

01:17:31

Yeah, 2002, 2003 I think. Now Anderson has notoriously been very late into technology.

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***Tacey A. Rosolowski, PhD***

01:17:39

OK. So you got a PET/CT machine in 2002, 2003?

***Donald A. Podoloff, MD***

01:17:45

We got our first PET scan in 1999.

***Tacey A. Rosolowski, PhD***

01:17:48

Oh, first PET scan, OK.

***Donald A. Podoloff, MD***

01:17:50

It was not really our first, it was our second. We actually had a PET program here from 1988 to '94 but we had to close it.

***Tacey A. Rosolowski, PhD***

01:17:58

Why was that?

***Donald A. Podoloff, MD***

01:17:59

It was a huge economic drain on the institution.

***Tacey A. Rosolowski, PhD***

01:18:04

Huh.

***Donald A. Podoloff, MD***

01:18:04

And at that time PET was not reimbursable, so you couldn't charge patients a clinical fee for doing it.

***Tacey A. Rosolowski, PhD***

01:18:09

I see. So was that decision to close down the PET program purely financial? Or was it not demonstrating value in terms of care?

***Donald A. Podoloff, MD***

01:18:18

Oh, it had nothing to do with science, it was purely—were you here in '94?

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***Tacey A. Rosolowski, PhD***

01:18:23

No, I came in 2011.

***Donald A. Podoloff, MD***

01:18:25

OK, so you're relatively new. In 1994 we were told that in 1995 we'd be half our size. Managed care was coming, and it was going to destroy MD Anderson. And our leaders, being responsible humans, listened. And so they closed programs. And PET was one of the casualties of that.

***Tacey A. Rosolowski, PhD***

01:18:52

OK, I do recall that period in the institution's history.

***Donald A. Podoloff, MD***

01:18:55

You've interviewed people who probably are still pissed off about that.

***Tacey A. Rosolowski, PhD***

01:19:00

Yeah. I mean it was a painful time for the institution.

***Donald A. Podoloff, MD***

01:19:03

Very. It was the first time that the institution ever had to do anything like that. And it was actually before '94. It was more like '92, '93.

***Tacey A. Rosolowski, PhD***

01:19:23

The Sharp report came out.

***Donald A. Podoloff, MD***

01:19:25

Yeah, exactly. Where are they today, by the way?

***Tacey A. Rosolowski, PhD***

01:19:29

Don't know.

***Donald A. Podoloff, MD***

01:19:31

Yeah. Where's MD Anderson? They were all wrong. All those experts were wrong.

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***Tacey A. Rosolowski, PhD***

01:19:35

Oh, yeah, absolutely. Yeah, well, I mean when John Mendelsohn came he decided he was going to ignore that wisdom as nonwisdom, and grow the institution. And I think there are people who are still talking about the fact that a lot of the people who were let go during '94, '95 were hired back. So it was a very strange period. How do you tell which way the wind is going to blow?

***Donald A. Podoloff, MD***

01:19:58

Yeah. It was a very serious miscalculation of what was going on. But it was the prevailing wisdom.

***Tacey A. Rosolowski, PhD***

01:20:08

Absolutely.

***Donald A. Podoloff, MD***

01:20:09

I remember J [Freireich] at that time was saying, "These guys are crazy. They're going to have more patients than they know what to do with in five years." And he was right.

***Tacey A. Rosolowski, PhD***

01:20:19

Huh. Now is the reason that PET scans were not reimbursed at that time, was it a lack of information that was being provided to insurers?

***Donald A. Podoloff, MD***

01:20:26

There was no clinical data that suggested that it was better than nothing. And it was very expensive. And it got its start in brain research. And then they started to do cancer work with it. The way PET got reimbursed was through a study done by a group who demonstrated to CMS—I don't think it was called Medicare at that time, it was called CMS—that a PET scan—this is just plain PET—reduced futile thoracotomies by twenty percent, because it found a metastatic deposit somewhere that you—like an adrenal lesion or a bone lesion, which means you're not an operable candidate anymore.

Well, a thoracotomy was more expensive by far than doing a PET scan. And that's why the government approved PET scanning for lung cancer.

***Tacey A. Rosolowski, PhD***

01:21:27

Now was that study done at MD Anderson or someplace else?

***Donald A. Podoloff, MD***

01:21:31

No. I don't remember where it was done now. But it's a very famous study. I probably have it in my

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slides. But that's how PET started to get reimbursed. And now, well, it's been a long time, but there are groups of people who are working very diligently on demonstrating that when you do this test you save money in the long run. And that's really the only thing that the government—the government is not going to respond to well, the outcome is better and the patient feels better. They're going to respond to the macroeconomics of the situation.

***Tacey A. Rosolowski, PhD***

01:22:09

I've been talking to Linda Elting in Health Services Research. And it's been a very interesting conversation about how providing this hard data to insurance companies makes an enormous difference. And I mean in her words she says insurers are not in the business of denying people care, they're in the business of denying useless care. (laughter)

***Donald A. Podoloff, MD***

01:22:41

Yes. But most insurance companies are for-profit organizations. And so their bottom line is they have to be profitable. Well, denying care that's ineffective is a very good way to help that bottom line. But denying care that is effective is just as good a way of doing that.

***Tacey A. Rosolowski, PhD***

01:23:07

Absolutely. So when did MD Anderson get its PET program back? You said 2002?

***Donald A. Podoloff, MD***

01:23:15

I think we started it up again in 1999.

***Tacey A. Rosolowski, PhD***

01:23:23

OK, 1999.

***Donald A. Podoloff, MD***

01:23:24

I was given permission to recruit Homer Macapinlac here.

***Tacey A. Rosolowski, PhD***

01:23:28

I'm sorry. His name?

***Donald A. Podoloff, MD***

01:23:29

Homer Macapinlac. He's the chair of nuclear medicine. And I recruited him from Sloan-Kettering. And I recruited Osama Mawlavi who's a physicist. And they started the PET program for us. And very

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quickly we became the largest and most successful PET program in the United States, and still are. Nobody does seventy or eighty scans a day like we do.

***Tacey A. Rosolowski, PhD***

01:23:55

Wow.

***Donald A. Podoloff, MD***

01:24:01

I'm watching the time because I have something else that I need to do.

***Tacey A. Rosolowski, PhD***

01:24:04

OK. Would you like to stop? Do you need some time to transition?

***Donald A. Podoloff, MD***

01:24:09

No, I'm OK about transitioning. I want to leave you with a thought.

***Tacey A. Rosolowski, PhD***

01:24:13

Sure.

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## **Chapter 12**

### ***A View of New Collegial Leadership***

#### **B: Institutional Change;**

##### **Story Codes**

B: MD Anderson Culture;

B: Building/Transforming the Institution;

B: Growth and/or Change;

C: Professional Practice;

C: Leadership;

C: Understanding the Institution;

C: Portraits;

***Donald A. Podoloff, MD***

01:24:14

So I told you about my personnel legacy. When I started, I didn't seek this job, it was given to me. The guy who was my predecessor resigned.

***Tacey A. Rosolowski, PhD***

01:24:32

When you say this job, you mean?

***Donald A. Podoloff, MD***

01:24:34

The head of radiology.

***Tacey A. Rosolowski, PhD***

01:24:36

OK.

***Donald A. Podoloff, MD***

01:24:36

I didn't aspire to be anything more than the chairman of the Nuclear Medicine Department. That was fine with me. There were thirty-four radiologists on our staff. When I left the job ten and a half years later, there were 147 radiologists. What I did, with the help of my colleagues, is I built this place to be able to do the workload that it has been able to do. And now they've just continued to build it. The next step in the legacy, the reason that Marshall—well, I don't know the reason. Marshall got the job and I was very happy about that, because there were other very qualified candidates. He's working on the research. We've got the mass of people now that we need to do the work. So we're changing the phenotype of the radiologists that we're attracting. They're becoming much more academic.



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***Tacey A. Rosolowski, PhD***

01:25:34

Interesting, OK. So it was a much more clinically focused department before.

***Donald A. Podoloff, MD***

01:25:39

Totally. I mean near totally.

***Tacey A. Rosolowski, PhD***

01:25:40

OK. And I'm sure that now with the research being integrated—is there a mind to recruit people who tend to focus on translational? Is there a balance? More translational?

***Donald A. Podoloff, MD***

01:25:52

Well, the recruitment of the Piwnica-Wormses, both of them, both Helen and David, Helen to the Provost's Office and David to be the head of Cancer Systems Imaging, is a wonderful stroke for the institution. And they'll be terrific leaders. They're just what the institution needs at this point in time.

***Tacey A. Rosolowski, PhD***

01:26:20

Interesting.

***Donald A. Podoloff, MD***

01:26:20

Well, that's my belief. There are a lot of people who don't believe that but I'm not one of them.

***Tacey A. Rosolowski, PhD***

01:26:25

Do you have a few moments to say why? What you believe they bring?

***Donald A. Podoloff, MD***

01:26:30

Yes. They're both outstanding scientists. And they listen very well. They're really good listeners. And when they talk they say important things. I think Ethan is the same way, Dmitrovsky. [Ronald] DePinho has assembled an excellent team around him I think. I'm sure that everybody you interview doesn't agree with that, but that's my view.

***Tacey A. Rosolowski, PhD***

01:27:06

Yeah. Well, this is a collection of perspectives. Absolutely.

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**Donald A. Podoloff, MD**

01:27:11

Yeah. I think they're both scientists but they're also human. And it comes across in the way they interact with people. The previous head of what was then experimental diagnostic imaging is Juri Gelovani I told you about. He came from the Baltics. And he was very Baltic. And he was very top-down. He was born in Georgia, and you did it because Juri told you to do it. That's not David's style.

**Tacey A. Rosolowski, PhD**

01:27:53

So different leadership style. What about the research perspective?

**Donald A. Podoloff, MD**

01:27:58

Well, David has done extremely good fundamental work in nuclear medicine. He was the first to image P-glycoprotein, which is a cancer precursor. And I think he's into MR and hyperpolarization now. I go to the department meetings but lately I've been so busy on the clinical side with the clinical research we're doing that I've not gotten to as many of them as I should.

The clinical research activity here has gotten very very busy. It took a long time to ramp it up but it's very very full now. And in fact I'm in the process of asking them to reduce my clinical activity by another ten percent so I'll only do thirty percent clinic, just because I'm so busy.

So their leadership style is very collegial. That's a good word.

**Tacey A. Rosolowski, PhD**

01:29:23

Well, would you like to leave it there for today?

**Donald A. Podoloff, MD**

01:29:24

Yeah, I think so.

**Tacey A. Rosolowski, PhD**

01:29:25

OK, good, so I'm going to be turning off the recorder. It's about 11:52. And thank you very much for taking the time today.

**Donald A. Podoloff, MD**

01:29:34

You're very welcome. As you can tell, I enjoy talking to you.

**Tacey A. Rosolowski, PhD**

01:29:39

Yeah, I enjoyed it too.

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***Donald A. Podoloff, MD***

01:29:39

We got another one of these set up.

***Tacey A. Rosolowski, PhD***

01:29:40

We do. We do indeed.

***Donald A. Podoloff, MD***

01:29:41

That's what I was just going to look.

***Tacey A. Rosolowski, PhD***

01:29:42

Yeah, the week after next, I'm not quite sure. But I'm turning off the recorder at, yes, 11:53 right now.

audio repeated from 01:29:52-02:59:39 END OF AUDIO FILE

## **Donald A. Podoloff, MD**

### **Interview Session Two: 23 April 2015**

#### **Chapter 00B**

##### ***Interview Identifier***

***Tacey A. Rosolowski, PhD***

00:00:00

All right. OK. So now we are officially recording. And I'm Tacey Ann Rosolowski. Today is April 23rd, 2015 and the time is about seven minutes after 10:00. And I'm in SCRB 3 on the South Campus or Research Park of MD Anderson with my second interview today with Dr. Donald Podoloff.

***Donald A. Podoloff, MD***

00:00:25

Podoloff.

***Tacey A. Rosolowski, PhD***

00:00:25

Podoloff. My apologies. Thank you for correcting me. Good to have that at the head of the interview session to remind people, including me. (laughter) And so thanks for agreeing to spend the time again this morning.

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## **Chapter 13**

### ***Training Radiology Residents and MD Anderson as an Educational Institution*** **A: The Educator;**

#### **Story Codes**

A: Career and Accomplishments;

A: The Educator;

C: Research, Care, and Education;

A: The Administrator;

A: Overview;

***Tacey A. Rosolowski, PhD***

00:00:25

And we were going to talk about administrative appointments today. And I have a list going back to the beginning. And I don't know how important some of them are. But I did want to ask you, because I noticed that from '86 to '95 you were education coordinator for resident training. And that caught my attention because last time you mentioned that you were very proud of the fact that you trained so many people. So education seems to be an important part of your sense of mission here. So I wondered if you would talk about the taste of education at MD Anderson that you got in that particular role, education coordinator for resident training, and then how your education contributions evolved.

***Donald A. Podoloff, MD***

00:01:28

So in the Department of Nuclear Medicine, which is what that assignment referred to, in addition to being the deputy chairman, I was also the coordinator for resident education. I've always enjoyed teaching. And in both radiology and nuclear medicine a lot of the teaching is done by apprenticeship. Basically somebody sits next to you. You show them what's on the image that you're looking at. And then after a while you start letting them look at the images themselves without you present. And then you check them, and that's—

***Tacey A. Rosolowski, PhD***

00:02:09

Last time you showed me some of those images and how—I could imagine it would take a lot of practice and eyeballs-on experience to really understand how to do that.

***Donald A. Podoloff, MD***

00:02:20

You have to train your eye. There's a very interesting study that was done a long time ago that compared the eye movements of experienced radiologists to residents. And the difference was that the residents, their eyes were all over the place when they were reading, but the experienced radiologists read like a raster across and down. So without even knowing anything about that, that must be what's going on

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during the training phases, that you learn to control your eye movements in a systematic way so that you see everything that's there.

***Tacey A. Rosolowski, PhD***

00:03:00

Do some people never get it?

***Donald A. Podoloff, MD***

00:03:02

Yes.

***Tacey A. Rosolowski, PhD***

00:03:03

And why do you think that is?

***Donald A. Podoloff, MD***

00:03:05

It's a brain-eye thing that you either have the gene or you don't. There's a big difference between—I always tell this to internists because I was an internist before I was a radiologist. It's a big difference from looking at a film and interpreting the film. And it takes a different skill set. That's why radiology programs are four years long.

So in that role—the impetus for doing that role had to do with—the residents evaluated us. And I used to get very high resident grades. They liked the way I did what I was doing. So I decided to take that on.

***Tacey A. Rosolowski, PhD***

00:03:48

So it didn't exist before you did it.

***Donald A. Podoloff, MD***

00:03:49

It did, but it was done less formally.

***Tacey A. Rosolowski, PhD***

00:03:53

I see. OK.

***Donald A. Podoloff, MD***

00:03:55

And the entire graduate medical education system has evolved from 1986 to now. It's a much more formalized curriculum. There are milestones that have to be met, otherwise you're not considered to be a successful candidate. So it requires a fair amount of investment of time on the part of the education coordinator. But it wasn't an onerous role. It was something I enjoyed doing. And I got to know the

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residents. I really enjoy talking to young people. I believe there's no such thing as a stupid question, there's only an ill-informed answer. And you learn a lot when you teach, you really do.

***Tacey A. Rosolowski, PhD***

00:04:40

How so?

***Donald A. Podoloff, MD***

00:04:44

People ask you questions that you don't think about, and it makes you think about new and different things. An untrained young person who comes into a radiology residency has a very unique and different perspective about things than say does somebody who has been in the field for ten or twelve years. And you can learn from that, and you can make adjustments to how you think and what you do. I've always thought that lifelong learning is like a two-way street.

So that was the first administrative role after my deputy chair position. And what I did in that position is I basically ran the clinical service. So not dissimilar from what I'm doing as the medical director of CABI. If there's a hands-on medical problem, something that needs to be resolved by somebody with an MD degree, during the acquisition or management of a patient who's in your care for the imaging portion, they turn to the medical director or the clinical director for those answers.

***Tacey A. Rosolowski, PhD***

00:05:59

Dr. Podoloff, let me just ask you a quick follow-up question on the resident training. Were there certain processes or formal things that you set in place during the time that you served in that role—because that was for nine years—that have lasted? Because you said it was very informal. How did it change after you had that role?

***Donald A. Podoloff, MD***

00:06:26

I think we developed a template for evaluating milestones and what constituted a resident that completed what he was supposed to or she was supposed to do. I don't think that existed in that formalized way before I had that job. Our education of residents over here is peculiar. Let me tell you how. Because we're a categorical cancer hospital, ACGME does not allow us to educate interns or residents except if we're connected to a medical school. So our academic affiliation is either with UT Houston and sometimes it's with Baylor. But the formal tie is the UT System. So it's the medical school here in Houston.

And we don't really control the residents. They visit with us. But what's very different about the way we teach the residents from the way they might learn at a medical school is the attending staff do most of the work here. The residents either watch or are assigned apprentice duties, but they're not primarily the interpreters of the film, even when they've been very very senior.

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That all changes when you get into fellowship. But for the residency, since it's a medical school-controlled residency, they're guests over here. And that's unique and different. In most medical schools most of the work is done by the house staff, the actual reading. And then the attending comes in and checks it.

***Tacey A. Rosolowski, PhD***

00:08:23

What are the pros and cons of that system?

***Donald A. Podoloff, MD***

00:08:26

It's a good learning experience, or a better learning experience, for the trainee. It leaves the academic physician free to do other things like publish and serve on committees and do that. It's a little similar to what's happened in colleges now where the teaching assistants do most of the stuff and the professors are off reading and writing. And if you look at how does an academic physician get from assistant professor to full professor, they don't usually get it done on teaching. They get it done on original publication or seminal scientific work. Although there's a trend now to change that, to reward the outstanding expert teacher in a manner similar to the way we reward people who publish a lot. That's another transition that's going on in medical education at this time.

Because if you think about it, we've been educating people pretty much the same way since the nineteenth century. And it's now 2015. So a lot of things have changed but the basic medical school organization is pretty much the same now as it was 100 years ago.

***Tacey A. Rosolowski, PhD***

00:09:55

Do you see some ways in which that model is no longer serving the needs of students or of institutions?

***Donald A. Podoloff, MD***

00:10:05

I don't see that. But the ACGME has seen it and have mandated certain changes with respect to integrated curriculum. The standard two years of basic science followed by two years of clinical, it's now all mixed up. And you start doing the clinical. I was just back at my fiftieth medical school reunion. And they took us on an education tour. And they do things in the clinical setting in the first year now. We waited for two years before we actually touched a patient, except for a physical diagnosis class that I think we all had in our first six weeks or so. Yeah, so that's changed a lot.

But the basic model hasn't changed since the Flexner Report. And the Flexner Report, if I'm remembering right, came out in 1906. So it's over 100 years old.

***Tacey A. Rosolowski, PhD***

00:11:03

It's pretty amazing.



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***Donald A. Podoloff, MD***

00:11:08

Yeah. So our missions at MD Anderson are clinical care, research, education. And most of that education that we control is done at the advanced fellowship level, not at the resident or intern level, although during the course of my career I have taught interns and I've taught residents.

***Tacey A. Rosolowski, PhD***

00:11:33

Is there anything else you want to say about education right now before we go to your—

***Donald A. Podoloff, MD***

00:11:37

I think I won some Teacher of the Year Awards in the course of that. But it's always been a very rewarding experience to be around young people who have inquisitive inquiring minds. It keeps you young.

***Tacey A. Rosolowski, PhD***

00:11:54

Sure. And do you feel that you have a perspective on different facets of radiology that you would like to see carried on?

***Donald A. Podoloff, MD***

00:12:06

I'm not sure I understand the question.

***Tacey A. Rosolowski, PhD***

00:12:08

Well, every theoretician, every researcher, practitioner has an approach. And I'm wondering what's unique about your approach that you help impart.

***Donald A. Podoloff, MD***

00:12:19

I don't think there's anything particularly unique about it. I think it's pretty ordinary. You have a job to do and you do it. I do spend a lot of time talking to the younger students about medical ethics and economics, which I didn't use to do in the past, because I think it's very important that they understand that we're in a significantly changing environment. OK. Yeah, nothing else really occurs to me right now.

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## **Chapter 14**

### ***The Center for Advanced Biomedical Imaging: an Opportunity to Realize a Vision of Imaging for MD Anderson***

#### **B: Building the Institution;**

##### **Story Codes**

A: Career and Accomplishments;

A: Professional Values, Ethics, Purpose;

B: Building/Transforming the Institution;

C: Leadership;

B: Industry Partnerships;

***Tacey A. Rosolowski, PhD***

00:12:59

OK, thank you. OK. And we were talking about your deputy chair role. And what would you like to say about that?

***Donald A. Podoloff, MD***

00:13:13

Well, I was running a very busy Nuclear Medicine Department, the clinical aspects of a very busy Nuclear Medicine Department. I think we used to do fifty or sixty bone scans a day. We used to do forty or fifty liver scans. Maybe thirty or forty brain scans. But all that changed when CT came out. The liver scan went down to zero almost overnight, so did the brain scans. And we filled that void with cardiac scans and other tumor imaging that we hadn't done before. And then of course PET and PET/CT came along. So during all that time I was involved, like if new technology came in that was clinically approved, one of my responsibilities would be to evaluate it and put it in place.

I was also responsible while working with the technical support people to develop protocols. If we had a new imaging technique that we'd not done before, let's say we'd never imaged the adrenal glands before and we wanted to, and there was an FDA-approved agent to do it, I would have to help set up that protocol.

And then I was responsible for the quality control or quality assurance. So I ran a conference that we did once every two weeks I think.

***Tacey A. Rosolowski, PhD***

00:14:46

And the purpose of that was to?

***Donald A. Podoloff, MD***

00:14:49

To go over cases where there were either errors or where there was a teaching point that others could

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learn from. While we read, if we came across a mistake or something of concern, we turned that in. And those turn-ins were evaluated by me and by a technical person. And if they were of significant import, we presented them at the conference, blinded to who had done it. That's all done electronically now. We used to have to do it by hand.

***Tacey A. Rosolowski, PhD***

00:15:37

(laughter) And was that a new thing?

***Donald A. Podoloff, MD***

00:15:39

No, it was fairly standard. Peer review has always been part of medicine.

***Tacey A. Rosolowski, PhD***

00:15:47

Right. I was curious. In addition to the various technological advances that you approved, do you recall any significant technologies coming to your attention that you did not approve, that were not appropriate for use here at MD Anderson, and why?

***Donald A. Podoloff, MD***

00:16:09

I don't think so. I don't recall. Normally when a new technique, let's say a new instrument, is being developed, the appropriateness for it in a particular clinical setting is usually defined by a research group. And by the time they got to me as the practicing clinician, they had already been—those that weren't mustering were out. So it wasn't something that I would be concerned with in that role. If I were doing technical development work, or if I was working closely with a physicist, that might be where those kinds of things would come up. So what came to us in the clinical realm, although it was new, it was scientifically pretty mature.

***Tacey A. Rosolowski, PhD***

00:17:06

OK. Also from our conversation last time about some of the transformations that took place in practice when the combined PET scan/CT came about, I can see how new technology would come in and there's a cascade effect that it not only affects clinical work, it affects research, which then affects development. So there's a whole—

***Donald A. Podoloff, MD***

00:17:28

Well, this whole building is a very good example of that. The original thought behind the Center for Advanced Biomedical Imaging Research, CABI, as we called it when it started, was that we would partner academically with the medical school, with GE Healthcare, and with MD Anderson, the three of us as three equal partners. And GE's skin in this game was to provide us with equipment that we would then use to develop new technologies that GE could use and sell commercially.

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***Tacey A. Rosolowski, PhD***

00:18:20

Interesting. When were those conversations first taking place?

***Donald A. Podoloff, MD***

00:18:25

In 2000 maybe, fifteen years ago. So that began as a little seed amongst John Mendelsohn, myself, and the head of GE Medical, who at that time was somebody whose name I've forgotten. (laughter) Jeff Immelt, who was the original guy that I worked with, went on to become the head of GE after Jack Welch retired. So Jeff took over the whole company. And this young man became the medical person. Joe Hogan was his name.

***Tacey A. Rosolowski, PhD***

00:19:12

So not Jeff Immelt, but it was Joe Hogan.

***Donald A. Podoloff, MD***

00:19:14

No. Joe Hogan. Jack Welch in his book wrote a very funny thing about Hogan. He said he must get carded in every bar that he goes into because he looks like he's nineteen years old. He did when he was in his mid thirties.

***Tacey A. Rosolowski, PhD***

00:19:30

That's funny.

***Donald A. Podoloff, MD***

00:19:31

Yeah. So it was the three of us that forged the original deal about doing this. The CABI was actually part of my recruitment package to be the division head.

***Tacey A. Rosolowski, PhD***

00:19:45

Oh. Really. Huh. That's information I didn't—

***Donald A. Podoloff, MD***

00:19:53

It's not anywhere that you would ever see it.

***Tacey A. Rosolowski, PhD***

00:19:54

Yeah. Wow. So this was really so—

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***Donald A. Podoloff, MD***

00:20:00

Well, I had a vision of molecular imaging. And that's what I wanted. That's what wasn't here when I became the division head that I wanted to make sure was here. So that's why we restarted the PET program.

***Tacey A. Rosolowski, PhD***

00:20:21

And what was your vision?

***Donald A. Podoloff, MD***

00:20:22

That by the time a tumor gets to be a lump or a bump and you can see it on an X-ray it's too big. It's gone through too many replications and there's too much cancer around. What we have to be able to do is see things before they become that large, or before hundreds of millions of cells are there. And the way to do that is to do it through molecular imaging.

Now nobody's ever imaged a molecule yet as far as I know, except by X-ray diffraction and other things. But no radiologist has ever seen a molecule. But we do look at molecular events and subcellular events. And the reason that's important—since I'm a radiologist I'll show you something visually.

***Tacey A. Rosolowski, PhD***

00:21:17

And I'm going to of course e-mail you and ask you for this image.

***Donald A. Podoloff, MD***

00:21:23

I think I should be able to do that.

***Tacey A. Rosolowski, PhD***

00:21:23

That's great, yeah.

***Donald A. Podoloff, MD***

00:21:29

So that's what fighting cancer looks like. We do surgery, we do chemotherapy, we shoot radiation. And that's the tumor, that's what we can see. But what the etiology of this tumor is, it's all this stuff going down here.

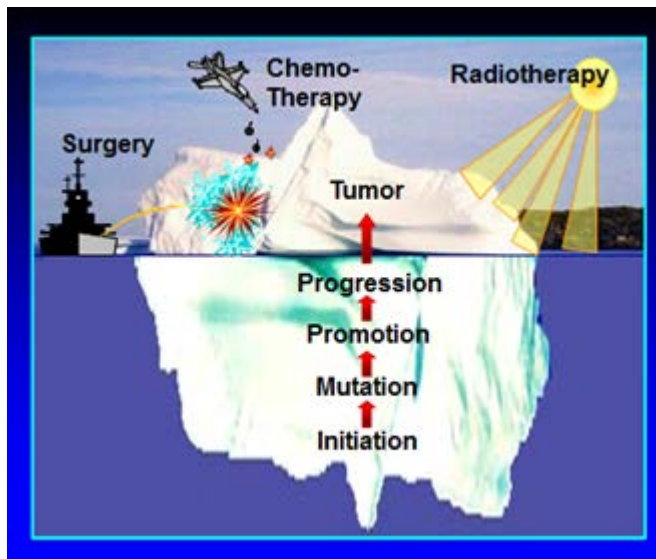
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**Tacey A. Rosolowski, PhD**

00:21:47

So you're using an image of an iceberg basically. And the surgery and chemo is all above water. And what's below—



**Donald A. Podoloff, MD**

00:21:55

Right. And after you get through—after you destroy the top part of it, you still have all this stuff back there. That's why cancer comes back. So the idea is you got to see what's going on down here. That's what molecular imaging is all about.

**Tacey A. Rosolowski, PhD**

00:22:08

Now when did you first have the idea for this?

**Donald A. Podoloff, MD**

00:22:14

It started to appear in the literature in the late 1990s. People started to talk about it. It wasn't an original idea with me. It was people began to realize that anatomy wasn't everything.

**Tacey A. Rosolowski, PhD**

00:22:30

But when did you feel that you had a special purpose to take action about it in this way?

**Donald A. Podoloff, MD**

00:22:36

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I think in the context of when they offered me the job as division head I said, “Well, if I’m going to be the division head, what am I going to do that warrants me to take that position? I mean it’s wonderful and I’ll make a lot more money than I was making. But what am I going to do for myself and the institution and for cancer care?” I suspect all of our leaders have epiphanies like that if they’re good leaders.

***Tacey A. Rosolowski, PhD***

00:23:11

Yeah. It’s the grander purpose.

***Donald A. Podoloff, MD***

00:23:13

Well, it’s a different purpose. And I always used to tell people the difference between my practice in private practice and at MD Anderson. In private practice my mission was to practice high quality medicine and make a profit. And my mission at MD Anderson is to eliminate cancer as a public health problem. Both of them are adequately good missions, they’re noble. But I think the elimination of cancer as a public health problem is a more noble one.

***Tacey A. Rosolowski, PhD***

00:23:43

Certainly has more impact.

***Donald A. Podoloff, MD***

00:23:44

Well, it may, yeah. So when it came time to negotiate, well, if you’re going to give me this job what are you going to give me with it, CABI was what came out of that.

And without Dr. Mendelsohn’s support and without the willingness of GE to be part of that, without the buy-in of a lot of people in the division who were going to help put it together, it never would have happened. No one person does something like this.

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## **Chapter 15**

### ***Developing and Opening the Center for Advanced Biomedical Imaging: Challenges and Complexities***

#### **B: Building the Institution;**

#### **Story Codes**

A: Career and Accomplishments;

A: Professional Values, Ethics, Purpose;

B: Building/Transforming the Institution;

C: Leadership;

B: Industry Partnerships;

***Tacey A. Rosolowski, PhD***

00:24:21

So we're here at this story. Do you want to tell me that story now? How CABI came about?

***Donald A. Podoloff, MD***

00:24:27

I just did.

***Tacey A. Rosolowski, PhD***

00:24:28

No, but I mean those were the beginning discussions. I mean what was the story of its evolution and—

***Donald A. Podoloff, MD***

00:24:35

Oh. I think the way to answer your question is to answer this question. Why did it take from 2000 to 2010 to move into the building?

***Tacey A. Rosolowski, PhD***

00:24:47

There we go. (laughter)

***Donald A. Podoloff, MD***

00:24:50

OK. Well, a lot of things changed in that period of time. First of all, GE originally planned to give us the instruments. Well, that became no, no, GE can't give anything to a customer who it also sells stuff to because that then sets up conflict of interest. So for nine of those ten years our lawyers and their lawyers drew up an agreement that was mutually satisfying to both corporate entities, both MD Anderson, the state of Texas, the UT System, and GE Healthcare. That's what took ten years.



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***Tacey A. Rosolowski, PhD***

00:25:36

Right. I can imagine those conversations were very complicated.

***Donald A. Podoloff, MD***

00:25:42

Extremely. And if it wasn't for Dan Fontaine's staff of people we never would have executed the agreement. So that's what took the ten years from initial thought of isn't this a good idea to opening the doors and actually coming in here in October of 2010.

***Tacey A. Rosolowski, PhD***

00:26:08

What about the planning process? I mean what's the mission of CABI? And how did the various facets of its activities come about?

***Donald A. Podoloff, MD***

00:26:20

It's to eliminate cancer as a public health problem with the use of imaging technologies to develop new treatments and diagnoses. The mission statement of the McCombs Institute, of which we are a part, is for the early detection and treatment of cancer. So the key word is early. And that's what gets you from the lumps and bumps to molecules. The molecular changes antedate the physical changes that you see.

***Tacey A. Rosolowski, PhD***

00:26:59

Yeah, I interviewed Red McCombs. Now when did you know that you would be part of the McCombs Institute and that you would be housed here?

***Donald A. Podoloff, MD***

00:27:11

I think that came almost at the beginning, because they were developing OK, we're going to do this. Then what you say is well, where are we going to put it, well, let's put it on the South Campus, we have all those other buildings that are either there or going up. So when they started to build SCRB 3 and 4, SCRB 1 and 2 had already been up, those buildings that are on the other side of Fannin Street over there.

The Smith Building. I think that was SCRB 1. I don't know what SCRB 2 is. But it's in our stuff. And then SCRB 3 and 4 were the last two that they put up. It took them about two years to build it. I think they broke ground for it in 2007 and it was ready, it became occupied in April of 2010. I didn't get here until September of 2010. I was still the division head until August 31st, 2010.

***Tacey A. Rosolowski, PhD***

00:28:27

OK. Now I mean it's not—maybe it seems obvious but it's not obvious to me. How did you find individuals who would be connected? The various areas in terms of research and technological development. How did you work all that out?

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**Donald A. Podoloff, MD**

00:28:46

Yeah, we already had all that kind of on the main campus. It was a matter of just getting a technical director, getting an administrative director, we follow the same administrative structure as the rest of the institution, the way you would start any department. There is a governance for the centers. And let me show you another thing that I think will help to make this clearer.

**Tacey A. Rosolowski, PhD**

00:29:27

I'm just noticing too that you've had an anniversary. I mean it's April 2015 so CABI has had the five-year anniversary moving in.

**Donald A. Podoloff, MD**

00:29:36

Yeah, we just put our five-year—so in a traditional medical school you have a department, and that's the structure that we've talked about that's 100 years old. It's an academic unit. It contains faculty with similar backgrounds and credentials. It's led by a chair. And that chair is responsible for recruitment, space, and mentoring. A center, on the other hand, is a group of faculty whose research focus is on a particular theme, in this case imaging, or in the case of the multidisciplinary care centers—

**Tacey A. Rosolowski, PhD**

00:30:14

Were there conversations? I mean in terms of you requesting or inviting faculty to become part of the center were there people who thought about that? Yes, I would want to be part, no, I wouldn't be part of the center? What was that thought process like in them making their selection?

**Donald A. Podoloff, MD**

00:30:33

I wasn't actually involved in that because by that time I'd decided that I would be the medical director of CABI. You're talking about an unfilled position even to this date of a center director, not a medical director, who would do all that.

**Tacey A. Rosolowski, PhD**

00:30:53

Why is that position as yet unfilled?

**Donald A. Podoloff, MD**

00:30:56

You'd have to ask my bosses about that.

**Tacey A. Rosolowski, PhD**

00:30:58

OK. (laughter)

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**Donald A. Podoloff, MD**

00:31:00

I suspect because they haven't found the right person. But there was somebody here in that role and he didn't work out.

**Tacey A. Rosolowski, PhD**

00:31:09

I see. OK. And I assume you're not mentioning his name because you do not care to.

**Donald A. Podoloff, MD**

00:31:12

I would rather not discuss that any further.

**Tacey A. Rosolowski, PhD**

00:31:14

That's fine, that's fine. OK. Well, that's very interesting.

**Donald A. Podoloff, MD**

00:31:20

So the center is like the Proton Center or the Imaging Center, the Center for Advanced Bio, or the Immunology Center. All those things are on the South Campus. And it was not an accident that that happened. They put them over here for synergies. So we have cross-center meetings monthly. And the idea was that we would have intellectual fertilization across those centers.

**Tacey A. Rosolowski, PhD**

00:31:52

Does it work?

**Donald A. Podoloff, MD**

00:31:54

Yeah. To some degree it does. Like everything else, it depends on the people. It works pretty well in most of the areas. We have a very strong relationship with the Proton Center.

**Tacey A. Rosolowski, PhD**

00:32:09

I can imagine, yeah.

**Donald A. Podoloff, MD**

00:32:10

We have a fairly strong one with the Immunology Center. We have a very very big tie-in with Physics and with Cancer Systems Imaging. Those are two departments in Diagnostic Imaging. Dr. Piwnica-Worms, who is the deputy division head for research, anything that has a research focus in it hits his desk

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at some point in time. They office on the fourth floor here. We had a good relationship with Dr. DePinhos, well, with Mrs. DePinho while she was here.

***Tacey A. Rosolowski, PhD***

00:32:52

Lynda Chin.

***Donald A. Podoloff, MD***

00:32:53

Because they had a lot of imaging needs.

***Tacey A. Rosolowski, PhD***

00:32:59

Lynda Chin.

***Donald A. Podoloff, MD***

00:33:00

Yeah. We have a strong relationship with the phase I program because they also have a lot of imaging needs and they are looking at molecular targets. So there's a very nice fit there. In fact the administrator of CABI, Leslie Billings, came from that department. She was in that developmental department, phase I department, before it became what it is today.

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## **Chapter 16**

### ***The Center for Advanced Biomedical Imaging: More on the Story of Establishing CABI***

#### **B: Building the Institution;**

##### **Story Codes**

B: Building/Transforming the Institution;

C: Leadership;

B: Industry Partnerships;

B: Multi-disciplinary Approaches;

D: Fiscal Realities in Healthcare

***Donald A. Podoloff, MD***

00:33:00

My technical director Anne Fisher came out of nuclear medicine. We have a cyclotron team that supports the cyclotron. The principal gentleman for that is Carlos Lepera-Gonzalez. And he reports, he's got a dual report. He reports to Homer Macapinlac, who's the chief of Nuclear Medicine, department chair of Nuclear Medicine, and he also reports to Leslie, and he reports to David Piwnica-Worms. So there's a lot of interrelations within the Division of Diagnostic Imaging and connections. And now that we're starting to advertise CABI, we've defined it as the best kept secret at MD Anderson, and we're starting to take it outside and show it to people, show what we can do, and our business is increasing as a result.

***Tacey A. Rosolowski, PhD***

00:34:31

So when you say advertise it, you're saying outside the institution. What are you—

***Donald A. Podoloff, MD***

00:34:35

No, it's within the—

***Tacey A. Rosolowski, PhD***

00:34:37

Within. And what are you trying to attract?

***Donald A. Podoloff, MD***

00:34:42

People who have imaging needs that we can fulfill.

***Tacey A. Rosolowski, PhD***

00:34:43

OK.

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00:34:43

**Donald A. Podoloff, MD**

A lot of times the conversation between a clinician and an imager will go, “Well, I’d like to offer you this imaging,” and the clinician will say, “I don’t need that imaging, this is what I need.” And those conversations are extremely important because it’s really the imaging needs of the practicing clinician and the researcher that we need to fulfill in order to be useful. We’re not here just to make pictures. We’re here to make useful pictures that have clinical impact, or to study research processes where such things will come from research and end up in clinical practice.

As an example, we started a research project in MR for head and neck cancer. That research project is now standard of care for that disease at MD Anderson.

**Tacey A. Rosolowski, PhD**

00:35:45

Wow. What is the process?

**Donald A. Podoloff, MD**

00:35:47

It’s basically an MRI sequence of how to best evaluate head and neck cancer. And the preliminary work was done at CABI with our equipment. And now I’m told by the investigator—his name is Fuller—in radiation oncology that it has now become standard of care at MD Anderson. So that’s a very high impact effect.

**Tacey A. Rosolowski, PhD**

00:36:24

It also shows that importance of synergy. That someone has a need and like bang, there actually is a system in place to investigate that.

**Donald A. Podoloff, MD**

00:36:31

Yeah, and that’s part of the mission too, is to investigate new techniques, and to bring those techniques from the research laboratory to clinical fruition.

**Tacey A. Rosolowski, PhD**

00:36:44

What do you feel has been achieved these past five years? What’s the arc of development been like?

**Donald A. Podoloff, MD**

00:36:56

When we started, when we opened the doors here, the first thing that happened was that the IRB came down and said, “Well, you can’t do research here, we haven’t approved you.” So we said, “What are you talking about? We built this building to do research.” So we had to get IRB approval. Just like any other facility. And just like any other facility, just because we’re geographically away, we started to think about doing conventional imaging, standard of care imaging, onto which we could tack a research piece.

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***Tacey A. Rosolowski, PhD***

00:37:31

Oh, interesting.

***Donald A. Podoloff, MD***

00:37:35

And the reason we thought about that is because we were hemorrhaging a couple million dollars a year while we were sitting around here from 2010 till 2015 to maintain the cyclotron and the equipment and all that. It couldn't be supported simply by grants. There's not enough dollars in the grant fund mechanism. So the institution had to underwrite it for a couple years.

Well, once we decided we would tackle doing standard of care imaging, we solved for the most part our money hemorrhage problem. I think we've billed over \$2 million so far this year. This fiscal year has five more months to it, four more.

So it took a year and a half to do the paperwork to make this a standard of care Medicare-approved facility. So we started that in 2010 and we didn't get finished with it, we didn't do our first patient, till 2012.

***Tacey A. Rosolowski, PhD***

00:38:49

So that's why the delay.

***Donald A. Podoloff, MD***

00:38:52

Well, yeah. Without being facetious about it, if there's a delay, it's legal until proven otherwise.

***Tacey A. Rosolowski, PhD***

00:39:00

Interesting. Because I was wondering when I was looking at some of the dates.

***Donald A. Podoloff, MD***

00:39:04

Yeah. Why?

***Tacey A. Rosolowski, PhD***

00:39:05

I noticed that. I was wondering. Yeah, what was that gap?

***Donald A. Podoloff, MD***

00:39:09

Well, you should sit down and talk to both Leslie Billings and Anne Fisher and ask them how long it took

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to get us to be able to do standard of care down here, and how long did it take—I can tell you about the lawyers, because I was involved in that—to get the building open.

***Tacey A. Rosolowski, PhD***

00:39:31

Can you snapshot for me what the legal concerns were?

***Donald A. Podoloff, MD***

00:39:39

We were very very concerned that we did not wish to violate conflict of interest issues.

***Tacey A. Rosolowski, PhD***

00:39:49

So this is going back to the instruments issue, OK, got you, OK.

***Donald A. Podoloff, MD***

00:39:53

Yeah. I mean there are very serious penalties for not doing things in appropriate legal ways. You can lose your standing as a Medicare-approved facility. They can close you down. The Food and Drug Administration can close you down. We're using radiation, both internally and externally. There are rules and—there's a whole separate set of rules and regulations about that. We're using drugs. The Food and Drug Administration has its own bureaucracy. And so all those things had to be dotted and—the i's had to be dotted, t's had to be crossed before we could ever see a patient down here. That's what the date discrepancy is all about.

***Tacey A. Rosolowski, PhD***

00:40:50

Yeah. Makes sense, makes sense. I mean was there anything of—I mean it sounds frustrating to have to wait those two years. But were there good things that came out of those two years? I mean the institute strengthened? Or center strengthened?

***Donald A. Podoloff, MD***

00:41:09

Well, we got ourselves in a good position, obeying all the rules and regulations, and we're now able to do standard of care and research and solve our own internal fiscal problems.

***Tacey A. Rosolowski, PhD***

00:41:23

Sounds like an important lesson to have learned. (laughter)

***Donald A. Podoloff, MD***

00:41:27

Well, it's an important lesson for survival. Unless the institution is willing to underwrite it, you can't not make a profit. We're a nonprofit? No, we're not. We're a not-for-profit. The difference between a



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nonprofit and a not-for-profit is that a not-for-profit takes its surplus money and reinvests it into the institution, doesn't give it to stockholders. A nonprofit goes under and dies.

***Tacey A. Rosolowski, PhD***

00:42:08

Yeah, you always have to think about the money end.

***Donald A. Podoloff, MD***

00:42:11

And people don't. People, well, you don't make a profit over there. No, it's what we do with the profit that's different. That's why I talk to the medical students and residents about economics.

***Tacey A. Rosolowski, PhD***

00:42:22

Oh, I see, I see.

***Donald A. Podoloff, MD***

00:42:24

I mean no margin, no mission, we used to say.

***Tacey A. Rosolowski, PhD***

00:42:27

I mean I have to confess I think there's also a sort of innocence or ignorance or naivete with a lot of people in thinking about money issues with medicine. There's this idea that it should be altruistic. And I was guilty of that myself, woefully uneducated about the very grave importance of thinking about finance in medical institutions, simply so it can continue to function and do its work.

***Donald A. Podoloff, MD***

00:43:00

It sounds simple, but a nonprofit is not a not-for-profit. That distills the whole thing right. And that I did think up. That was me.

***Tacey A. Rosolowski, PhD***

00:43:11

(laughter) That's a good one.

***Donald A. Podoloff, MD***

00:43:14

Yeah. No margin, no mission was somebody else's. But it's all the same thing. There's no free lunch. Where do our funds come from at MD Anderson? They come from our patient care activities. They come from our research grant activities. And they come from philanthropy. And a tiny little smidgen of it, less than 6%, comes from the state of Texas. Without those sources of income there would be no MD Anderson. And I think it's to Lee Clark's great credit that when the legislature said, "Well, we'll give you the money to put up a cancer hospital for the indigent and the poor," Dr. Clark's answer to the

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legislature is “Why should rich people be denied the best cancer care in the state?” And they listened to him. We could have been a Ben Taub when this place started. There’s a great book. It’s called Clark and the Anderson, if you like history, and you must. It tells about how MD Anderson became MD Anderson. It also tells who MD Anderson was.

***Tacey A. Rosolowski, PhD***

00:44:25

MD Anderson was, yeah, Monroe Dunaway Anderson. (laughter)

***Donald A. Podoloff, MD***

00:44:29

You got it. Cotton merchant.

***Tacey A. Rosolowski, PhD***

00:44:35

Yeah, it’s funny how people don’t even know. It’s like who was MD Anderson, what, what.

***Donald A. Podoloff, MD***

00:44:40

Who was the second person in that? Clayton.

***Tacey A. Rosolowski, PhD***

00:44:43

Clayton. Oh, I didn’t—

***Donald A. Podoloff, MD***

00:44:46

Well, there’s a Clayton Foundation, there’s an Anderson Foundation. But they were partners in the cotton business.

***Tacey A. Rosolowski, PhD***

00:44:52

OK, that’s a name that I hadn’t encountered, or hadn’t stuck if I did.

***Donald A. Podoloff, MD***

00:44:56

You would if you spent more time at the medical school. They have a lot of Clayton Foundation. In fact I think it’s a young medical school. It didn’t start until, didn’t have its first class until 1972. They have a fair amount of Clayton money over there. Some people at MD Anderson have some.

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## **Chapter 17**

### ***The Center for Advanced Biomedical Imaging: Part of the Changing Institutional Vision of Cancer Care***

#### **B: Building the Institution;**

##### **Story Codes**

B: Building/Transforming the Institution;

C: Leadership;

B: Industry Partnerships;

B: Multi-disciplinary Approaches;

D: Fiscal Realities in Healthcare;

B: Institutional Mission and Values

***Tacey A. Rosolowski, PhD***

00:45:15

Interesting, interesting. I forgot to ask you. Was there any controversy about establishing CABI?

***Donald A. Podoloff, MD***

00:45:25

There's always controversy when a new idea is started. It's within the realm of human nature that people resist change.

***Tacey A. Rosolowski, PhD***

00:45:41

What were the discussions like?

***Donald A. Podoloff, MD***

00:45:49

Well, should we be in that business? Who's going to pay for it? Do we need to have another research facility? Look at how busy we are with clinical care. Why don't you just hire another 100 faculty instead of wasting all this money for this pie in the sky deal? That kind of stuff. But that happens no matter what you do. You form a new department here, and people will wonder why you have to do that. I mean it wasn't serious controversy because the administration was in favor of this.

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**Tacey A. Rosolowski, PhD**

00:46:37

I was remembering. I think the timing is right, because when I interviewed John Mendelsohn he talked about his vision of the interrelationship of all of the different institutes and his vision for the cancer care cycle. And this early detection was a really important piece of that global vision.

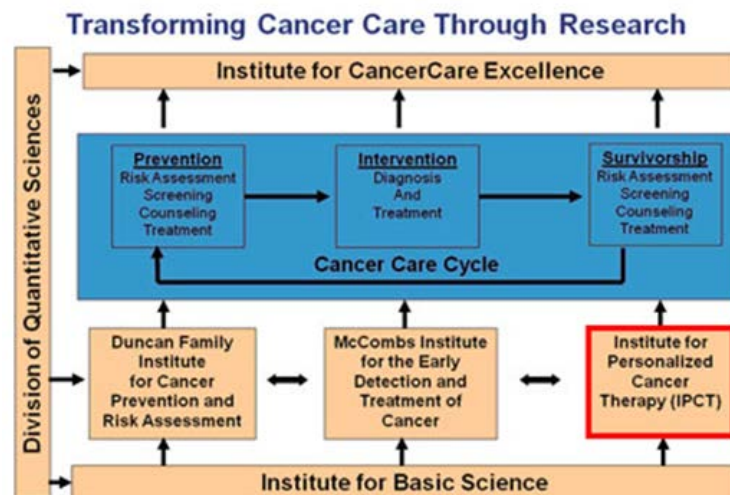


Diagram designed by Dr. John Mendelsohn, provided with his permission.

**Donald A. Podoloff, MD**

00:46:52

Yeah. It started with Dr. LeMaistre.

**Tacey A. Rosolowski, PhD**

00:46:56

Oh, did it? OK.

**Donald A. Podoloff, MD**

00:46:57

Dr. LeMaistre was hissed at and booed because he said, "We've been treating cancer or trying to since the 1970s." He got here in '76. "It's now 1996. Why don't we start thinking about preventing it instead of curing it?" And there was a lot of people who were making their living on cancer drugs who didn't like that. But no question about it. If you have to have cancer, get thyroid cancer and get it differentiated, because we can cure that. And the best thing is not to get cancer at all, prevent.

So anyhow, LeMaistre was very big on that. And I think John by the time he got here, because he had been through that phase of the cancer cycle, recognized that lumps and bumps are too late. We got to get it before. And he was very biochemical. He's the inventor of Erbitux, which is one of the few drugs that has been taken out of a laboratory and commercialized. That doesn't happen that often. It's a rare event.

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I think six to eight percent of the drugs that are started ever make it clinically. And that's part of the reason that they're so damn expensive, because it's high risk, high reward, but a lot of failure.

So anyhow, John had that vision and he was committed to CABI. And it's a funny thing. If the president of the institution is committed to it, a lot of people will shut up and go along regardless of what they think. We didn't have a battle. There are always discussions about do you really want to do that. Part of the reason that you have to do that in a place like this is we have to grow and change, because if we're doing the same things ten years ago that we're doing today, we're not meeting our mission.

***Tacey A. Rosolowski, PhD***

00:49:21

How do you feel that CABI fits in with Dr. DePinho's vision?

***Donald A. Podoloff, MD***

00:49:29

It's an extension or it's a vital part. What DePinho is talking about is what people refer to as big data. What Ron sees, apart from his Moon Shots, my understanding from my contacts with him, which are not extensive, but I've had a few, and they've all been good, is that if we understand the genomics and we understand the pathology and we understand the radiology of the disease, we'll be able to personalize it and give the person a drug that will cure the cancer and not kill the body.

But it involves putting all of these things together. He's recruited extraordinary people here. Jim Allison is probably on his way to a Nobel Prize because of his unleashing of the immune system. It's a totally new way of treating cancer. DePinho himself, he has reversed aging in mice, that was his work at the Belfer Institute. The people who are now running cancer medicine, Patrick Hwu, who's a melanoma specialist, he's just done a—Dmitrovsky and the Piwnica-Wormses, husband and wife, these are outstanding recruits that will I think ultimately change the way cancer is managed in the United States and the world.

And it's his vision that did that. He is very supportive of CABI. He's the one who let us bleed \$2 million a year away. He could have shut that down any time, but he never did. So I think we fit very nicely with both Mendelsohn's vision and his.

00:51:58

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## **Chapter 18**

### ***The Center for Advanced Biomedical Imaging: A View at the Five Year Anniversary and Role as Medical Director***

#### **B: Building the Institution;**

##### **Story Codes**

B: Building/Transforming the Institution;

C: Leadership;

B: Industry Partnerships;

B: Multi-disciplinary Approaches;

D: Fiscal Realities in Healthcare;

B: Institutional Mission and Values;

C: Patients, Treatment, Survivors;

C: Patients;

C: Donations, Gifts, Contributions;

***Tacey A. Rosolowski, PhD***

00:51:58

What are the immediate next steps that you see for CABI? What are you hoping to work on?

***Donald A. Podoloff, MD***

00:52:03

Well, they're going to have to replace me, because I'm eventually going to retire. Don't put that in the article, please, because I haven't made up my mind when I'm going to do that.

***Tacey A. Rosolowski, PhD***

00:52:11

All right. Well, you'll have to look at the transcript and see if you want to take that out. But you can of course.

***Donald A. Podoloff, MD***

00:52:23

We need to—it's a very tangible thing and I'm uncomfortable talking about it because it has to do with the contract. In order for a cyclotron to be positive cash flow, it must sell radiopharmaceutical to its nuclear medicine department. All the successful cyclotrons in the United States do that. And that's the major way they survive.

We have a contract with PETNET that—

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***Tacey A. Rosolowski, PhD***

00:53:00

I'm sorry. What's the name?

***Donald A. Podoloff, MD***

00:53:02

PETNET.

***Tacey A. Rosolowski, PhD***

00:53:03

Oh, PETNET.

***Donald A. Podoloff, MD***

00:53:06

It's a Siemens operation but it's a different company now. That's where it came from though. Ninety percent of our routine radiopharmaceuticals have to be purchased under contract from PETNET, for which we get a very nice discount. But when that contract is over in 2017 we need to renegotiate, because in order to make our cyclotron successful we need to start producing a fair quantity of our own radiopharmaceuticals from the cyclotron.

***Tacey A. Rosolowski, PhD***

00:53:36

I see. Interesting.

***Donald A. Podoloff, MD***

00:53:38

I don't know if I want any of that in the article, because I'm not sure I should be telling it to you.

***Tacey A. Rosolowski, PhD***

00:53:43

OK. Well, like I said, when you—

***Donald A. Podoloff, MD***

00:53:45

There may be legal issues.

***Tacey A. Rosolowski, PhD***

00:53:48

Absolutely. Well, when you get your transcript, you can say that you would like that redacted. Or you could say it should be sealed until a later date. You have all those good choices.

***Donald A. Podoloff, MD***

00:53:57

OK.

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***Tacey A. Rosolowski, PhD***

00:53:57

Yeah. So not to worry.

***Donald A. Podoloff, MD***

00:54:01

But that's an immediate next step. We are exploring now the possibility of doing inpatient and interventional radiology over here. The driver for that is that—

***Tacey A. Rosolowski, PhD***

00:54:27

Now when you say over here do you mean at CABI? OK.

***Donald A. Podoloff, MD***

00:54:30

Yeah. Because we can do them in certain places on the main campus, but we have unique imaging capabilities here. The driver for that is this personalized medicine. You really need live-time biopsy and it's not convenient to do an image over here and then take the patient somewhere else for a biopsy. So we're exploring that. We just started that effort yesterday actually. I met with people to lay out the strategy about what we want.

They do see inpatients, a small number of them, at the proton facility. And that's what got our investigators. Well, if they do it at the proton, it's right across the street, why can't you guys do it? Well, right now if we have a catastrophic cardiac event we call 911, because we don't have access to the Blue Team like they do on the main campus. And that's part of the reason that the original decision was made, no inpatients and no pediatrics here. So we're looking at that. And that'll have a huge impact if we change that policy. I don't know whether we will or we won't, but that's the idea.

And I guess once we have been—we just did the McCombs Report. That was a big milestone.

***Tacey A. Rosolowski, PhD***

00:56:04

What's that?

***Donald A. Podoloff, MD***

00:56:05

Well, we had a five-year report to do.

***Tacey A. Rosolowski, PhD***

00:56:08

OK, for the—



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**Donald A. Podoloff, MD**

00:56:09

Basically hi guys, we gave you a lot of money, what did you do with it? Well, it turns out we didn't really get all that much money from McCombs. He used his money for other reasons. This building was not paid for by the McCombs—

**Tacey A. Rosolowski, PhD**

00:56:23

Really.

**Donald A. Podoloff, MD**

00:56:24

Yeah. The state of Texas built this building.

**Tacey A. Rosolowski, PhD**

00:56:33

So the combination of funding sources for CABI was partially McCombs, state of Texas, other philanthropy?

**Donald A. Podoloff, MD**

00:56:42

Yes.

**Tacey A. Rosolowski, PhD**

00:56:43

OK. MD Anderson itself made a financial commitment?

**Donald A. Podoloff, MD**

00:56:49

They have underwritten us, yeah, right. So it's clinical care last, because that's the thing that we— clinical imaging last. Before that it was philanthropy, state of Texas. The medical school was supposed to put up some money but they changed their mind and instead became tenants rather than joint owners.

**Tacey A. Rosolowski, PhD**

00:57:13

Interesting.

**Donald A. Podoloff, MD**

00:57:18

And we basically get our money like the institution does, from the same sources. We don't have a printing press either.

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***Tacey A. Rosolowski, PhD***

00:57:30

Right. But I imagine that there are certain individuals like Red McCombs who are very very interested in specifically research.

***Donald A. Podoloff, MD***

00:57:38

I'm not sure about that. We don't have that much individual donor money. It's very hard in imaging to get sponsorship from donors, because they can't see any immediate benefit, like if I save your life with a drug with prostate cancer. We don't have an equivalency there in imaging. So it's a very difficult donor support thing.

A lot of PET cameras and cyclotrons in the beginning got supported by people who had brain tumors, and they got this marvelous image of the whole body that they'd never seen. That turned them on. But that's not common. It's hard to get philanthropic support for purely research studies.

For instance the phase I study that I'm doing, what we're trying to find out is how much of a dose of something can we give this patient before we give him or her so much that we might be damaging organs. That's not a very easy sell for recruitment purposes. You basically have to tell the patient flat out, "This is not going to help you. It can't. But it may help somebody in the future."

***Tacey A. Rosolowski, PhD***

00:58:57

Right, so it's altruism.

***Donald A. Podoloff, MD***

00:58:59

And that altruism really runs through so many of our patients. It's remarkable that they're willing to donate their bodies if you will to this kind of research.

***Tacey A. Rosolowski, PhD***

00:59:19

Well, I derailed you, you were talking about the McCombs Report and how that was leading to thinking about next steps.

***Donald A. Podoloff, MD***

00:59:25

Yeah. So the next steps, the ones that I've already outlined for you, are really the most important things that we have to do over the next couple years.

My runway is a little too short for a five-year plan. I will be spending a fair amount of time mentoring people to take over this job when I do retire. It used to be when and if I retire, now it's when I retire.

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***Tacey A. Rosolowski, PhD***

01:00:09

Well, that's a good thing.

***Donald A. Podoloff, MD***

01:00:11

I don't know. My dad retired and died three days later. (laughter)

***Tacey A. Rosolowski, PhD***

01:00:14

Yikes. (laughter) Well, you don't have to repeat the past.

***Donald A. Podoloff, MD***

01:00:20

Yeah, hopefully not, that's right.

***Tacey A. Rosolowski, PhD***

01:00:23

Oh my gosh. Well, would you like to talk about some of the other roles? Though I didn't ask you specifically the scope of your responsibilities and some specific examples of your role as medical director of CABI.

***Donald A. Podoloff, MD***

01:00:43

It's pretty ill-defined in that there's no job description for it. I'm basically responsible for the medical activities that occur in the Imaging Center.

***Tacey A. Rosolowski, PhD***

01:00:55

That's pretty broadly defined.

***Donald A. Podoloff, MD***

01:00:59

Yeah, exactly. And I think it was done that way purposely. It's like the medical director of the Emergency Center. I'm the go-to person if the nurses or the techs have a problem when I'm here, and I'm here more than I'm not, I don't travel that much anymore. I report to Dr. Hicks, who is the acting center director for administrative purposes. And my other role is as director of clinical/translational research for the Division of Diagnostic Imaging, and I report to Dr. Piwnica-Worms for that role.

***Tacey A. Rosolowski, PhD***

01:01:57

And what is the scope of your responsibilities in that position?

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**Donald A. Podoloff, MD**

01:01:59

Major activity that I do right now is I help Sujaya Rao, who is the clinical/translational manager, if she has problems that she can't solve. She and I, I think we meet every two weeks. I also am responsible for—and I delegate a lot of this—I'm responsible for every protocol in the institution to determine whether or not it has imaging as part of it and whether or not we need a radiology collaborator on the project.

So I basically see or my staff sees every protocol that comes out of MD Anderson with that question in mind. A lot of it is handled electronically by e-mail. But it takes some time every week, really every day.

**Tacey A. Rosolowski, PhD**

01:03:02

When did that become a part of the evaluation of protocols at the institution?

**Donald A. Podoloff, MD**

01:03:10

I want to say seven eight years ago. It's relatively new.

**Tacey A. Rosolowski, PhD**

01:03:19

I thought that might be the case. Now what was going on seven or eight years ago that made people think OK, we need to do this now?

**Donald A. Podoloff, MD**

01:03:26

We were getting a lot of protocols that were coming through that needed a radiologist but didn't have one.

**Tacey A. Rosolowski, PhD**

01:03:39

And the PI didn't know or wasn't really aware that they needed a radiologist.

**Donald A. Podoloff, MD**

01:03:43

Right. Yes.

**Tacey A. Rosolowski, PhD**

01:03:44

Interesting.

**Donald A. Podoloff, MD**

01:03:45

And we're also seeing a lot of—while there are—in the protocol it says tumor measurement is going to be done. Who's going to do it? I'll do it. That's the PI speaking. OK. What's your training? What's your

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background? I know you're the PI but do you know how to measure tumors? Oh yeah, I've been doing it all my life. Well, where's your quality control? So that's what led to QIAC, the Quantitative Imaging Analysis Core, that Dr. Piwnica-Worms is running. That's going to mean that in the future what I'm doing won't be necessary anymore, because it'll all be done through QIAC.

***Tacey A. Rosolowski, PhD***

01:04:29

Oh, interesting.

***Donald A. Podoloff, MD***

01:04:29

And it's going to take some time to transition that obviously. I sit on the institutional executive research council because of that role. It's just another administrative job that I have.

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## **Chapter 19**

### ***Overview of Administrative Roles; The Moon Shots; Translational Research and the Future of Targeted Therapy***

#### **A: Overview;**

#### **Story Codes**

A: Overview;

A: The Researcher;

C: Cancer and Disease;

B: Discovery and Success;

D: Understanding Cancer, the History of Science, Cancer Research;

D: The History of Health Care, Patient Care;

C: Research, Care, and Education;

***Donald A. Podoloff, MD***

01:04:29

I have two titles, one is medical director of CABI, and the other one is translational/clinical research director.

***Tacey A. Rosolowski, PhD***

01:04:57

Now when did you take that on? I'm looking at your—

***Donald A. Podoloff, MD***

01:05:02

In September of 2010.

***Tacey A. Rosolowski, PhD***

01:05:05

Twenty ten, OK.

***Donald A. Podoloff, MD***

01:05:06

Both the medical director role and the translational role were taken on September 1st, 2010 when I stepped down from being the division head.

***Tacey A. Rosolowski, PhD***

01:05:14

Division head. OK. Now why did you choose to take on that translational role?

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**Donald A. Podoloff, MD**

01:05:20

It seemed like somebody needed to do it, and as the division head I had been working with Sujaya. So it just seemed like a natural—I wasn't recommending to Marshall that he go out and hire somebody else because we were trying to be conservative with institutional resource funds.

**Tacey A. Rosolowski, PhD**

01:05:44

Right. OK. Now I've asked a number of people that I've interviewed to define how they see translational research. And I've gotten an amazing variety of answers. So I'm going to ask you what your view is.

**Donald A. Podoloff, MD**

01:05:56

Well, my view of it is it's a two-way street. You can translate backwards or forwards. You can take a research basic science concept and move it into the clinic. And once you're in the clinic you may discover some things and say, "We really ought to go back to the basics to study this phenomenon a little bit more." That transition, translation if you will, between basic science and clinical research is what translational research is in my mind. I don't know what comes up if you do Google. It's a good idea.

**Tacey A. Rosolowski, PhD**

01:06:40

(laughter) Oh my gosh. At least you didn't pull out your phone to do it.

**Donald A. Podoloff, MD**

01:06:44

Well, I could have. Let's see what Google has to say.

**Tacey A. Rosolowski, PhD**

01:06:51

That's funny. I'm beginning to think that it's impossible to have dinner at a restaurant without people checking things on their phones.

**Donald A. Podoloff, MD**

01:06:59

It is. It's totally impossible. Yeah, I often wonder what we used to do before we had all these devices.

**Tacey A. Rosolowski, PhD**

01:07:12

Well, I ask because I usually ask an interview subject whose work is oriented in that way. And there are a variety of different perspectives. And I guess as a follow-up to that, there have been some different perspectives too on how Ronald DePinho's new focus or focus on genomics in particular, some people believe it's changed the emphasis of translational research. And I'm wondering what your view is of that. What's translational research now?

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**Donald A. Podoloff, MD**

01:07:48

I need one second.

**Tacey A. Rosolowski, PhD**

01:07:54

Sure.

**Donald A. Podoloff, MD**

01:07:54

Interview subject reads from an Internet site.] “Clinical and translational research. Clinical research is medical research that involves people. Translational research means research that applies discoveries generated in the laboratory to studies in humans.” I defined it pretty well.

**Tacey A. Rosolowski, PhD**

01:08:06

There you go.

**Donald A. Podoloff, MD**

01:08:07

And I’ve never read that on Google before.

**Tacey A. Rosolowski, PhD**

01:08:12

That’s funny. (laughter)

**Donald A. Podoloff, MD**

01:08:12

So that’s what it is.

**Tacey A. Rosolowski, PhD**

01:08:13

That’s what it is.

**Donald A. Podoloff, MD**

01:08:14

Anybody else tells you anything different, they’re wrong. It’s not in Google.

**Tacey A. Rosolowski, PhD**

01:08:19

They’re wrong. (laughter) That’s good. So what is your view? I mean is there a different flavor now to translational research under Dr. DePinho? I mean some people at the institution who’ve lived through the administrative shift have said, “Yeah, translational research looks different now under Dr. DePinho.” What is your view of that?



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**Donald A. Podoloff, MD**

01:08:41

I haven't noticed that it looks different. What I have noticed that Dr. DePinho brought here that we didn't have before is the Moon Shots. The notion that he wanted to identify a small but important number of cancers and define an impact within five years. I hadn't heard that before in quite that way. And there's been a lot of criticism both for it and against it based on the fact that the Moon Shots was an engineering problem, it wasn't a biological problem. We knew by the laws of physics how we could get a rocket ship off the earth to the moon. We don't have that kind of certainty about cancer, although the analogy is an inspirational one. And I think that's what Ron means when he talks about that. I don't think he's dumb enough to think that cancer is engineering. So to me it's a very inspirational message. He's a very very powerful speaker. I wrote him a note not so long ago because I have listened to twenty-eight annual messages from the president. The one he gave last year was the first time I ever cried.

**Tacey A. Rosolowski, PhD**

01:10:12

Wow. That says a lot. Yeah, to touch people in that way.

**Donald A. Podoloff, MD**

01:01:16

He showed this kid who basically had half his pelvis removed who's now out playing football or something. Yeah, it was very moving. He knows how to do that. That's part of I think why he's such a good leader, that he can inspire people to do things. Yeah, we'll treat it like a Moon Shots.

**Tacey A. Rosolowski, PhD**

01:10:38

It is an inspiring image. Yeah, I hadn't heard that address. On the Moon Shots, what's different about the way Moon Shots leverage the translational perspective from the way—what's your view of how they differ from the usual way of conducting research?

**Donald A. Podoloff, MD**

01:11:03

I think it has to do with the fact that it's a very well-defined collaborative effort. So the Moon Shots that I know the most about, and I don't know that much about any of them, is the one for lung cancer, early detection of lung cancer, because we're the ones who are doing the noncontrast low dose CT. And those patients are having blood drawn. They're having saliva collected. And they're having pulmonary function studies as well as their CT. That's the big data that's going to be churned and put in a superbrain. And I don't know if it's going to be Watson, but it'll be put somewhere. And it's going to be analyzed.

That's a somewhat different approach. If each of the Moon Shots is doing it, and I suspect they are. So you're getting a multidisciplinary diagnostic group of studies that will in the future be interpreted in some way that will be useful in the management of the early detection and treatment of these diseases.

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One of the things, if you think about cancer care from the point of time when it was no longer a surgical disease but became a medical disease, we cut it out first, then we burned it out, and now we're poisoning it out. And when you poison it out you sometimes poison normal cells.

Well, the hope is that these tailored therapies will address the cancer and leave everything else alone. I say hope, because cells are not stupid either. And they develop resistance. And pathways change. You block one pathway, they use another. There's a brilliant diagram in one issue of Science from I think 2005 that shows the cell as an integrated circuit.

**Tacey A. Rosolowski, PhD**

01:13:14

Oh. Interesting. Huh.

**Donald A. Podoloff, MD**

01:13:16

Yeah. And that's an interesting way to think about it. So I don't know that the Moon Shots will be successful. I don't know that personalized cancer medicine will be successful. But I do remember medically historically that there was a time when people got diseases when we used to bleed them. We don't do that anymore. Maybe 200 years from now people will look back at us and go, "How could they give them all those poisons? What was wrong with those people?" Possibly.

Another funny aside about this is one of my mentors told me a story when I first got here. He took a donor up to—I guess the Clark Clinic had just been built. So it was 1988. And they're looking out over what was then MD Anderson. And the guy says to him, "Tom, you know what? I think there's a lot more people making a living off of cancer than dying from it." And at that time that's probably true because heart disease was killing more people.

But the point of that story is that if you are in fact making a lot of money off of cancer, you sure don't want to end it, do you? We have one of these self-defeating missions. We want to eliminate cancer. OK. Then what are you going to do? Fortunately I'm not going to have to worry about that.

**Tacey A. Rosolowski, PhD**

01:15:04

(laughter) Yeah. Yeah. Well, there'll always be a new research problem to put your mind to.

**Donald A. Podoloff, MD**

01:15:11

I suspect there will be.

**Tacey A. Rosolowski, PhD**

01:15:12

Yes. I can't imagine that anyone will ever run out of research problems. (laughter)

Making Cancer History®

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***Donald A. Podoloff, MD***

01:15:17

Real or imagined.

***Tacey A. Rosolowski, PhD***

01:15:18

Real or imagined, that's it.

***Donald A. Podoloff, MD***

01:15:21

Let's see how we're doing here. I got about another fifteen minutes if you need it.

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## **Chapter 20**

### ***Administrative Roles, Views on the Multi-disciplinary Environment of Centers and Institutes, and A Radiologist's Contribution to a Care Team***

#### **A: The Administrator;**

#### **Story Codes**

A: The Administrator;

A: Overview;

A: The Clinician;

B: Building/Transforming the Institution;

B: Multi-disciplinary Approaches;

B: Growth and/or Change;

B: MD Anderson Culture;

C: Professional Practice;

C: The Professional at Work;

***Tacey A. Rosolowski, PhD***

01:15:24

OK. Yeah. Well, there are a variety of other administrative things, which I don't know if they're relevant to talk about, because we've talked about—

***Donald A. Podoloff, MD***

01:15:34

Tell me what they are, and I'll tell you if they're relevant.

***Tacey A. Rosolowski, PhD***

01:15:36

All right. Well, we have department chair.

***Donald A. Podoloff, MD***

01:15:40

That was when I was the department chair of nuclear medicine. Basically at that time we had two departments, nuclear medicine and radiology. So I was on the executive committee of the division, because it was still a division. Bill Murphy was the division head and chairman of radiology. Sidney Wallace was the deputy division head for research. Tom Harle was the deputy division head for education. And I was the deputy division head and chair of the Department of Nuclear Medicine. And we met, we had an executive committee every week.

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***Tacey A. Rosolowski, PhD***

01:16:29

It was '93 to 2005 you held that role. And what did you feel you were able to achieve during that time? That's a long time.

***Donald A. Podoloff, MD***

01:16:38

Well, that's basically when I was also the chairman of the Executive Committee of the Medical Staff. So I had a lot of administrative roles that I was doing. And we achieved a lot of different growth things. It was a growth phase for the institution.

What are the years involved did you say?

***Tacey A. Rosolowski, PhD***

01:17:07

As department chair in nuclear medicine 1993 to 2005.

***Donald A. Podoloff, MD***

01:17:14

Well, I really stopped being the department chair per se in 2000 when I became the division head. I didn't officially give the position up. But I delegated the work to the people in clinical nuclear medicine and to PET. I was too busy.

The reason it has those dates in it is that I didn't actually resign the chair position until 2005.

***Tacey A. Rosolowski, PhD***

01:17:41

I see. Now we talked about obviously CABI as part of the recruitment package, the enticement for you taking on the role of division head. What were some of the other big initiatives that you worked on as division head?

***Donald A. Podoloff, MD***

01:17:59

Let's see. I was involved with Alkek and involved with the Mays Clinic and occupancy and developing. That was all going, that's what I meant about building.

***Tacey A. Rosolowski, PhD***

01:18:15

Right. Now I'm sorry. I interviewed Bill Daigneau. But you were on that committee that—

***Donald A. Podoloff, MD***

01:18:22

No. I mean as the division head of radiology when they were putting in radiology equipment in the Mays and all of that stuff, it was under my purview. I was the content expert if you will.

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***Tacey A. Rosolowski, PhD***

01:18:39

Got you. All right.

***Donald A. Podoloff, MD***

01:18:41

I didn't actually build the building.

***Tacey A. Rosolowski, PhD***

01:18:43

Right. Well, there were a number of individuals who were part of a core team that were advising the architects.

***Donald A. Podoloff, MD***

01:18:51

No, because it was already up. This was occupancy. This was—

***Tacey A. Rosolowski, PhD***

01:18:55

OK, occupancy.

***Donald A. Podoloff, MD***

01:18:57

Yeah, I think they opened that building in November of 2004. Well, from 2000 when I became division head to 2004 I was intimately involved in what do we occupy there, who goes where, that kind of stuff. And I delegated that to my administrator Chris Capitan and to our equipment people, because we had to site equipment over there.

And I worked pretty closely with Bill. If he had a radiology-associated problem he would call me.

***Tacey A. Rosolowski, PhD***

01:19:35

And you mean Bill Daigneau.

***Donald A. Podoloff, MD***

01:19:35

Yeah.

***Tacey A. Rosolowski, PhD***

01:19:36

Yeah, OK, yeah. Yeah, I hadn't even thought about that piece. But who better to ask about how it's going to be used at MD Anderson?

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**Donald A. Podoloff, MD**

01:19:48

Yeah, and all the division heads had the same role. Stan did it for pathology, Raph Pollock did it for surgery, I did it for diagnostic imaging. And I believe the division heads met as a group once a week on Wednesday. And some of those Wednesday meetings we were talking about how are we going to occupy Alkek, how are we going to occupy Mays.

**Tacey A. Rosolowski, PhD**

01:20:16

Mays Clinic.

**Donald A. Podoloff, MD**

01:20:17

And the Prevention Building.

**Tacey A. Rosolowski, PhD**

01:20:21

Because I remember as Bill Daigneau was telling the story about planning the Mays Clinic.

**Donald A. Podoloff, MD**

01:20:24

Now that's different. I was not involved in the planning of the clinic.

**Tacey A. Rosolowski, PhD**

01:20:30

Well, the way he told the story, it was interesting. It started out as a certain number of square feet and then bang, it got bigger. And it's like oh, we should put radiology in there and bang, it got a lot bigger. So it expanded and expanded.

**Donald A. Podoloff, MD**

01:20:44

Those discussions occurred prior to 2000. That would have been Bill Murphy who would have been involved in that.

**Tacey A. Rosolowski, PhD**

01:20:50

Bill Murphy, OK. So what other initiatives were you involved in as division head?

**Donald A. Podoloff, MD**

01:21:03

The rollout of this organizational thing related to prevention and the integration of the various centers and that stuff Mendelsohn talked to you about.

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***Tacey A. Rosolowski, PhD***

01:21:18

The cancer care cycle, and the relationship of the centers and institutes here.

***Donald A. Podoloff, MD***

01:21:23

Yeah, I was intimately involved in developing that and also in communicating it to the faculty.

***Tacey A. Rosolowski, PhD***

01:21:31

Can you tell me more about that? What do you mean when you say you were involved in developing it?

***Donald A. Podoloff, MD***

01:21:38

All the division heads helped Dr. Mendelsohn with that. And I think for a period of time when that was going on I was on the Management Committee. I was the division head representative to the Management Committee for a period of two years. And this idea just didn't come out of thin air. It had people discussing it and talking about it. I was involved in those activities.

***Tacey A. Rosolowski, PhD***

01:22:11

Now you said you were involved in helping to communicate this idea to the faculty.

***Donald A. Podoloff, MD***

01:22:15

Back to the radiology faculty. I did many presentations at faculty meetings, which I used to have monthly, up until 2007, and then I changed it to quarterly.

***Tacey A. Rosolowski, PhD***

01:22:29

What were some of the challenges of communicating that vision? I mean when I talked to Dr. Mendelsohn, he was emphatic. He worked really hard on clarifying this.

***Donald A. Podoloff, MD***

01:22:38

Yeah. It was a different approach to how you deal with cancer. To some degree it diminished the role of the standard department and it increased the role of the centers and the institutes. And that's a big deal. I mean it wasn't so big a deal for me. And since I didn't have any department heads that I was talking to about this that wasn't a problem. Faculty at large just needed to be informed about what was going on. And I did a number of presentations related to that cancer continuity cycle if you will.



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***Tacey A. Rosolowski, PhD***

01:23:33

Now how has that played out in the creation of it? What's been the fallout with the shift in emphasis away from departments? Is there financial implications, power implications? What's the deal?

***Donald A. Podoloff, MD***

01:23:46

There are certainly power implications. The basic science side of the house is still basically organized by department as far as I know. The clinical side of the house is more organized by multidisciplinary care centers and by—well, the clinical care is delivered in a multidisciplinary care environment. And so there's a center director. Thoracic Center. And I don't know how those folks relate to their department chairs. The intention was—it goes back to that slide I showed you. The intention was that the clinical care would be given in the multidisciplinary center, and the academic activities, the publication, the research would be handled at the department level.

That's how it looked on paper. I don't know. You'd probably have to talk to somebody who was a department head from 2000 to 2010 when I was not a department head any longer, I was the division head, to get an idea of how that impacted. It didn't impact me other than the fact that I was obliged to communicate to the department chairs that this was going on. We didn't take a vote. We didn't ask them. We just told them.

***Tacey A. Rosolowski, PhD***

01:25:38

That's a substantial shift.

***Donald A. Podoloff, MD***

01:25:39

If it translated into something happening that's different. That's what I said I can't talk to you about because I don't know. We still have departments. I was at a department meeting yesterday. And we talked about clinical care in that department meeting and we talked about research and we talked about workload. So to some degree radiology and pathology I assume are not operating in the multidisciplinary care leadership role as attendees. When I look at the schedule I see that we have sarcoma conferences that we cover. That's multidisciplinary. We have GI, we have thoracic. Those are all multidisciplinary. And we're at the table. Rank-and-file radiologists are at that table.

One of the things that I tried to do as the division head that I was unsuccessful in was that once we developed Clinic Station I recognized fairly early on that the clinicians would never need to come to the Radiology Department ever again. And the consequence of that is that they wouldn't need the radiologists anymore. Or they wouldn't communicate with the radiologists. So I started to push my clinicians into the multidisciplinary care environment.

But it decreased their efficiency significantly.

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***Tacey A. Rosolowski, PhD***

01:27:08

Why is that?

***Donald A. Podoloff, MD***

01:27:10

Because they get asked questions. A radiologist goes in a room, shuts the door, turns the lights down, and reads. Nobody bothers him. Nobody asks him or her anything. That's how they do their work.

If you're in a multidisciplinary care center, every ten minutes somebody's knocking on the door asking you a question. But the gain from the loss of that efficiency is that you're part of the clinical management team and are relevant. One of the real struggles that radiology is having throughout the country is they're becoming irrelevant to the clinical issues. Because everybody can get the X-rays as a digitized thing on their computer.

That's again why it's so important to remind people there's a difference between interpreting a film and looking at it. Now everybody can look at the film instantaneously. But supposedly only radiologists can interpret it.

***Tacey A. Rosolowski, PhD***

01:28:19

Wow.

***Donald A. Podoloff, MD***

01:28:19

That's what technology has done. Yeah, I mean we used to spend a lot of time answering questions when clinicians would bring films to us. That doesn't happen in 2015. There's no reason to go to the Radiology Department unless you're working in it.

***Tacey A. Rosolowski, PhD***

01:28:38

Right. Well, this conversation that we've had today and last time, we've meandered into some really interesting subtle points about the field. And I'm really glad, because I think it's been very very revealing. I know you said you really only could spend fifteen minutes. Would you like to stop now? And I think I could come back for a short session? Or would that work?

***Donald A. Podoloff, MD***

01:29:04

Yeah. Why don't you do that? Yes. That'd be best.

***Tacey A. Rosolowski, PhD***

01:29:06

OK, good, good.

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***Donald A. Podoloff, MD***

01:29:07

Because I'm not sure whether I have a one o'clock meeting or not.

***Tacey A. Rosolowski, PhD***

01:29:13

OK. Well, I am turning off the recorder at 11:35. All right.

***Donald A. Podoloff, MD***

01:29:20

Remind me what you're going to—

01:29:21

END OF AUDIO FILE

## **Donald A. Podoloff, MD**

### **Interview Session Three: 4 June 2015**

#### **Chapter 00C**

#### ***Interview Identifier***

***Tacey A. Rosolowski, PhD***

00:00

I've turned on the recorder and the counter is moving. And today is June 24th. No. June 4th, 2015. And the time is about five minutes of 10:00 in the morning. And I'm in SCRB 3 talking to Donald Podoloff for our third and final session together. So thank you very much, Dr. Podoloff, for making time for me.

***Donald A. Podoloff, MD***

00:22

You're most welcome.

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## **Chapter 21**

### ***Next Steps --for the Division of Radiology and the Field***

#### **B: Building the Institution;**

##### **Story Codes**

A: The Researcher;

A: Overview;

A: Definitions, Explanations, Translations;

B: Building/Transforming the Institution;

B: Multi-disciplinary Approaches;

B: Growth and/or Change;

C: Healing, Hope, and the Promise of Research;

C: Discovery and Success;

D: Understanding Cancer, the History of Science, Cancer Research;

D: The History of Health Care, Patient Care;

***Tacey A. Rosolowski, PhD***

00:25

I know how busy you are. So we strategized a little before the recorder went on, and as I said I just had some general cleanup questions to ask you today. And the first one on my list is to ask for your reflections on next directions in radiology for research and also for technological evolutions that you feel will really change the field and will have an impact on how MD Anderson operates.

***Donald A. Podoloff, MD***

01:02

I think it has to do with the whole field of what has become known as molecular imaging. With the development of molecular pathology and with the development of computational abilities that we didn't have because of the speed of the computers, we can now gather data, store it, and analyze it much more quickly than we ever could before. What the radiology group here has taken on is a Quantitative Image Analysis Core, similar to the other cores in the institution, but because it's so new it is not yet NCI-funded, it's institutional-funded.

***Tacey A. Rosolowski, PhD***

01:51

And that has the acronym.

***Donald A. Podoloff, MD***

01:52

That has the acronym of QIAC.

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***Tacey A. Rosolowski, PhD***

01:55

QIAC, yeah.

***Donald A. Podoloff, MD***

01:56

QIAC, that's under the direction of Dr. David Piwnica-Worms who's the chair of cancer systems imaging and is also the deputy division head for research in diagnostic imaging at MD Anderson.

***Tacey A. Rosolowski, PhD***

02:17

Now tell me a little more about QIAC. Is it a system that MD Anderson purchased from elsewhere? Or is it something developed here?

***Donald A. Podoloff, MD***

02:29

It's a core. It's a facility. So if you go out this door you'll see a big sign that says QIAC. That's where they're housed. The computational hardware is on the second floor here at CABI. And the guts and brains of it and the way that it talks to everything else is across the hall here in our data center. So it's basically people and computers and their task is to gather quantitative imaging data for analysis. But that data can also be merged with pathology data and with genomic data. So what's happening to radiology because of our previous technology is we have become or are slowly becoming the data storers for all the data. And that's a different and exciting new research endeavor for the field of radiology.

Because it's allowed us to move from a purely technical-driven kind of research into a more biological form of research because of the other data elements that we capture. So for instance we're doing a moon shot, one of the subgroups in the moon shot, with lung cancer. Well, these patients are not only getting low dose CTs, but they're also getting sputum analysis. And they're getting pathology specimens. And all of that data is digitized and then stored along with the other data in the QIAC for later analysis.

***Tacey A. Rosolowski, PhD***

04:37

So this is obviously part of the institution's interest in moving toward big data.

***Donald A. Podoloff, MD***

04:44

Yeah.

***Tacey A. Rosolowski, PhD***

04:47

And now tell me what the implications of that are, pros and cons if there are any.

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**Donald A. Podoloff, MD**

04:52

Well, the implications are that by studying the genomic expression associated with quantitative imaging and pathology you will be able to get a signature that tells you who's going to get a particular disease, how severe it's going to be, and what drugs you need to cure it or help it.

Now this is not related to QIAC specifically, but one of my research projects is looking at the epidermal growth factor receptor mutation that when it exists it predicts that you will respond to drugs like Iressa and Tarceva. That information could potentially avoid biopsies in the future, because the only way to get that information now is to put a needle into the patient. But if we can do it by imaging, that's a big step forward, certainly for the patient, and probably for medicine.

I had a patient recently who was very excited about participating in the research although the project that I'm doing is a phase I so there's no intent to benefit the patient, as usual with phase I studies. But he was very excited about the fact that he wouldn't have to go through biopsies anymore if this works.

In the past radiology has been a—their research has been technology-based. Biologic research is more often hypothesis-based. And radiology with molecular imaging is becoming more hypothesis-based. So it's mimicking more like what the other biological sciences are. Now we still do a lot of technology and develop new technologies. Probably the most important new technology that we're dealing with right now today is plans to start a spin laboratory where we're going to do hyperpolarization. C13-pyruvate is a metabolite that can give you enormous information about cancer cells and cancer biology. And there's only a few centers in the United States that have these spin labs. We have approval to move forward with ours.

**Tacey A. Rosolowski, PhD**

07:56

What exactly is a spin lab?

**Donald A. Podoloff, MD**

07:58

You probably ought to have somebody who knows a little bit more about it than I do explain it to you. Dr. Piwnica-Worms probably could do that. Hyperpolarization is a technique whereby you spin atoms and accelerate them. And when you do that they give off energy that is imageable or detectable in some other way, if not by image by light microscopy or something.

But it images things at a level that's different from anatomy. It images it at a more physiologic chemical level.

**Tacey A. Rosolowski, PhD**

08:42

OK, interesting, wow.

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**Donald A. Podoloff, MD**

08:44

And that's one of the major new directions that diagnostic radiology is going in.

**Tacey A. Rosolowski, PhD**

08:56

How long has the spin technology been around?

**Donald A. Podoloff, MD**

08:59

It's been around MD Anderson for about two or three years for animals and not for humans yet. I don't know when the technology first came out. But I've heard about C13-pyruvate for a long time.

**Tacey A. Rosolowski, PhD**

09:15

Interesting. Huh. So that's the material that would somehow activate or interact with this energy that's being produced so that it can be imaged.

**Donald A. Podoloff, MD**

09:27

Right.

**Tacey A. Rosolowski, PhD**

09:27

OK, got you.

**Donald A. Podoloff, MD**

09:27

You're tracing things. There's a cycle. There are two cycles of major use to cancer cells and all living cells. One is glycolysis, the sugar, and that's what PET imaging with FDG glucose is based on.

And the other is a more anaerobic type of metabolism, the so-called tricarboxylic acid TCA cycle. That's where pyruvate is. And it's distal to the glucose pathway so it's further down into the cell.

**Tacey A. Rosolowski, PhD**

10:08

Interesting. Huh. Wow, I can see—well, obviously I'm putting this in context of some vocabulary that you've used before, talking about how radiology has gone through this transformation from focusing on form to now focusing on function.

**Donald A. Podoloff, MD**

10:24

It's going through. It hasn't—



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***Tacey A. Rosolowski, PhD***

10:25

Yeah. Is going through.

***Donald A. Podoloff, MD***

10:27

Yeah. It's not a completed task by any means. And we're uncertain about the end result. I doubt that we'll fail, but we don't know that for sure. We think it's going to work.

10:43

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## **Chapter 22**

### ***Medical Education, Radiology Researchers, and The Future of Radiology Research (in the Healthcare Economy)***

#### **A: Overview;**

##### **Story Codes**

A: The Researcher;

A: Overview;

A: Definitions, Explanations, Translations;

D: Understanding Cancer, the History of Science, Cancer Research;

D: The History of Health Care, Patient Care;

D: On Research and Researchers;

A: Character, Values, Beliefs, Talents;

A: Personal Background;

A: Inspirations to Practice Science/Medicine;

D: Fiscal Realities in Healthcare;

D: The Healthcare Industry;

#### ***Tacey A. Rosolowski, PhD***

10:43

Are you speaking specifically about the spin lab or in general?

#### ***Donald A. Podoloff, MD***

10:46

In any endeavor where you're looking at something that's going to happen in the future, you never know. The other big thing is multimodality imaging, PET/CT, and now PET/MR. And those are areas that we're going to be exploring over the next five to ten years to see if there are additional pieces of information that we can get from PET/MR that are not available to us with PET/CT. And there's some competition within this. For instance we now have dual energy CTs. And there comes a question can dual energy CT do a lot of the things that MR can do. So within their own house there are competing and complementary elements in the types of imaging we do.

#### ***Tacey A. Rosolowski, PhD***

11:58

I'm thinking about how dramatic or how confusing, how exciting it can be for a researcher who's been educated in a field that has a perspective at a particular time, as your generation educated with radiology that is about form, to be going through this huge change in the field to suddenly it's a different entity.

#### ***Donald A. Podoloff, MD***

12:29

Yeah, it has its—the implications about what you're talking about have to do with what sort of a person goes into radiology, and what is the training of that individual like as we move from anatomy to function. It's like in the early days before chemotherapy and before radiation, cancer was a surgical disease. And it

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really didn't become a nonsurgical disease until after the Second World War when we recognized some of the nitrogen mustards that were being used had potential cell killing. And then the development of radiation oncology—although it wasn't called that at that time, it was called radiation therapy, it's now called radiation oncology—came along. So now you had the ability to not only cut stuff out but you could also burn it out and you could poison it out. And what we're learning now is there's a kinder gentler way to perhaps do that in looking at signal pathways and blockers and unblockers of chemical events.

The most obvious example of that and the first was Gleevec, a very specific chemical reaction is blocked, and leukemia gets cured, a particular type of leukemia. And then after a while because cancers aren't stupid they figure a way around it, much like bugs do around antibiotics.

***Tacey A. Rosolowski, PhD***

14:30

Right, right. I'm thinking too—

***Donald A. Podoloff, MD***

14:32

And we're in a position now where we can begin to start to think about can I image that event.

***Tacey A. Rosolowski, PhD***

14:38

That's—yeah, very exciting.

***Donald A. Podoloff, MD***

14:39

And that is very exciting.

***Tacey A. Rosolowski, PhD***

14:40

Does it take a kind of resilience though as an individual? Because sometimes it's hard to overcome that initial training. It shapes how you think, it shapes how you see things, shapes how you problem-solve.

***Donald A. Podoloff, MD***

14:54

The training that we give to our physicians is the major cause of medicine not advancing. When I was in medical school there was an article published in the New England Journal of Medicine I think it was that said that the average life span of a fact that you learn in medical school is 5.2 years.

***Tacey A. Rosolowski, PhD***

15:19

That's really scary. (laughter)

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**Donald A. Podoloff, MD**

15:24

If you think about it it's intriguing because it should teach you don't accept anything, because it may not be true in five years. In fact there's a high likelihood that it won't be. I think we've talked about this philosophically before.

**Tacey A. Rosolowski, PhD**

15:44

We have, yeah.

**Donald A. Podoloff, MD**

15:46

Two hundred years from now I believe that we will look back on chemotherapy and radiation therapy and surgery the same way our doctors today look at bloodletting. Everybody in the world that I know of told Jim Allison that he couldn't do what he did because it wouldn't work.

I believe I've heard John Mendelsohn say the same thing. He was told that his theory about antibodies was ridiculous and wasn't going to work. Well, it did work. But you need people. Freireich is like that too. People who will say, "Well, that's what you say, but I'm going to go do it anyhow."

**Tacey A. Rosolowski, PhD**

16:35

It seems like it takes a particular kind of resilience and maybe constant intellectual curiosity to—

**Donald A. Podoloff, MD**

16:43

That's one thing. It also takes some life experiences.

**Tacey A. Rosolowski, PhD**

16:48

What kind of life experiences? I've never heard anybody say that before.

**Donald A. Podoloff, MD**

16:54

Well, I don't know if you read the article about J Freireich in the paper.

**Tacey A. Rosolowski, PhD**

16:58

No, I haven't seen that.

**Donald A. Podoloff, MD**

16:59

It was in the Chronicle a couple weeks ago. I learned, I didn't know this about him. But apparently he

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was on his own very very early on as a kid. And part of how he grew up was a survival mechanism. And that's part of the reason I suspect that he is as innovative as he was.

I know somebody outside of medicine, he's a good friend of mine, who came home one night and his mother, who was his only parent, left him a note, said she was out. So at fifteen years old, he had to live for himself. He's now a multimillionaire in real estate. David has a very interesting way of looking at life, as you might imagine. So I think life experiences shape. They fashion you to do what you do. Why do you become a doctor or an engineer?

***Tacey A. Rosolowski, PhD***

17:57

What are some life experiences that gave you that resilience? Or the ability to keep up, change thought patterns?

***Donald A. Podoloff, MD***

18:04

I was very curious and always have been. I loved chemistry as a kid. And I used to have a chemical thing in my house. I remember my parents used to take me, my dad used to take me down to Winn Chemistry at Twenty-third Street and Seventh Avenue in New York City. It was an old apothecary. And I used to make stuff.

That led to the science. And I got interested in medicine at a very early age. My parents tell me that I told them I wanted to be a doctor when I was five years old. I don't remember that. But I knew—as early as I have memory, I knew that I was going to be a doctor.

I had an uncle who was a doctor but I wasn't very close to him.

***Tacey A. Rosolowski, PhD***

19:05

Yeah, you talked about in our first session actually how early you had discovered that. And I remember you mentioning your chemistry sets too. But it's an interesting question where does someone get that independence of thought. There's so much pressure to conform, to do things the way that they've been done and that's presented to you as well, you're learning your field, when actually it can be an exercise in conformity that can last way longer than is useful.

***Donald A. Podoloff, MD***

19:34

Well, there's a certain amount of conformity that you have to do to get through medical school. I mean if you walk in a medical school and decide well, I really don't need to do biochemistry or anatomy, you're not going to get very far. And a lot of medical education used to be rote memory. The people who had the best memories became the best doctors. Well, that doesn't necessarily mean that you're a creative thinker, it just means you have a good memory.

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***Tacey A. Rosolowski, PhD***

20:05

Right. Yeah, creativity is key. Is there anything else that you wanted to tell me about next technological advances? We talked about the spin lab and QIAC.

***Donald A. Podoloff, MD***

20:21

It all gets down to this form moving to function or with function. It's a complementary thing. That's why we develop these multimodality imaging devices, because one element does anatomy and the other does some kind of function. That's relatively new, I mean it's ten, fifteen years old. I suspect in the future we'll see optical imaging or acoustic imaging paired up with some other kind of imaging.

If I knew I would be very rich because I would be making the next great machine. That's not where I am.

***Tacey A. Rosolowski, PhD***

21:14

Not where you are, yeah. Well, a related question of future and general perspectives. I was wondering about your comments on changes in health care delivery. There's a lot of conversations about that, and a huge impact on the institution and of course the nation in general.

***Donald A. Podoloff, MD***

21:37

Allegedly. I mean we're still doing pretty well. We still function largely like a fee-for-service organization. The great majority of MD Anderson's money doesn't come from philanthropy or from grants, it comes from us seeing patients and generating revenue. That's been true for the whole twenty-nine years I've been here. There's more discounting than there used to be. But we seem to be doing all right and growing.

So it hasn't negatively affected us. There are changes that are inevitable based on the fact that the cost of medicine in the United States is now perceived as being out of control with respect to the benefit that it creates. So just last night there was an article on the news I think because ASCO is running about drugs that cost \$100,000 a year to keep people alive. The people who are looking into the future think something is going to happen about that.

It may. But I don't think—I subscribe very heartily to the Yogi Berra theory of history, which is predictions are very difficult, especially about the future.

***Tacey A. Rosolowski, PhD***

23:18

(laughter) Now you said—the phrasing I think you used was there's a perception that medicine has gotten—

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***Donald A. Podoloff, MD***

23:25

So you picked up on that.

***Tacey A. Rosolowski, PhD***

23:26

I did. (laughter) I listen to language for a living. So tell me more about that.

***Donald A. Podoloff, MD***

23:31

Why it's not a reality? Because I don't necessarily see a scientific experiment that shows that to be true. I see a lot of anecdotes. I don't know that it's more expensive than it should be. I do know that it's not reasonable to assume that it can be the total gross national product of the United States. It can't be that much. So it's got to be something less than that. The question is how much. Well, depends on who you're talking about. If it's my wife, probably it can get pretty close to that figure. If it's you, probably not so much.

***Tacey A. Rosolowski, PhD***

24:15

(laughter) True. Personal bias and personal connections make a lot of difference, they do.

***Donald A. Podoloff, MD***

24:18

Exactly. And it's the difference between health care delivery and health care policy. It is probably not appropriate for people over the age of seventy to get mammograms. My wife is going to get a mammogram. So that's the difference between health care delivery and health care policy.

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## **Chapter 23**

### ***MD Anderson Growth as an Impact on Institutional Culture and on Radiology***

#### **B: Institutional Change;**

##### **Story Codes**

B: Institutional Mission and Values;

B: MD Anderson Culture;

B: Institutional Processes;

B: Growth and/or Change;

A: Overview;

A: Definitions, Explanations, Translations;

***Tacey A. Rosolowski, PhD***

24:50

It sounds like we're switching subjects but I think we're going to come back to some of these issues again. I wondered about your view of MD Anderson growth, particularly affiliation with other institutions. And the reason I'm aligning it is—yeah, you got it.

***Donald A. Podoloff, MD***

25:08

OK, yeah, no, I see where you are. I was at a cocktail party the other night. It was a fundraiser actually for research. And Jim Cox was there. Have you interviewed Jim?

***Tacey A. Rosolowski, PhD***

25:24

I have.

***Donald A. Podoloff, MD***

25:25

OK. I made the point to Jim that he had a lot of vision, because he recognized very early that if his intent with radiotherapy was palliation only, he needed to go to the patients. Because to have them come in here five days a week when they were in pain wasn't going to work. It's from that seed that we developed these Regional Care Centers. It's absolutely imperative that that effort continues because we'll die if it doesn't. The traffic in the Medical Center is getting so bad, and there's so many other opportunities in the periphery, and plus Houston is growing, that we absolutely need to bring our work to our patients.

So from an economic and from an educational point of view, because we're also obliged to teach, and part of the teaching that we do is to go out into the periphery and educate, that's one of our major missions, we're obliged to do that.

How we do it, the particulars, who's in charge of it, that'll change over time. But I think we've done a very very good job so far. There are bumps in the road. There are differences. This is not the same



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institution that I came to twenty-nine years ago when I knew everybody in the institution on a first-name basis, when I had 15 people in a Radiology Department that now has close to 200. So it's different and much bigger. And there are problems with growth, but they're manageable.

***Tacey A. Rosolowski, PhD***

27:28

What are some of the problems you see?

***Donald A. Podoloff, MD***

27:29

The same thing that happens to any large group, any company, any entity that grows immediately needs more regulation. And the regulatory environment is stifling to some degree but it absolutely is a requirement. You can't have everybody doing what they want to when you've got 18,000 people allegedly working together.

But our core is good. Discovery, integrity, those are good goals and good behaviors. I think I told you this before also. The mission of MD Anderson is to eliminate cancer as a public health problem in the state of Texas, the United States, and the world through programs in education, research, and clinical care, and prevention now.

When I was in private practice my mission was to practice high quality medicine and make a profit. Very different missions. Both good missions, there's nothing wrong with them. The MD Anderson model is a little bit more ennobling. But maybe some people would say that's self-serving.

***Tacey A. Rosolowski, PhD***

29:01

What's the place of the radiologist in the teams that are established as MD Anderson moves out into regional care?

***Donald A. Podoloff, MD***

29:13

That's a great question. There's a much more fundamental question. And that is is radiology a legitimate medical specialty, or is it a technology.

And radiology is groping with that question right now.

***Tacey A. Rosolowski, PhD***

29:34

Really.

***Donald A. Podoloff, MD***

29:34

There are forces that say, "Well, anybody can do that." And my answer to anybody can do that, reading a

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film, is there's a difference between reading a film and looking at it. Because I've been trained. But when I was an internist, that's what I thought.

***Tacey A. Rosolowski, PhD***

29:55

Well, I was recalling one of our conversations where you were talking about how the ease with which you can now digitally provide copies of films, you send them to a treating physician who believes they've taken a class, they can read this, and interpret it.

***Donald A. Podoloff, MD***

30:12

The orthopedics still believe that they can read films better than radiologists. Neurosurgeons believe that they can read most brain studies better than most radiologists, even neuroradiologists.

***Tacey A. Rosolowski, PhD***

30:27

So that's again one of those pressures to say that radiology is actually a technology and not a craft, an art, a specialty.

***Donald A. Podoloff, MD***

30:35

Exactly. We just faced that right here in our own division. PET/CT is read by nuclear medicine doctors, it's read by the abdominal imagers, some of them, it's read by the chest radiologists, and it's read by the orthopedic radiologists. So there's about thirty or thirty-five people that read. Not too long ago the chest radiologist leadership said, "We want to read all the chest and esophagus. It's ours. We go to the conferences. We deal with the docs." So I went out because it was curious to me, and I asked the end user, the thoracic surgeons and the medical thoracic oncologists, who should read their films.

And the thoracic surgeons said to a person it should be the chest radiologists. And the medical oncologists didn't care. Well, the difference is that the medical oncologist has a need to know is this better, worse, the same. The surgical oncologist needs to know the anatomy of the situation, which lymph nodes are involved, all that kind of stuff. And somebody who does chest probably—although I can't prove it, because we tried and failed—somebody who read chest all the time probably knows more about that anatomy than somebody who reads it along with 50,000 other things that they're reading.

So we ended up developing an answer for this problem. We now have a separate section of PET/CT with a section leader. And we're working through how to solve that. I'm not sure I want you to put that in this article.

***Tacey A. Rosolowski, PhD***

32:50

OK. Well, actually this'll be part of a transcript. So if you want to seal it or redact it then we can talk and do that.

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**Donald A. Podoloff, MD**

32:56

Yeah, because it was a very painful discussion.

**Tacey A. Rosolowski, PhD**

32:58

Was it? Huh.

**Donald A. Podoloff, MD**

33:00

But I think it got solved as best it could, although everybody's still not happy.

**Tacey A. Rosolowski, PhD**

33:05

And it was a painful discussion because?

**Donald A. Podoloff, MD**

33:09

Of ownership.

**Tacey A. Rosolowski, PhD**

33:10

Ownership, yeah, those territory issues.

**Donald A. Podoloff, MD**

33:14

Right. It was painful for me to hear it because nobody ever told me what's best for the patient. They only told me what was best for them.

**Tacey A. Rosolowski, PhD**

33:27

Well, that's why I think it's such an interesting question. As MD Anderson's services are spread out globally now, what is the fate of radiology? Are radiologists part of the multidisciplinary teams?

**Donald A. Podoloff, MD**

33:42

Well, we've encouraged that. I started doing that when I was division head. The price that you pay for that is a tremendous decrease in efficiency, because if the radiologist is not sitting in a darkened room reading one case after the other rapidly, and they're out talking to people, they're not reading the volume that they read. And the question is what's the balance between those.

So now our radiology schedule makes room for conference attendance, like Tumor Boards. So they're part of that multidisciplinary, just like the pathologist, just like the radiation oncologist, just like the

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surgeon. And that's the way for them to survive. Because if I can digitize it, then I can send it anywhere I want to get it read. You don't necessarily have to be here.

This all started, in my opinion, when some people who weren't thinking very clearly and didn't fully appreciate the implications I think of what they were recommending decided to get nighthawks. And this became a burgeoning industry of people. They read films when the docs didn't want to. So from 5:00 p.m. until 5:00 a.m. the nighthawks took over. And then the dayhawks, the regular radiologists, read from 5:00 a.m. to 5:00 p.m. And the first time I heard about that, I said, "Well, if they don't need you from 5:00 p.m. to 5:00 a.m., why do they need you the other twelve hours?" Some people—

***Tacey A. Rosolowski, PhD***

35:35

So I'm confused. When did this happen and who started it?

***Donald A. Podoloff, MD***

35:39

It was radiologists. First nighthawks were owned by a group of radiologists from out in California.

***Tacey A. Rosolowski, PhD***

35:48

Huh. So this was an industrywide thing or a fieldwide thing.

***Donald A. Podoloff, MD***

35:52

Well, it started very locally. But it spread very quickly.

***Tacey A. Rosolowski, PhD***

35:55

Wow.

***Donald A. Podoloff, MD***

35:56

And now you can get your studies read in India if you want. We can't, because you have to be a credentialed member of the MD Anderson staff to read, and you have to be credentialed in radiology. And with very limited exceptions, if you're not a radiologist you can't interpret stuff. You can look at it but you can't write a report, send it out, and bill for it.

***Tacey A. Rosolowski, PhD***

36:25

Interesting.

***Donald A. Podoloff, MD***

36:26

So our problems are different from the rest of the world, because of the way we split up our money.

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We're like communists. Everybody makes the same more or less. There are differences per department and stuff like that. Surgeons make more money than medical oncologists usually.

But we're much more collegial and cooperative, and we're not very territorial. One of the experiences that illustrated that in an interesting way for me. They recruited somebody here maybe twenty years ago now. And he came from the medical school here in town. And he wanted a gamma camera so he could do cardiology. And they put it in his package that he would get one. But we ended up staffing it, and after a year, he decided that he really didn't want to bother with that anymore, now that he had us, because he wasn't collecting the dollars for it, the technical fees were higher than the professional fees.

And so we have a very nice cooperative effort with cardiology now where two days a week I think it is we read the cardiac stuff and then three days a week they read it, or something like that. That would not happen in a fee-for-service free enterprise system, because money would be the driver.

***Tacey A. Rosolowski, PhD***

38:03

Yeah. Interesting.

***Donald A. Podoloff, MD***

38:03

Yeah. So I like our financial model. And I actually believe that it's the right financial model for all of medicine. I think we should have a single provider and that all doctors should be on salary. But that's me. And I'm at the end of my career, not at the beginning of it. Although I think I've always felt that way. I often tell people, "If you're going into medicine to make a good living, you won't be disappointed, but if that's the major reason you're doing it, you're going to be very unhappy. Whereas if you're going to be a stockbroker, that's what you want to do. You want to make a lot of money."

***Tacey A. Rosolowski, PhD***

38:50

I had just one more question about the institution.

***Donald A. Podoloff, MD***

38:55

You don't have much more time for—

***Tacey A. Rosolowski, PhD***

38:55

I know. I don't. But—

***Donald A. Podoloff, MD***

38:59

I changed my schedule around so I can do some other things.

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***Tacey A. Rosolowski, PhD***

39:01

OK. Can we stop at 11:00 though? That's when I have.

***Donald A. Podoloff, MD***

39:04

That's a little longer than I wanted to go.

***Tacey A. Rosolowski, PhD***

39:06

OK. When would you like to stop today?

***Donald A. Podoloff, MD***

39:07

I'd like to stop by 10:45.

***Tacey A. Rosolowski, PhD***

39:10

OK, OK. Well, I'm glad we checked on that. Well, I guess I do want to ask this next question. Since Dr. DePinho arrived at the institution in 2011 there's been a lot of turbulence at the institution. And I wondered if you could comment on what you feel—temperature-take. What's been the source of dissatisfaction or upsetment with changes in the institution? And then the next phase. What do you think is going to coalesce and move out of it?

***Donald A. Podoloff, MD***

39:48

Well, I think the next phase is already happening. And that is things are settling down. People who come to an institution and are brought here to change it often get criticized by the people who are here for doing what they were brought here to do.

The Board of Regents hired Dr. DePinho. The faculty didn't. I'm sure they made it very clear to him what they wanted done and why. And he's doing it. So I would say it's fairly unfair to criticize him for doing what the people he really works for want him to do.

I think the faculty through the Faculty Senate is confused. They think that DePinho works for them. He doesn't. He works for the Board of Regents. That's who hired him. That's who hires every leader in the UT System. Case closed.

***Tacey A. Rosolowski, PhD***

40:53

Case closed. (laughter) What do you think MD Anderson is going to look like in five years, ten years, with the changes that Dr. DePinho is bringing?

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***Donald A. Podoloff, MD***

41:09

So your question assumes some things.

***Tacey A. Rosolowski, PhD***

41:11

It does.

***Donald A. Podoloff, MD***

41:12

It assumes that what his changes are will be here five or ten years from now. And that is not a given. But if they are, and he's successful, what you'll see is an institution that's bigger, an institution that's more global and local, and an institution that has significantly reduced the death rate from five or seven cancers that are in the moon shot programs. If the Moon Shots are successful, that's what'll happen. That's the goal of the Moon Shots. The obvious criticism is that it's an allegory.

And going to the moon was an engineering problem that could be solved with mathematics and science. Curing cancer is a bit more complicated than that. But I don't think he ever envisioned curing cancer. I think he envisions setting the tone for getting people to think about how we could do it if it was possible. I'm very satisfied with his leadership. He's been personally very kind to me, I never had any issues with him. I don't think that's true of all of my colleagues.

I have had no direct experience that says that he's doing something that he shouldn't have done. Probably the closest I would come to that is if it is true that he reversed unanimous decisions of the Promotion and Tenure Committee, unanimous positive decisions, and if he reversed them, if he didn't explain why he did that, that's probably a mistake. And I suspect he recognizes that, if that's all true. I mean I only know what Todd Ackerman tells me.

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## **Chapter 24**

### ***Legacy Left at MD Anderson; A Love of French Cooking; Life and Work Fed by Spirituality***

#### **A: View on Career and Accomplishments;**

##### **Story Codes**

A: Character, Values, Beliefs, Talents;

A: Faith;

A: Career and Accomplishments;

A: Post Retirement Activities;

A: Professional Values, Ethics, Purpose;

***Tacey A. Rosolowski, PhD***

43:44

I also wanted to ask you as you look back on what you've done at the institution what is it that you're most contented to have set in place.

***Donald A. Podoloff, MD***

43:56

OK, that's easy. I'm extremely proud of a legacy that I'm going to leave when I quit this job.

***Tacey A. Rosolowski, PhD***

44:04

And what is that legacy?

***Donald A. Podoloff, MD***

44:06

Marshall Hicks, the head of Diagnostic Imaging. Wei Yang, the chair of Diagnostic Radiology. Homer Macapinlac, the chair of Nuclear Medicine. And John Hazle, the chair of Diagnostic Imaging. It's a great legacy to leave.

***Tacey A. Rosolowski, PhD***

44:25

What do you intend on doing in your time remaining?

***Donald A. Podoloff, MD***

44:31

Staying alive.

***Tacey A. Rosolowski, PhD***

44:33



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(laughter) Do you have retirement plans? Do you have a date? You may not want to share it, but do you have a date?

**Donald A. Podoloff, MD**

44:38

I do, but I haven't shared it. I want to finish this research project that I'm working on. And I want to train and certify my replacement as the medical director.

**Tacey A. Rosolowski, PhD**

44:55

Has that person been chosen?

**Donald A. Podoloff, MD**

45:00

Not to my knowledge.

**Tacey A. Rosolowski, PhD**

45:00

OK.

**Donald A. Podoloff, MD**

45:08

Yeah, it's been a wonderful place to work. Almost every morning I got up I would get up and say, "This is great, I'm glad I'm coming to work now." I still feel that most mornings, but not all. That's part of the reason I'm thinking about retiring.

There was something else. I had another thought that I wanted to share with you. It'll come back.

**Tacey A. Rosolowski, PhD**

45:41

How do you think people will remember you?

**Donald A. Podoloff, MD**

45:44

Well, I can only go on the basis of my upward evaluations. Some of them are going to love me and some of them are going to hate me. I must have been a very polarizing figure, because I used to get in the same evaluation he's the greatest thing since sliced bread, and other people said, "He's a piece of shit, get rid of him." It was not said quite that way, but that was the message.

**Tacey A. Rosolowski, PhD**

46:17

(laughter) Well, at least you know you're making an impact, right?

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**Donald A. Podoloff, MD**

46:19

Yeah. Well, I once told Dr. Kripke, because she said she was disappointed in my upward evaluation. I said, "I am too." I said, "But if it was a good evaluation it would mean I wasn't doing my job."

**Tacey A. Rosolowski, PhD**

46:34

Yeah. Not rattling the cages. Yeah. Well, I also would like to ask you if there's anything about the person behind the titles and the CV. Something about your hobbies or personal persona that you could share.

**Donald A. Podoloff, MD**

46:50

Yeah. I like to cook.

**Tacey A. Rosolowski, PhD**

46:51

Oh, really.

**Donald A. Podoloff, MD**

46:53

And I'm pretty good at it.

**Tacey A. Rosolowski, PhD**

46:54

Do you have a specialty?

**Donald A. Podoloff, MD**

46:56

Just about anything. But French. I do a lot of Julia Child kind of stuff. But I modified it. I recently had a dinner party where it took me four hours to make a sauce.

**Tacey A. Rosolowski, PhD**

47:09

(laughter) Do you approach it like a laboratory problem?

**Donald A. Podoloff, MD**

47:13

Yeah, of course, it's chemistry.

**Tacey A. Rosolowski, PhD**

47:13

There we go.

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**Donald A. Podoloff, MD**

47:13

Cooking is chemistry, that's why I like it. I used to run, till I injured myself, and that was good. Not injuring myself, but running. I don't do that anymore. I hate to travel. My wife is very concerned about what we're going to do when I retire. Because I'll do anything to avoid traveling. I traveled a lot over the twenty-nine years that I've been here. It's not any fun anymore for me.

Let's see. I read a lot. I'm an avid reader.

**Tacey A. Rosolowski, PhD**

47:50

Have there been any particularly influential books for you? Oh.

**Donald A. Podoloff, MD**

47:56

That one.

**Tacey A. Rosolowski, PhD**

47:57

There we have The Emperor of All Maladies. Yes.

**Donald A. Podoloff, MD**

48:02

Another one was The History of the Jews. And the third one was The Gifts of the Jews. That's where Sabbath came from. I read Torah. I don't belong to any affiliated synagogue, but every Saturday—I have to tell you the story how it happened.

Are you Jewish?

**Tacey A. Rosolowski, PhD**

48:25

Mm-mm.

**Donald A. Podoloff, MD**

48:25

No. There's the High Holy Days that come, the New Year and the Day of Atonement. And our rabbi Sam Karff—

**Tacey A. Rosolowski, PhD**

48:36

Oh, you know Sam Karff, yeah.

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**Donald A. Podoloff, MD**

48:38

Yeah, Sam was a very good friend of mine. Yeah. How do you know him?

**Tacey A. Rosolowski, PhD**

48:42

I networked with him when I was coming to Houston. He's a wonderful person.

**Donald A. Podoloff, MD**

48:46

Yes, he is. It's part of the reason I don't belong to any synagogues now because nobody has ever lived up to him. But one of his sermons over the period of time was he asked the audience, "What do you do to demonstrate that you're Jewish?" I said, "Nothing. Well, I come here."

And so I got to thinking about that. And I discussed it with my wife, who is not Jewish. She's a lapsed Catholic, she likes to refer to herself. And we decided that I would go to synagogue every Saturday, that we would light candles Friday night for the Sabbath. And I said, "And I'm going to read the Torah."

So I did all three of those things for fifteen years. I started, and new rabbis came. And the new rabbis were younger than I was. And some of them didn't know as much as I did. So I stopped going to temple. (laughter)

**Tacey A. Rosolowski, PhD**

49:56

Oh yeah. (laughter) Do you feel that your spiritual belief has some impact on your—

**Donald A. Podoloff, MD**

50:04

Yeah. Sure. Oh yeah.

**Tacey A. Rosolowski, PhD**

50:07

How so? And that will be my last question, I promise.

**Donald A. Podoloff, MD**

50:09

It defines everything that I do.

**Tacey A. Rosolowski, PhD**

50:10

Really.

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**Donald A. Podoloff, MD**

50:14

I have a very strong belief that we're not the only thing in the universe, and that we did get created somehow. Probably not by an old man in seven days. But that there's—and I don't believe in heaven or hell or any of that garbage. But I do believe that there is something divine about all of us. So anyhow that's how I got to start to read the Torah.

And now I continue that, although I haven't been to synagogue in a long time. I actually am networking now through the Internet with the Central Synagogue of New York City.

**Tacey A. Rosolowski, PhD**

51:00

Oh, really.

**Donald A. Podoloff, MD**

51:01

They do their services online.

**Tacey A. Rosolowski, PhD**

51:02

Wow. That's neat.

**Donald A. Podoloff, MD**

51:04

And I've tried that a couple of—I've been doing it for a couple weeks. It's interesting.

**Tacey A. Rosolowski, PhD**

51:07

I'm really glad you shared that.

**Donald A. Podoloff, MD**

51:08

And it's interesting to see how young the clergy is. I mean they could all be my children. I had this conversation with an older rabbi, and he was furious with me. He basically said, "What do you think we go to school for all those years?" Blah blah blah blah blah. And it's like could they become a doctor without going to school, I said, "No, they can't. It's a bit of a different analogy though because there are certain skills that you have to have to be a physician. Certain knowledge base that you have to have. You can be a rabbi without those things. But you won't be a very good one, you have to learn something." But after a while the Torah is read over and over and over again. It's the same book. It's the same five books actually. And it starts and stops and begins again. In fact the way it's constructed is that when you read the last chapter in the last book you immediately start the first chapter in the first book. And every Jew in the world does that every Saturday. So it's a connection. It's very interesting. And that's why throughout the centuries people have tried to destroy the Torah, because of its strength.

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***Tacey A. Rosolowski, PhD***

52:37

Well, I'm really glad you talked about that. Thank you.

***Donald A. Podoloff, MD***

52:40

It defines me. It's part of the reason I'm a doctor, and it's part of the reason I'm a good human being, I think.

***Tacey A. Rosolowski, PhD***

52:51

Well, we've actually run a few minutes over. So I want to make sure that we don't abuse your time. And I thank you very much for your time this morning and for sharing all this.

***Donald A. Podoloff, MD***

52:55

Pleasure, thank you for—I forgot why I got involved with this. I think it had something to do with one of my colleagues asking me.

***Tacey A. Rosolowski, PhD***

53:03

Someone asked you, I can't remember who it was.

***Donald A. Podoloff, MD***

53:05

It was one of the orthopedic radiologists. Haygood maybe.

***Tacey A. Rosolowski, PhD***

53:12

Oh yes, Tamara Haygood, yes, yes. Well, thank you again for your time this morning.

***Donald A. Podoloff, MD***

53:16

Sure.

***Tacey A. Rosolowski, PhD***

53:17

And I'm turning off the recorder at about 10:48.

***Donald A. Podoloff, MD***

53:20

Ten forty-eight.

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***Tacey A. Rosolowski, PhD***

53:21

There we go.

53:23

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