

***A Conversation With Luther Brady, M.D.  
By Carl Mansfield, M.D.***

In 2000, ASTRO established the History Committee for the purpose of documenting and recording the history of radiation oncology in the United States. The following interview with Luther Brady, M.D., was conducted at ASTRO's 43rd Annual Meeting in San Francisco by Carl Mansfield, M.D.

***I'm Carl Mansfield and it is my privilege and, in fact, honor to interview such a distinguished and well-known individual as Dr. Luther Brady. Dr. Brady, could you tell us a little bit about your background and how you came into the field of radiation oncology?***

I was born in North Carolina and received my Bachelor's degree in zoology from George Washington University, and subsequently my M.D. degree from George Washington University School of Medicine. Before my graduation from medical school, I worked for six months with Dr. Harold Stewart and Dr. Thelma Dunn in the Division of Pathology at the National Cancer Institute. This was the time when medical schools were de-accelerated to be back on the regular, non-wartime schedule. My work with Drs. Stewart and Dunn related to identification of spontaneous tumors occurring in mice and the induction of mass cell leukemias in mice using Dibenzanthracene. During that experience, I did identify a malignant testicular tumor which was carried on as a transplantable tumor at the National Cancer Institute.

During my stay with Dr. Stewart, we discussed at length where I would intern. I had not given a significant amount of time to that decision. As a consequence, he suggested that I might intern at Jefferson Medical College Hospital in Philadelphia. He had been Professor of Pathology in that institution.

As a consequence of that suggestion, I did apply, but was rejected by the director of the hospital with the comment that Jefferson took only students from Jefferson Medical College as interns. At dinner later with Dr. and Mrs. Stewart, he asked what had happened and I told him. Dr. Stewart was greatly distressed and subsequently called the medical director, who suggested by letter that I re-apply. Therefore, I was accepted as the first intern at Jefferson Medical College Hospital who had not been a student at Jefferson Medical College. Without question, this was an important hallmark in my career in medicine.

I did my internship and internal medicine training at Jefferson Medical College and subsequently served in the United States Navy during the Korean War. Part of that duty was at the United States Naval Hospital in Bethesda, Maryland, where I was asked by the commanding officer if I would be willing to take over the management of the nuclear medicine program at the Naval Hospital in Bethesda, Maryland. As a result of that decision, I managed the nuclear medicine program for a year and subsequently served the remainder of my tour of duty in the Navy on a cruiser operating out of Yokosuka.

Upon discharge from the Navy, I returned to Jefferson Medical College Hospital as a resident in radiology, during which time I also managed the nuclear medicine program. It was during that residency in radiology that I became very interested in radiation oncology and changed my program to radiation oncology with Dr. Theodore Eberhardt. In June 1955, I left Jefferson and joined the training program in radiation oncology at the Hospital of the University of Pennsylvania under Dr. Eugene P. Pendergrass, then chairman of the department of radiology at the University of Pennsylvania. I worked actively with Dr. Pendergrass and with Dr. Richard A. Chamberlain in radiation oncology, and ultimately became a member of the faculty in radiation oncology at the University of Pennsylvania.

In July 1959, I left the Hospital of the University of Pennsylvania to become assistant professor in the department of radiology at Columbia University College of Physicians and Surgeons in New York City. This proved not to be a satisfactory position, and I ultimately accepted the position as chief of radiation oncology at Hahnemann Medical College and Hospital in Philadelphia. The chairman of the department of radiology was Dr. J. Stauffer Lehman, and under his aegis I went from a division in diagnostic radiology to, following Dr. Lehman's retirement in 1969, the second independent academic department in radiation oncology, following Jefferson Medical College, which was the first under Dr. Simon Kramer.

The program at Hahnemann Medical College and Hospital offered me the opportunity to become involved actively with medical students, many of whom rotated through the program in radiation oncology. At the moment, there are probably about 250 students from Hahnemann who have rotated through the program in radiation oncology who are now either in radiation oncology training programs, or who are actually in clinical practice in radiation oncology. Of that number, there are a significant number in academic radiation oncology programs, with four as chairmen and a large number as members of academic faculties.

That has been an important part of your work. You should get credit for the fact that you have mentored many medical students, residents, faculty and clinicians now practicing all over the world.

As I said before, there are a number who are now chairs in academic departments of radiation oncology, a large number who are now academic faculty. It's always wonderful to come to national meetings like the American Society for Therapeutic Radiology and Oncology and meet with them.

***In terms of the equipment and so forth, what was it like back in your early days at Hahnemann?***

By present standards, the equipment, when I first arrived at Hahnemann, could only be described as primitive. We had a 2 million volt Van de Graaf generator by virtue of our association with the program at the American Oncologic Hospital, along with orthovoltage equipment. The Van de Graaf generator was one of the first two manufactured in the United States by the High Voltage Engineering Corporation in Boston, and was ultimately replaced by a cobalt-60 teletherapy unit. At that point, there were cobalt units at Jefferson and a Van de Graaf generator at the University of Pennsylvania, which was a gift from the Donner Foundation. The University of Pennsylvania was one of 10 recipients of a Van de Graaf generator, as was Temple University Medical Center.

In 1966, we purchased and installed the first linear accelerator in Philadelphia, a Varian 6 million volt accelerator without electron beam capability. Ultimately, because of the wide interest in total body electron beam therapy for mycosis fungoides, we were able to convert the machine to do that

treatment. The program at Hahnemann grew and developed over time to where there were five satellite operations in the community, with Hahnemann as the central focus, with eight linear accelerators and two linear accelerators at Hahnemann. The program grew to be a major focus in intraoperative radiation therapy, stereotactic radiosurgery and stereotactic radiotherapy, hyperthermia, total body electron therapy for mycosis fungoides, as well as a major area for clinical assessment of monoclonal antibodies in cancer treatment, with the antibodies being both labeled with radionuclides and unlabeled.

***Which diseases do you think a radiation oncologist has the most impact on?***

It is clear that the whole issue of lumpectomy and radiation therapy in cancer of the breast is an area where radiation oncologists and patients have had a significant and important role in changing the treatment regimens. It is now clear that lumpectomy and radiation therapy give rise to equally good results in terms of treatment when compared to mastectomy. The major effort in that area now is how to more effectively integrate the impact on long-term survival and excellent quality of life. The role for radiation therapy in cancer of the prostate is now clearly defined and has had a significant impact on operating opportunities for curative management, equal to those that have been achieved by radical prostatectomy.

Technologies in radiation oncology have developed where the balance between the high potential for cure and the limited potential for normal tissue toxicities is well understood and identified as a part of the overall management. Other areas where curative radiation therapy techniques have been equally impressive have been in brachytherapy in the management of primary and secondary malignant tumors of the eye. This has been done with high cure rates, very low local failure rates and preservation of vision. The role of radiation therapy in the evolution of technology for treatment of retinoblastomas is clear, with an increasingly greater emphasis on attempting to preserve the eye intact without enucleation, and for more advanced diseases the integration of chemotherapy and radiation therapy.

Clearly, in lymphomas, there was a period where radiation therapy was the major influence in the treatment, but there seems now to be some shift toward management with chemotherapy for early stage disease and using radiation therapy only for failure or for consolidation in terms of management.

***Tell me a little bit about the early days of the American Society for Therapeutic Radiology and Oncology.***

Dr. Juan del Regato was a significant and major voice in bringing together radiation oncologists in the United States into the American Club of Therapeutic Radiologists in the early 1950s. The evolution of this club had a significant impact on bringing the profession together. It met at lunch or dinner at the American Radium Society meeting or the Radiological Society of North America meeting. Ultimately, discussions emerged that identified the need to have a more regularized society with the growth and development of radiation oncology.

The first meeting of the American Society for Therapeutic Radiology and Oncology was held in 1969 at the Mountain Shadows Hotel in Scottsdale, Arizona. Dr. Simon Kramer was President, and it was a memorable event. The scientific meetings were in the mornings, and the afternoons were left for small group discussions relative to our specialty. The second meeting of the American Society for Therapeutic Radiology and Oncology was at the Arizona Biltmore Hotel in 1970, when Dr. William E. Powers was president. At that meeting, the programming and events took on a more precise definition of what the goals and objectives of the society should be. The third meeting was in 1971, and was also at the Arizona Biltmore Hotel in Phoenix, Arizona, the meeting where I was president.

In the beginning there was a banquet at each meeting, and it was at the banquet in 1971 that all former presidents of the society and the club were recognized. The only ones not present were Dr. Simeon Cantril, the first president who had died, and Dr. James Nixon, who had left the meeting early. Henry Kaplan commented during the banquet that he was most pleased and delighted to be there and to receive the medal from the society. However, he had only one regret, which was that he was not the president during that meeting because of its high quality and outstanding presentations. The meeting was conceived to have major invited speakers along with proffered papers, and was again in the mornings with the afternoons left for small discussion meetings. It was subsequent to that meeting in 1971 that the refresher course program was initiated, which I chaired for 12 years, and the meeting took on the aspect of multiple simultaneous meetings with proffered paper presentations as well as invited speakers.

***In summary, where do you see radiation oncology going, and where would you like it to go? There may not be a distinction, but, if there is, could you comment on it?***

I think that radiation oncology is at a very complicated and difficult point in its development. The emerging impact of other oncology specialties deriving protocols which in many instances leave radiation therapy out and oftentimes without even consultative advice is very disturbing. The evolution of cancer management demands that we have a broader global impact in combined integrated multimodal programs of management at the time of the initial diagnosis, with more precise protocols to test the alternatives in terms of treatment not only in terms of outcome but also in terms of quality of life.

We have come to the point where technology has become an overriding interest in the community, and this may not be an appropriate and proper position. The emphasis on technology and its development clearly represents a significant improvement. However, if we do not see the patients for treatment, however good the technology is, it will not be used. Clearly, the radiation oncologist needs to be a very good physician, he needs to be a very good oncologist and radiation therapy is what we do as a part of our practice.

We have lived through an incredibly interesting period in oncology development. The evolving technologies have allowed us to do a much better job in treatment than we were able to do before. The machines are better, more flexible, more complicated but practical, and allow us to carry out more complicated, difficult programs of management than we were ever able to do before. The technologists and the physicians are better trained than ever before, and we have better technical support, better physics support and better computer support than we've ever had before.

***Very good. Luther, thank you very much. It has been a pleasure.***

Thank you very much. I appreciate it.

