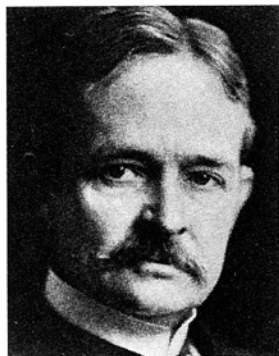


## Biographical Notes

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ABBE, ROBERT (1851–1928), was born in New York. He graduated from New York City College, then registered at the College of P and S at Columbia University from which he received his M.D. degree in 1874. After three years of general practice he became attending surgeon of the New York Hospital until

1884, when he was appointed Surgeon to the St. Luke's Hospital and also to the Babies Hospital. Interested in surgery of cancer, he was appointed surgeon to the New York Cancer Hospital, predecessor to the Memorial Hospital of New York. Dr. Abbe taught surgery in several institutions: at the Women's Medical College, the College of P and S, and the New York Post-Graduate Medical School. A very capable surgeon, he was one of the earliest to recognize the potential of radiumtherapy. Abbe obtained two tubes containing radium from the Curies in Paris and used it as an adjuvant to his surgical procedures. After resection of a tumor he positioned tubes into which he later introduced radium sources, thus pioneering the after-loading technique of radiumtherapy.

AEBERSOLD, PAUL CLARENCE (1907–1967), was born in Fresno, California. He received his B.A. degree from Stanford University in 1932 and an M.A. degree from the University of California in 1934. He went to Berkeley attempting to qualify for the Olympic track team. Instead, he met by chance Ernest Orlando Lawrence (1901–1958), who agreed to take him as a graduate student. Aebersold participated in the perfecting and testing of the cyclotron, and collaborated with Lawrence and his brother, John Hundale Lawrence (1904–1992), in early biophysical testing of the effectiveness of neutrons (see Fig. 19-3). With Robert Spencer Stone (1895–1966), he worked on clinical comparison of the effects of 200 kv versus 1000 kv roentgen rays in 1937. In

May 1939 he presented his dissertation towards a Ph.D. degree from the Graduate Division of the University of California. *The Collimation of Fast Neutrons* was his original solution to the problem of using neutrons for biological and clinical irradiations.<sup>5</sup> He worked at Los Alamos and was one of those involved in the assembly of the plutonium bomb tested at Alamo Gordo, June 1945. At Oak Ridge after World War II, he was put in charge of the production of radioactive isotopes. He lectured extensively throughout Latin America, then was transferred to the headquarters of the Atomic Energy Commission. Although he was a charming convivialist and a gregarious extrovert, he developed bouts of depression and, after several attempts, ended his life on 29 May 1967. A Paul C. Aebersold Memorial Lecture was delivered by Glenn Theodore Seaborg (1912–), Nobel Prize winner and Chairman of the U.S. Atomic Energy Commission, in San Francisco on 2 December 1969. The Society of Nuclear Medicine established in 1973 an annual Paul Aebersold Award "for outstanding achievement in basic science applied to nuclear medicine."



AHLBOM, HUGO (1900–1952), was born in Sweden and studied medicine in Stockholm. He did undergraduate work at the Serafimerlassarettet and at the Radiumhemmet, and received his diploma of Doctor of Medicine in 1935. In 1944 he was appointed director of the Department of Radiotherapy of Södersjukhuset.

In 1950 he became professor of radiotherapy and Director of the Radiumhemmet. Ahlbom wrote a thorough histopathologic study of tumors of the major salivary glands which was a model for years.<sup>6</sup> Ahlbom is also to be credited with associating the frequent evidence of cancer of the oral cavity and pharynx in Swedish women with sideropenia, the now known

Plummer-Vinson Syndrome. Ahlbom died prematurely of nephritis only two years after being appointed director of the Radiumhemmet.



ALBERS-SCHÖNBERG, HEINRICH ERNST (1865–1921), originally a gynecologist, was the first German physician to devote himself entirely to radiology. In February 1897, he and Gustav Georg Deycke (1865–1940) opened the first Privat Röntgen Institut on Klopstockstrasse in Hamburg. In May 1900, he founded the

Röntgen Gesellschaft, one of the world's earliest radiological societies. In 1903 with the collaboration of Bernard K. Walter and Frederick W.R. Seifert, he published the famous book, *Die Röntgentechnik*, which went through several editions and had a large readership.<sup>7</sup> That same year, he started publication of the *Fortschritte auf dem Gebiete der Röntgenstrahlen*, of which he was editor. Albers-Schönberg also made some early radiobiologic observations that opened new avenues of research. In 1904 his exhibits won two gold medals at the World's Fair International Exhibition in St. Louis. In 1905 he inaugurated the Röntgenabteilung of the Saint Georg Hospital of Hamburg. In 1908 he developed his first carcinoma of the skin on one of his fingers. Like many other pioneers, he suffered successive treatments and eventually died of metastases. His name is among 403 others sculpted on stelae in the Saint Georg Hospital's garden in memory of martyrs of radiology.<sup>439b</sup> Appropriately, the department of radiology of the Saint Georg Hospital was renamed the Albers-Schönberg Institut (see Holthusen, Chapter 12).



BACLESSE, FRANÇOIS (1896–1967), was born in Battenbourg, Luxembourg, and received his M.D. degree from the University of Paris, with training in radiodiagnosis under the leaders of the specialty. Seeking experience in radiotherapy he applied to the Radium Institute and became a *stagier*. Soon afterward he was appointed

Coutard's first assistant and took charge of the diagnostic obligations of his department. A tenacious worker with Teutonic qualities, he carried to

perfection Coutard's original work on radiography of the pharynx and larynx.<sup>123</sup> Late in 1937, as Coutard and del Regato left for the United States, Baclesse was promoted to chief roentgenologist of the Foundation Curie. He thus fell heir to a wealth of meticulously kept records of patients who he continued to follow and on whom he later published. Although he had previously favored intensive short treatments, this material showed the advantages of longer fractionation as practiced by Coutard, and for which Baclesse has subsequently been credited. In 1938 Baclesse became a French citizen. He authored a remarkable text on an anatomic-topographic radiological study of malignant tumors of the pharynx and larynx in 1960. Likewise he later produced a pragmatic atlas of mammography. In 1961 he left the Radium Institute for the position of radiotherapist of the American Hospital in Neuilly. He died on 11 November 1967.



BAUDE, JULIETTE (1893–1979), studied medicine in Paris. As a student she worked under Bécclère at the Saint Antoine Hospital and prepared her doctoral thesis on complications in curietherapy of cancer of the uterus. She received her M.D. degree in 1923. Recommended by Bécclère, she was appointed assistant to Dr.

Richard in his radiumtherapy service at the Hospital Pasteur, where she contributed to the perfection of techniques of interstitial irradiation for cancer of the tongue and intracavitary curietherapy for cancer of the cervix. In 1934, at the death of Monod, she became the chief of radiumtherapy services for the Foundation Curie. She was a hard-working, dedicated physician and a kind friend. She wrote a number of articles and participated in numerous symposia on the treatment of cancer. In 1967 she retired from clinical practice, but continued to do volunteer work on records, and participated at International Congresses through 1974. She died at eighty-six, in 1979.

BEEBE, SILAS PALMER (1876–1930), was a Ph.D. in biochemistry, working at the Loomis laboratory. He was given credit for some subjects, and received his M.D. degree from Cornell in 1908. He was appointed to the faculty and became Professor of Experimental Therapeutics. Professor Beebe's laboratory activities led him into a sort of double jeopardy: his



development of drugs intended for cancer treatment brought lay publicity and professional censure, while the husband of one of his colleagues named him as correspondent in a divorce suit. Ewing supported Beebe at the risk of his own position at Cornell, but Beebe saw himself obliged to resign.



BELOT, JOSEPH (1876–1953), studied medicine in Paris and served as an *externe* under Bécélère, becoming his most distinguished disciple. He presented his doctoral thesis in 1903 on the subject of radiotherapy. In 1904 he published one of the earliest books on the specialty.<sup>75,76</sup> After World War I he was appointed

Chief Electro-Radiologist of the St. Louis Hospital in Paris, where he practiced for many years. Belot developed a technique for the treatment of cancer of the skin which he advocated for years, consisting of blunt quick debarking by curettage and immediate irradiation with unfiltered low-voltage radiations. He was a French delegate to the first two International Congresses of Radiology in London and Stockholm, and a vice president of the third in Paris. He was chief of the French delegation to the fifth Congress held in Chicago in 1937. During World War II he was chief of the radiological services of the French army and became a Chevalier of the Legion of Honor. He died of aplastic anemia due to his chronic exposure to radiations, on 24 May 1953.

BERGONIÉ, JEAN ALBAN (1857–1925), was born on 7 October 1857 at Casseneuve, Lot-et-Garonne, France. He combined a pre-medical education in physical and natural sciences, and received his M.D. degree from the Medical School of the University of Bordeaux. Named *professor agrégé* of the Faculty of Medicine in 1883, he became Professor of Physical Medicine in 1891. A leading electrotherapist and innovator, Bergonié was an enthusiastic pioneer of radiology. An inspiring teacher, he organized courses of instruction in electro-radiology.<sup>237</sup> His name and that of L. Tribondeau, a pathologist, are associated with their proposed law relating cell radiosensitivity to its degree of differentiation and the duration of the cell cycle.<sup>79,80,81,82,83</sup> Bergonié founded and endowed the first cancer center in France, in the city of Bordeaux. He died as a consequence of uncontrolled cancer of the skin developed through chronic exposure to x rays.



BERVEN, ELIS GUSTAV EMANUEL (1885–1966), was born on 4 March 1885 in Stockholm, Sweden. He received his M.D. degree from the Karolinska Institute in 1913, and became the first associate of Forssell at the Radiumhemmet. He succeeded Forssell as director of the developing institution he brought to international fame. In 1931, he published his *opus magnum*, a comprehensive study of malignant tumors of the tonsil and their effective treatment.<sup>86</sup> In his professional lifetime, Berven published numerous papers, mostly on the treatment of cancer of the upper air passages but also of the breast and vulva. An adamant but affable advocate of radiotherapy, he was to be counted present at any international meeting on the treatment of cancer. He was also an exacting teacher. He became an Emeritus Professor of Radiotherapy in 1950 and was replaced by Hugo Ahlbom as director of the Radiumhemmet. In 1953, he was one of the founders of the International Club of Radiotherapists. He received a degree of Honorary Doctor of Medicine from the University of Mainz. He was also an honorary member of the American Roentgen Ray Society and the American College of Radiology. On 15 June 1966, Berven died of cancer.<sup>362</sup>



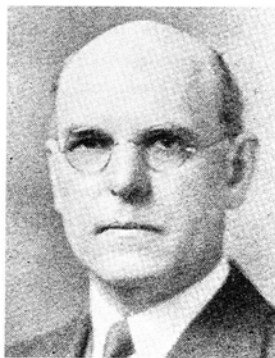
BLOEDORN, FERNANDO GERMANO (1913–1975), was born in Virginha, Brazil, on 12 October 1913, the son of a Piedmontese mother and a Prussian father. He received his M.D. degree from the University of Rosario, Argentina, in 1936. After ten years of practice, he entered the staff of the Hospital Británico of the same city, where he was exposed to fine oncologic surgery. In 1948 Bloedorn and his wife Nelly went to Italy, confident in the use of his maternal language and seeking to learn more about radiotherapy. He went to the Cancer Institute of Milan, directed by Prof. Felice Perussia<sup>B</sup> and was introduced to “plesiotherapy” or brachytherapy. After a year he went briefly to Paris and London and proceeded to Manchester. He was captivated by Paterson’s pragmatic approach to radium dosimetry. Invited to New York he was promptly offered a position as associate radiotherapist at the M.D. Anderson

Hospital in Houston. He collaborated on several projects with Gilbert Fletcher.<sup>B</sup> In 1955 he became head of the Division of Radiotherapy of the University of Maryland, where he worked for thirteen years. He advocated pre-operative radiotherapy for cancer of the lung, and had some measure of success. In 1968 he was appointed Professor and Chairman of the second academic department of radiation oncology in the U.S., at the Tufts-New England Medical Center. A tenacious worker, he had an unexpected attack of coronary thrombosis in 1975 and died during an attempted surgical bypass.



**BORAK, JONAS** (1893–1949), was a Viennese physician and the only student of Holzkecht who chose radiotherapy as a dedicated profession. He attended the International Congress of Radiology in Paris in 1931, and wrote several articles on what he called the “Coutardische methode” of fractionation roentgentherapy.

<sup>89</sup> Under the Nazi occupation of Austria in 1938, he is said to have written a paper purporting to prove that there was not such a thing as a Jewish race, and was put in jail. He was released following an inquiry from the American Medical Association, and obtained a passport from a Nazi officer whose mother he had cured of cancer. In New York in 1939, he tried his hand as a playwright. He had an office on Madison Avenue and was active in the Lodge of Free Sons of Israel. On 4 April 1949, he died while delivering a paper at the New York Academy of Medicine.



**BOWING, HARRY HERMAN** (1884–1955), was born in Richmond, Indiana, where he received his preliminary education and a Bachelors of Science degree from Earlham College (1913). He studied medicine at the University of Pennsylvania and received his M.D. degree in 1917. He served an internship at the

Saint Joseph Hospital of Philadelphia, and in 1919 was appointed Head of the Section on Radiumtherapy at the Mayo Clinic. A fine teacher, Bowling introduced Ralston Paterson to the techniques of radiumtherapy during three months of his fellowship at the

Mayo Clinic. In 1930 Bowling was president of the American Radium Society. His position as radiumtherapist was independent from roentgentherapy; as such he served for twenty-four years. A massive stroke obliged him to retire in 1948. He died seven years later.



**BUSCHKE, FRANZ JULIUS** (1902–1983), was born 22 August 1902 in Berlin, where his father was a renowned professor of dermatology. He received his M.D. degree in 1927 from the University of Berlin, and then had four years of training in internal medicine in Vienna and Berlin. In 1933, as the Nazis took power, Buschke

left the country of his birth and went to Zurich. His interest in the radiological exploration of the gastrointestinal tract led him to the Roentgeninstitut of the University of Zurich, where he became noted as one of the brilliant lieutenants of Prof. Hans Schinz during the 1934 International Congress of Radiology. There he met Max Cutler<sup>B</sup> who proposed that he move to Chicago. Thus, under a special fellowship, Buschke worked at the Michael Reese Hospital of Chicago on the writing of a book published in 1938, entitled *Cancer*; by Cutler and Buschke. No better book had been written for the clinician. He became briefly a member of the staff of the new Chicago Tumor Institute and was on the faculty of lecturers of special courses (see Fig. 10-6). After a short time Buschke left to become the associate director of the Tumor Institute of the Swedish Hospital of Seattle. He and Cantril<sup>B</sup> dedicated themselves to the study of high energy radiations. After years of conscientious clinical work, in 1950 they published with Parker *Supervoltage Roentgentherapy*, a work which initiated an appreciation of high voltages when used by clinicians.<sup>94b</sup> In 1957, Buschke became Professor of Radiology and head of the section of radiotherapy of the University of California at San Francisco. A capable clinician, he was an inspiring teacher and a kind friend. He died in 1983.



CALDWELL, EUGENE WILSON (1870–1918), was born in Savannah, Missouri, on 3 December 1870, the son of Camille Kellogg and W.W. Caldwell. He received a B.S. in engineering from the University of Kansas. As a student and assistant of Prof. Lucien T. Blake, he went to New York to work on submarine telephony. While

working for the New York Telephone Company, he registered at the Bellevue Medical School. He did work on telephony for the U.S. Lighthouse Establishment, and received his M.D. in 1895, the year of Röntgen's discovery. His interest was aroused, and he contributed variously to the development of roentgenology. He invented an electrolytic interrupter, designed the first motorized diagnostic table, made a variety of tubes including one for intracavitary roentgentherapy, and also experimented with stereoradiography. Caldwell became chief of the department of radiology at the Bellevue Hospital, and is credited with opening the first known private office of radiology. In 1903 he co-authored a book with Pusey, writing the physics chapters. In 1906 he developed a squamous carcinoma of the skin on his hand. Although already quite ill, he served as a Major in the U.S. Army during the first World War. He died from recurrence and metastases of his carcinomas of the skin on 20 June 1918.



CANTRIL, SIMEON THEODORE (1908–1959), a 1932 Harvard M.D., served an internship at the Michael Reese Hospital in Chicago under Max Cutler, director of the Tumor Clinic, and became interested in radiation oncology. He went to Paris and was appointed *stagier* in the department of roentgentherapy (Fig. 10-5).

Intensely committed, Cantril assimilated the scientific bases of physics and biology, but was passionately devoted to the art of clinical medicine. He became an enthusiast of the French school of radiotherapy. Sim and his wife, Mary Grace, thrived in the cultural atmosphere of the great city. After more than two years in Paris, he decided to return home with his matured convictions, ready to make his own contributions. In visits from New England through the midwest to the west coast in 1937 he was

appalled at the lack of understanding of the as yet unexplored possibilities of clinical radiotherapy. He agreed to settle in Chicago and worked intensely to rewrite the book Buschke had produced in two years of research. The book was published in 1938 as the work of Cutler and Buschke. After a few months of service at the newly founded Chicago Tumor Institute, he accepted the position of director of the Tumor Clinic of the Swedish Hospital of Seattle and took Buschke with him. Many academic institutions had sought him, but he chose the freedom and tranquility of the job he would keep for the rest of his life. During the war he was drafted into the Manhattan Project and entrusted with the protection and supervision of workers in the field of radiations, an area which would eventually be called health physics. Cantril wrote a comprehensive monograph on cancer of the cervix in 1950, and delivered the 1957 Janeway Lecture on the contributions of biology to radiotherapy. He co-authored with Buschke and Parker a book on supervoltage roentgentherapy with their early contributions in this area.<sup>93b</sup> In 1953, in Copenhagen, he was one of the founders of the International Club of Radiotherapists and was chosen chairman of the American delegation. In 1958 he made a thorough review of the treatment of cancer of the larynx. A man of intellectual integrity and uncompromising honesty, Cantril was also an affectionate friend and possessed the natural qualities of charismatic leadership. His premature death on 10 September 1959 from massive coronary thrombosis at fifty-one was a great loss to the cause of radiation oncology.



CASE, JAMES THOMAS (1882–1960), was born in San Antonio to a Seventh-day Adventist mother who wanted him to be a missionary. He grew up in Los Angeles, and at eighteen entered the American Missionary College in Chicago, from which he received an M.D. degree in 1905. As a medical student he became

part-time secretary to Dr. John Kellogg, director of the Battle Creek Sanitarium in Michigan. He later assisted Dr. Kellogg as a surgeon and in time replaced him. Dr. Case had an early interest in radiology and became Professor of Radiology at Northwestern University from 1913 to 1947. A man with a prodigious capacity for work, he performed innumerable procedures in radiodiagnosis and wrote over 150 papers on the subject. A polyglot, he undertook to translate German textbooks into English. An avid

traveler, he journeyed widely, in particular to Latin America, where he became an ambassador of good will. After an unrivaled career of a half century in diagnostic radiology, he became director of the Cancer Memorial Foundation of the Cottage Hospital of Santa Barbara, California. For the last ten years of his life he became a dedicated radiotherapist. He was among the earliest members of the American Club of Radiotherapists and supported its growth. In 1955 he was president of the Inter-American Congress held in Washington. An amiable and altruistic man, he was also a compassionate physician and an affectionate friend. "Uncle Jim" took loving care of his wife during the last two difficult years of her life. He died of metastases from a carcinoma of the colon on 2 May 1960.



CHAOL, HENRI (1887–1964), was an Egyptian-German professor of radiology at the Charité Hospital of Berlin. He is credited with the introduction of special x-ray tubes for what was called "contact therapy," a method for the administration of large amounts of virtually unfiltered radiations in a very short time for the

treatment of cancer of the skin and oral cavity. The method enjoyed a wide vogue among general radiologists.

CHRISTÉN, FRANK THEOPHIL (1873–1920), was a Swiss mathematician and physicist who is credited with the idea of the half-value layer (HVL) as a means of estimating the quality of a beam of radiations.

CLEAVES, MARGARET ABIGAIL (1848–1917), was a dedicated New York electrologist when she became interested in radiumtherapy. She made a very thorough review of all published information on the physical properties and physiologic effects of radium, as well as of the details of the few cases treated with radium in Paris, Vienna, and London. Then, through the courtesy of Prof. Charles Baskerfield of the chemistry department at the University of North Carolina, she borrowed one gram of radium chloride sealed in a glass tube. She used this source in two clinical trials of treatment of malignant tumors. One patient was a man with an advanced tumor of the oral cavity, and

the other a woman with an extensive carcinoma of the cervix and vagina. Her trials consisted in very limited exposures of a few minutes, but she observed marked regressions in both cases before she was obliged to return the source.<sup>101</sup>



COOLIDGE, WILLIAM DAVID (1873–1975), was born in Hudson, Massachusetts, on 3 October 1873, the only child of Martha Alice Shattuck and of Albert Edward Coolidge, a shoemaker. After grade and high school in Hudson he received a B.S. degree from M.I.T. in 1896. After a study fellowship in Leipzig, Germany, he received his Ph.D. in 1899 and was appointed to the staff of M.I.T. In 1905 he took a position in the General Electric Research Laboratory at Schenectady, where he remained for the rest of his long life. He worked at first on ductile tungsten as a replacement for the carbon filament in incandescent lamps. In 1913, using tungsten filament, he developed his famous hot cathode tube. A kind and thoughtful man, he obtained eighty-three patents during his work and lived to the age of 102. He was survived by a daughter, Elizabeth, and a son, Lawrence, from his marriage in 1908 to Esther Woodward, who died in 1915. He had no children from his second marriage to nurse Dorothy E. McHaffie.

CROCKER, GEORGE (–1910), a wealthy citizen of New York, sought Ewing's advice in the preparation of his will, leaving his properties to support an Institute for Cancer Research. Subsequently, another pathologist, Dr. Francis Carter Wood of Columbia, also was consulted. When the will was executed in February 1910, it was found that Carter Wood's intervention affected only one word in the will: Columbia, instead of Cornell!<sup>608,698</sup> Under the able leadership of Carter Wood, the Crocker Fund prospered. In later years, Ewing complained that many people in New York thought that it was not possible to do anything about cancer except through the Crocker Fund.

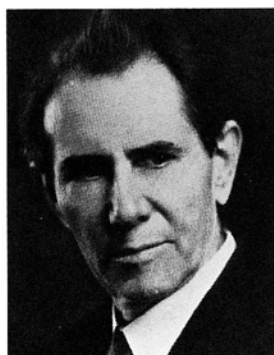




CUTLER, MAX (1899–1984), was born in Jifomir, Russia, and grew up in the United States. He received a B.S. degree from the University of Georgia in 1922, and an M.D. degree from Johns Hopkins in 1926. He was one of the privileged young physicians trained in surgical oncology at the Memorial Hospital of New York from

1926 to 1930. He did original work in histopathology of carcinoma of the endometrium. Ewing sent him to London to observe the original work of Sir Lenthal Cheattle, who studied cancer of the breast using sections of the entire breast on microscopic slides of large size. Cutler talked Sir Lenthal into writing a book on cancer of the breast, subsequently published in London in 1931 with Cutler as co-author. He then took a position as director of the Tumor Clinic of the Michael Reese Hospital of Chicago. He was also an associate in Surgery at Northwestern University where he became a consultant in radiumtherapy. An ambitious man with unusual gifts, Cutler conceived the idea of a great cancer center of the Midwest, located in Chicago. He obtained substantial financial support from wealthy industrialists for the Chicago Tumor Institute which he planned to build along Michigan Avenue. He proceeded to recruit a blue-ribbon staff with Sir Lenthal Cheattle and Coutard, as well as Cantril, Buschke, del Regato, Louis Rosenthal, and Ernest Wolan, a physicist. He had the support of Nobel laureate Arthur Compton and of the prestigious professor of pathology Ludwig Hektoen (1863–1951), each of whom had an interest in research in the field of radiations. In 1938, the book on which Buschke had been working for over two years was published as *Cancer*, with Cutler and Buschke as co-authors. Cutler was also one of the earliest members of the nascent National Advisory Cancer Council. In the spring and summer of 1938 the top-heavy faculty of the institute busied itself teaching the well attended six-week courses on the treatment of cancer (Fig. 10-5). But Cutler had not been as diligent in procuring support from organized medicine. The staff disbanded and the Chicago Tumor Institute, a good idea before its time, gradually collapsed. In 1952, Cutler moved to Beverly Hills and settled to become a good husband and father. He obtained limited privileges for surgery of the breast at the Cedars of Lebanon Hospital of Los Angeles. Those who knew him closely would have expected to see him rise in American oncology, but wherever he went his ability to make friends was not commensurate with his ambition. He died at eighty-five, a

wasted talent, virtually forgotten, in Beverly Hills on 16 July 1984.



DANIEL, JOHN (1861–1950), was born in Perry County in Alabama and received B.A. and M.A. degrees from the University. In 1889 he became an instructor in Physics at Vanderbilt and, in 1895, was promoted to full professor. From the 14 February 1895 issue of *Nature* he learned of Röntgen's discovery. All the

necessary elements were available on the shelves of his laboratory: a pear-shaped Crooke's tube, a Ruhmkorff coil, and accumulators (batteries). He made radiographs of his minister's hand and of a bullet wounded wrist showing destruction of the ulna. He was asked to try to locate a bullet in the head of a child, and decided that a preliminary trial of a radiograph of a brain was needed—an extraordinary precaution at a time when no adverse effects of the X rays had been noted. William L. Dudley, professor of Chemistry and Dean of the Faculty of Medicine, agreed to submit himself to a one-hour exposure for this preliminary study on 29 February 1896. The trial failed, but three weeks later the Dean's hair had fallen out over an exposed area two inches in diameter. Thus this depilatory effect was possibly the first radiobiologic effect ever observed. Daniel reported the event in a letter to the editor of *Science* (vol. III pp. 562-563, 1896) and also to the *Philadelphia Medical Journal*.<sup>129</sup> Daniel remained professor of physics at Vanderbilt until 1939 when he became Professor Emeritus. He died in the University Hospital in Nashville at eighty-eight, on 2 March 1950.

DEGRAIS, PAUL (1874–), was a Parisian dermatologist who contributed to the earliest trials of radiumtherapy at the Saint Louis Hospital of Paris. He co-authored with Wickham an instructive report of their experiences in radiumtherapy.<sup>657</sup>



DESJARDINS, ARTHUR ULDERIC (1884–1964), was born in Waterville, Maine, on 6 March 1884, the son of Sarah Marie Mercier and Samuel Desjardins. He studied at the St. Joseph College of Three Rivers, Canada, and received his M.D. degree from the University of Pennsylvania in 1912. During the first

World War, he went to France as an assistant surgeon to the American Ambulance Corps and volunteer in the military hospital at Oranges. In 1917 he was appointed Fellow in Surgery at the Mayo Clinic, but shortly afterwards was commissioned Captain and returned to France. After the war, he was commanding officer of the U.S. Army laboratories at Coblenz, Germany. In 1920 Desjardins took the course for the Diploma of Medical Radiology and Electrology in Cambridge, England. He then was appointed chief of the section of therapeutic roentgenology at Mayo, a position he held until 1948. He was also a professor of radiology in the Graduate School of Medicine of the University of Minnesota. Desjardins was one of the earliest therapeutic radiologists in the U.S., privileged in an institution that recognized the medical specialty. He wrote lengthy scholarly reviews of world literature on radiophysiology of normal tissues and over a hundred other articles. A dignified, cultured, and generous gentleman, he had genuine interest in other endeavors. A modest man, he failed to seize the national leadership that could have been his to make radiotherapy accepted within organized medicine. It must be said on his behalf that he lived in the times when opposition to the exclusive practice of therapeutic radiology was strong in radiological societies. He had the qualities of a scholar rather than those of a leader.

DOMINICI, HENRI (1867–1919), was born in England of French parents originating in Corsica. He received his education in France at the College of Vaugirard, receiving a Licentiate in Science in 1888. He began the study of medicine, becoming an intern of the Hospitals of Paris from 1893 to 1897. He applied himself to the study of pathology and experimental medicine along with his clinical practice. After three years at the College of France, under Suchard and Malassez, he started a series of works on the histology of hemopoietic organs and of the blood, as well as on their histopathology. In 1902 he was working in Prof. Saboureaud's laboratory at the Hôpital Saint Louis of Paris. In 1906 he was invited

to study the biologic effects of radiations in association with M. Rubens-Duval. He worked with Coutard and others at the Laboratoire d'Essais des Substances Radioactives, established at Gif by Jacques Danne and his brother. Dominici was the first to point out the advantages of highly filtered radiations and their increase of the margin of safety between the effects on normal and pathological tissues as shown by histopathologic studies. His insistence on heavy filtration was called the "method of ultrapenetration," for which he was credited. He also did histopathologic studies of various organs and tissues of experimental animals injected with radioactive substances. His health declined during the first World War and, at its end, he died of tuberculosis at fifty-two.

DOUGLAS, JAMES (1837–1918), a British citizen and the son of an English physician who had settled in Canada, was a mining engineer who became president of the Phelps-Dodge Corporation.<sup>409</sup> His daughter, Naomi, had suffered from a post-operative recurrence of cancer of the breast and was taken to England in search of radium treatments. The available amounts of radium being insufficient, Douglas went to Paris and bought, at an exorbitant price, a substantial amount of radium which he loaned to Guy's Hospital. The results were disappointing, but the experience captured his interest. He decided to further the investigation of radiumtherapy of cancer. He endowed a bed in memory of Naomi in 1909 and funded a "studentship" in actinotherapeutics at Guy's Hospital. Douglas died in Spuyten Duyvil on the Hudson, north of Manhattan, on 25 June 1918, having suffered from severe anemia which Ewing helped treat and for which he recommended transfusions.<sup>606</sup> In 1917, Douglas wrote a pencil note to W. Van Arsdale: "There is a lead tube in my private safe with a large bit of radium. I wish you would take this up to the hospital...taking a receipt for it. We [the Douglas family] only occasionally need a little radium for ointment and so on. Think I would suggest that you get the chemist at the radium department to return, say, 100 milligrams. That ought to be enough to satisfy our wants for a long time."(!)



ERSKINE, ARTHUR WRIGHT (1885–1952), was born in Lawrence County, Pennsylvania, on 6 March 1885. He attended Hiram College in Ohio, and received his M.D. degree from the Baltimore Medical College in 1908. He entered the general practice of medicine in Bessemer, Pennsylvania, but in 1912 moved to Cedar

Rapids, Iowa, where he spent the rest of his life in the practice of general radiology. He developed the departments of radiology of the Mercy and Methodist Hospitals, and remained head of these departments all his life. Erskine was the tenth president of the RSNA in 1925. His interest in cancer led him to write a manual which was widely distributed to physicians in Iowa and other states. He also developed an expanded vaginal speculum to facilitate transvaginal roentgentherapy for cancer of the cervix. He made other contributions to the technology and dosimetry of radiation therapy, and published a handbook on *Practical X-ray Therapy* (1931). A generous man, Erskine established prizes at Hiram and at Coe College. He died suddenly at his home in Cedar Rapids on 10 December 1952.

EWING, JAMES HALSTED (1902–1969), nourished his youthful emotions in the company of various members of the Halsted family. He was particularly loved and cared for by his maternal uncle, James Halsted, and his wife, Sarah. James Jr. went to the New York Military Academy at Cornwall and later to Amherst (B.A. 1925). He does not seem to have deliberately emulated his father, but he graduated from Northwestern University Medical School in 1936. He served in the U.S. Navy Medical Corps during World War II, later taught at Cornell, and worked with Dr. L'Esperance at the Strang Clinic of the Memorial Hospital. He suffered from hypertensive cardiovascular disease and nephrosclerosis. He died at the Memorial Hospital on 26 December 1969 of constrictive pericarditis. He was survived by his widow, the former June Clemens, and their three children: John, James, and Holly.



FERROUX, RENÉ (1892–1952), physicist of the Fondation Curie. An engineer and graduate of the University of Grenoble, Ferroux was an early associate of Regaud as a physicist, participating with him in experimental work on fractionation. He designed some of the first telecurietherapy units used at the Radium

Institute of Paris and was responsible for the measures to protect patients and personnel.



FINZI, NEVILLE SAMUEL (1881–1968), was without question the outstanding English pioneer of radiation therapy. In 1913 he wrote *Radium Therapy*, summarizing his experiences over four years in using radium, including an attempt at telecurietherapy with a 600 mgm source.<sup>227</sup> He also developed a remarkably well-

equipped department of therapeutic radiology at Saint Bartholomew's Hospital in London, supported by a research committee.<sup>420</sup> His initiative revealed unsuspected possibilities in clinical radiotherapy. Finzi had already implemented tangential fields of irradiation for cancer of the breast.



FLETCHER, GILBERT HUNGERFORD (1911–1992), was born in Paris on 11 March 1911, the son of Marie Budel from Auvergne and of Walter Scott Fletcher, an American residing in France, who died when Gilbert was only three years old. He attended the parochial school in the region of Jussieu where he lived. In

1929 he graduated from the private High School Stanislas and registered at the Sorbonne to study Latin, Greek, and philosophy for a bachelor's degree. His older brother moved the family business to Belgium, and Gilbert finished a baccalaureate in engineering at Louvain in 1932. He also received a masters degree in mathematics from the University of Brussels in 1935. He then entered medical school and

served an undergraduate internship in the hospitals of Brussels. He received his M.D. degree in 1941 during the German occupation. As the son of an American citizen, he was entitled to an American passport, permitting him to leave Belgium and make his way to America. After a residence of a few months in gynecology at the French Hospital, he entered training in general radiology at the New York Hospital, where he met Mary Walker Critz, a resident in pediatrics whom he married. He was certified by the ABR in 1945. As a captain in the U.S. Army he was assigned as a radiologist to the Veterans Office in Pittsburgh. After his discharge from the Army, Mrs. Fletcher wished to settle in the South. She presented him to Randolph Lee Clark, who was recruiting staff for a new cancer institution in Houston. But Fletcher's weakest point in his training and experience had been radiotherapy. He was offered a fellowship and spent several months in Paris, Stockholm, London, and Manchester as an observer. He was particularly impressed by Baclesse and Paterson. On his return, in 1948, he was appointed head of the Department of Radiology at the M.D. Anderson Hospital, with responsibilities in radiodiagnosis and radiotherapy. In the feverish post-war development of radiotherapy he was an unknown but, blessed with native ingenuity and an abundance of patients, no one rose as rapidly to acquire experience and be recognized as an authority. He developed techniques and pragmatic gadgets that were widely adopted. An indefatigable worker, he made systematic analyses of his own experiences, pointing out causes of failure and complications. His lectures, embellished by his Gaelic accent, were remarkably educational presentations of his abundant material. He was also an incisive debater. With his associates he contributed various gadgets for brachytherapy of cancer of the cervix. He contributed to the development of one of the first Cobalt-60 units. It was not until 1965 that he relinquished his diagnostic obligations to devote himself to the utilization of super-voltage and the investigation of hibaroxyc- and electron-therapy. A prolific writer of innumerable papers, he also edited the contributed chapters of a *Textbook of Radiotherapy*, which was widely used.<sup>227b</sup> His reputation brought to Houston numerous physicians from this country and abroad searching for training. They became characterized by their unswerving emulation of his methods and ideas. He was a founding member of the International Club of Radiotherapists (1953), president of the American Radium Society (1963), and of the American Society of Therapeutic Radiologists (1967). As chairman of the Committee on Radiation Studies he endeavored to initiate meaningful clinical cooperative studies and trials of combined radiotherapy and chemotherapy. In his brilliant career he earned the Bécélère and Janeway medals, as well

as the gold medals of the RSNA, ASTRO, and ARS. His associates and former residents founded a Fletcher Society which met annually. They enjoyed his acid tongue and incisive debates, delivered in his cultivated curmudgeonly style. A man of innate genius and pragmatic resourcefulness, he enjoyed their adulation. In his retirement he continued to work and to invite friends to his "farm" for convivial enjoyment. On 11 January 1992, Gilbert died of heart failure. He was survived by his wife, two sons (Walter and Thomas), and six grandchildren.

FRANTZ, VIRGINIA KNEELAND (1896–1967), was born in New York on 13 November 1896. A graduate of the Brearly School and Bryn Mawr College (1918), she was admitted to the College of P and S and, as an undergraduate in 1920, married classmate Angus McDonald Frantz. She received her M.D. degree (1922), became the first woman surgical intern (1922–1924) at the Presbyterian Hospital, and delivered her first child on completion of her internship. She served as an assistant surgeon at the medical center and had her second child in 1927. She collaborated with Clarke and Stout in the writing of a chapter on surgical pathology for the Nelson Loose Leaf Surgery, taught second year surgery, and had her third child in 1930. On Clark's retirement, she became assistant to Stout. In 1931 she started a third-year course of surgery which she and Harold D. Harvey continued for thirty years. Their lectures, later published as an *Introduction to Surgery*, went through four editions. They contained, she said, more experimental surgery than surgical pathology, more art than science, and were more fun than work. In 1935, as a collaborator of Whipple, she received recognition for the first description of an insulin-producing tumor. She was divorced that year. During the war, she was a medical investigator for the Office of Scientific Research and, with Lattes, did research on hemostasis with absorbable gauze. With Edith Hinckly Quimby (1891–1982), she made early studies of radioactive iodine on cancer of the thyroid. A writer of note, she contributed two fascicles to the *Atlas of Tumor Pathology* series. In 1951 she wrote an affectionate short biography of Stout for the Festschrift published in *Cancer*.<sup>247</sup> Endowed with distinctive charm and wit, she addressed the 1954 young women graduates of Brearly: "were you to go into medicine with stardust in your eyes, you will be disillusioned," she said, "but if you are willing to forget yourselves and civilized living, the rewards are enormous." She wrote a chapter on pathology of the thyroid gland for the second edition of S.C. Warner's *The Thyroid* (1962), a veritable milestone in the understanding of thyroid tumors. Virginia Frantz received



the Janeway Medal of the American Radium Society (1962) and her Bryn Mawr classmates donated to their college a laboratory which bears her name. An emeritus professor of surgery, she died on 23 August 1967. She was seventy-one years old.



**FREUND, LEOPOLD** (1868–1943), was born in Meskowitz, Bohemia, on 5 April 1868. He received his M.D. degree from the University of Vienna in 1895, the year of Röntgen's discovery. He worked in various departments of the Allgemeines Krankenhaus of Vienna, where many of the earliest contributions to

roentgenology were made. In November 1896 Freund irradiated a four-year-old girl with an extensive hairy nevus of the dorsal region. The treatment, resulting in moist radioepidermatitis, achieved complete epilation. For this Freund has been repeatedly credited with being the first to use radiotherapy purposefully. But Grubbe<sup>B</sup> had attempted radiotherapy as much as ten months earlier. In 1903, Freund wrote an extensive book on radiotherapy mostly for skin diseases. The book was translated and published and, in New York, enjoyed a large readership.<sup>247b</sup> He enjoyed a long professional life as a professor at the University of Vienna. In 1938, at the Nazi occupation of Austria, Freund and his family went to live in Brussels. Three years later the German occupation of Belgium caused them severe suffering. He died in Brussels on 7 January 1943.



**FRIEDMAN, MILTON** (1903–1983), was born in Newark, 13 September 1903, the son of Sarah Goldberg and Samuel Friedman. He received his M.D. degree from George Washington University in 1926, then served a two-year internship at the Newark General Hospital, with residence training in general radiology

(1930–1932) at the Bellevue Hospital of New York. During his training he became interested in radiotherapy of skin diseases. In 1934 he was one of the first Americans to be certified in therapeutic radiology by the ABR. Gradually his interest in the treatment of cancer and the development of self-taught

skills in radiation therapy saw him become a radiotherapist at the New York Hospital for Joint and Bone Diseases. He also became professor of radiology, in charge of radiotherapy at the New York University Hospital. In time he also had a private office on New York's Fifth Avenue. During the second World War Milton was assigned to direct the department of radiotherapy in the Walter Reed Hospital of Washington, with the rank of lieutenant colonel of the U.S. Army. The armed forces provided supervoltage units and a contingent of young soldiers with testicular tumors. He forcefully advocated the practice of prophylactic post-operative irradiation of the abdominal node-bearing areas, using unusually large fields and incremental doses. In time he published the results on nearly one thousand patients and honestly analyzed the untoward effects. After the war he wrote papers and delivered lectures on this subject and also on the treatment of cancer of the bladder. In 1946 he was awarded the Legion of Merit. His keen interest in cancer and his dedication to radiotherapy brought him to be an acknowledged leader in American radiation oncology. A founding member of the International Club of Radiotherapists, he was the third president of the American Club which became ASTRO, and president of the ARS in 1967. A charismatic teacher, Milton was a resourceful researcher. He was also an eccentric. In 1928 he married Miriam Mendelson, who gave him a daughter, Susan. In 1947 he married Elda Linborg with whom he had no children. In 1970 he was expected to be at the board of directors meeting of the ARS in San Diego, but did not arrive. We learned that he had left the country with Marianne Scheuer, the young lady who became his third wife, and their baby son. He participated in clinical research at the Regina Elena Institute in Rome, where their second son was born. They established a home in Ireland and did some work at the St. Luke's Hospital of Dublin. In 1974 he delivered the prestigious Sir James MacKenzie Lecture of the Faculty of Radiology in London and, in 1975, was made an Honorary Fellow of the British College of Surgeons in Dublin. Through all these years any correspondence with him was channeled through an address in Switzerland. In October 1982 he made a surprise appearance at the ASTRO president's dinner in Florida. He experienced an episode of syncope during the cocktail party, but was able to have dinner at the president's table. We learned then that he had returned incognito, and that he and his family, under the assumed name of Sweetman, had been living for six years in Greenville, South Carolina, at 26 Tranquil Street. While his sons Matthew (1969–) and Lawrence (1971–) attended school, Dr. Sweetman attended tumor conferences and taught radiobiology to residents and technologists at the Greenville Memo-

rial Hospital. He was looking forward to returning to his beloved New York, but his health rapidly declined and, on 12 February 1983, he died of a stroke. Thus ended the life of an early paladin of American radiation oncology.

GARCIA, GERMÁN (1907–), was born in Spain and received his M.D. from the Universidad Central of Madrid in 1931. He trained at the Röntgen Institute of the State Hospital of Frankfurt, at the St. Georg Hospital of Hamburg, and at the Radium Institute in Paris. On the staff of the Instituto del Cancer of Madrid, he served abroad as a diplomatic health agent during the Spanish civil war. Later he saw himself obliged to leave Spain for Mexico, where he has served well his adopted country. He became head of the department of neoplastic diseases at the Hospital Español of Mexico City and professor of oncology at the Escuela Superior of Rural Medicine. A thoughtful man, he has written philosophically on the enigma of cancer.



GARCIA, MANUEL (1907–1973), was born in Villahermosa, Mexico, and was educated in the U.S. A 1932 graduate of Tulane Medical School, he interned at the Highsmith Hospital in Fayetteville, North Carolina. He then became a resident in radiology at the Memorial Hospital of New York. Here Garcia foresaw the great possibilities of professional

radiotherapy. He was certified by the ABR in general radiology in 1940. He was among the few early protagonists of therapeutic radiology at a time when it was elegant to propound its dependence on the practice of surgery. He achieved recognition for the seriousness of his work and the quality of his results. As chief radiotherapist at the Charity Hospital of New Orleans, he made notable contributions to the treatment of cancer of the cervix. As an assistant professor of radiology at Tulane he taught radiotherapy at a time when others had not yet discovered it. He was a charter member of the International Club of Radiotherapists and the fourth president of the American Club. Manuel was a modest but tenacious worker, an affectionate friend, and fine gentleman. He died on 13 April 1973 from the consequences of an automobile accident three days earlier.



GENDREAU, JOSEPH ERNEST (1870–1949), was a pioneer of radiumtherapy in French Canada. He was professor of Medical Physics at the University of Montréal and Director of the Radium Institute of that city. He was frequently the chairman of Canadian delegations to International Congresses of Radiology.

GILBERT, RENÉ (1892–1962), was born in Geneva on 14 April 1892, the son of a distinguished physician, Valentin Gilbert. At the University of Geneva he acquired an early interest in radiology. In 1920, he was already chief of radiology of the Hôpital Cantonal of Geneva; in 1925 *privat dozent*; and professor and chairman of radiology at the University in 1935. At all international congresses of radiology he was a member, and most often chairman, of the Swiss delegation, as well as a member of the executive committee and its commissions. A general radiologist with considerable gifts in radiodiagnosis, he became known for his interest in Hodgkin's disease and its treatment by radiotherapy. His lasting results were already noted in the 1920s and 1930s, his innovation being the irradiation not only of the obviously affected sites, but also the adjacent areas of potential involvement, a technique later called extended field irradiation. He was a dedicated teacher, a convivial and kind friend, and a man of admirable serenity. In his retirement he dabbled in the radiography of fine art. In the last decade of his life he was weakened and disabled by an undisclosed disease, but remained intellectually alert, and to his last day received visitors at his home in Chêne-Thonex.



GLASSER, OTTO JULIUS ALEXANDER (1895–1964), was a German physicist who did seminal work on dosimetry in association with W. Friedrich of Freiburg in Breisgau. In 1929 he devised a condenser dosimeter, later marketed by his disciple, John Victoreen. In 1931, in Berlin, Glasser published his classic biography of

Röntgen with a bibliographic list of over 1000 publications on x rays in the year 1896. He was engaged to come to the U.S. by Dr. Howard Kelly of Baltimore.

After a short term of duty there he became the physicist of the Cleveland Clinic, a position he kept for his lifetime. In 1933, he was editor of a book of contributed chapters, *The Science of Radiology*, now a collector's item, summarizing the development of the specialty. Glasser contributed to making charts of intensity distribution of doses in depth, which he called "isodose curves." He was one of the earliest trustees of the American Board of Radiology and, with Edith Quimby, established the requirement of physics competence of candidates for certification long before their clinical competence could be adequately tested. He delivered the Janeway lecture of the ARS in 1950.



GRICOUROFF, GEORGES (1899–1993), a graduate and Laureate of the Faculty of Medicine of the University of Paris, became a protégé of Mme. Curie, who recommended him to Regaud. He was the chief of the laboratories of histopathology at the Fondation Curie and became a recognized authority on tumor pathology. With

Lacassagne he made a thorough review of the radiobiologic effects of radiations on tissues, published in Paris in 1941.<sup>387</sup> An English translation of this gem of a book was published in the United States by C.C. Lushbaugh and G.R. Riese in 1958.<sup>387b</sup> Gricoureff, his wife, and children joined Marie Curie, the Joliot-Curies, and the Langevins at L'Arcouest, a Breton fishing village where they spent summers, and where, in time, their children intermarried. Thus Gricoureff's daughter married Pierre Joliot, and Hélène Joliot married Michael Langevin. A modest and kind man, Gricoureff helped innumerable *stagiers* from various countries to integrate a knowledge of pathology of tumors into their clinical training.



GRUBBÉ, EMIL HERMAN (1875–1960), was born in Chicago on West 31st St., the son of Bertha Reetz, a nurse, and of Albert Grubbé, a merchant sailor, both of whom emigrated from the Baltic coast of Germany to Chicago in 1870. Emil graduated in Pharmacy in 1895 from the Northern Indiana Normal School, and estab-

lished himself as a metallurgist and chemical assayer. He opened a small shop in an alley room in the back of a stationery store at 12 Pacific Avenue (now La Salle Street) and dealt with prospectors in Iowa and Colorado. He also registered as a student and later an instructor at the Hahnemann Medical College of Chicago. Grubbé associated himself with an expert in exhaust pumps and manufactured Geissler and Crookes tubes in his shop. Thus on 9 January 1896 with the public announcement of Röntgen's discovery, having all elements available in his shop, Grubbé proceeded to make radiographs of his hands and other people's extremities. On 27 January, his hands had become inflamed, swollen, and painful with a severe radioepidermitis. He consulted several physicians of his school's faculty. One of them, Dr. J.E. Gilman, applying a homeopathic principle, suggested that the rays capable of producing such a "pathogenic condition" should also have therapeutic properties. Thus, on 29 January Grubbé received a patient, Mrs. Rose Lee, with a post-operative recurrence of cancer of the breast. He administered eighteen treatments in the next three weeks. He was unquestionably the first to use X rays for therapeutic purposes. Grubbé developed what was probably the first X-ray facility in Chicago, at the Hahnemann Hospital in 1896. He became Professor of "Electrotherapeutics and X-rayology" and owned the Illinois X-ray and Electrotherapeutic Laboratory, at 2614 Cottage Grove Avenue, where courses were offered and certificates issued. Grubbé wrote various articles, some of which were repeatedly printed in minor publications. Notable among these is a report on the treatment of 139 cases of cancer of the skin, emphasizing fractionation and the need for a total dose capable of causing a strong reaction. Grubbé's hands and face became the sites of numerous carcinomas of the skin. He suffered a series of amputations and died at eighty-five with metastases. A gruff, short-tempered man, Grubbé had few friends; an inveterate mythomaniac, he discredited himself by unwarranted claims. Because he did not publish the details of his 1896 work for several years, many doubted his claims to priority in the field. He bequeathed his fortune to the Medical Society of Chicago to support training in therapeutic radiology, to establish a lectureship, to award a gold medal in his name, and to publish his biography.<sup>287</sup> (Dr. R. Ludlam's letter of referral of Mrs. Rose Lee to Grubbé, dated 28 January 1896, is preserved in the Archives of the Smithsonian Institution.)





GUZMÁN, LEONARDO (1889–), an M.D. graduate of the University of Chile, he was a Chilean of Bolivian ancestry. An early visitor to the Radium Institute of Paris, he acquired skill as a radiumtherapist and became a capable practitioner. He founded and was director of the Instituto Nacional del Radium in Santiago. He did

creditable work in brachytherapy of cancer of the cervix. An honorary member of several Latin American societies of radiology, he was also an honorary member of the American Radium Society and of the American College of Radiology. An ambitious man with political connections, Guzmán became a member of the cabinet in the government of Chile. Thereafter he faded into anonymity.



HAMANN, ANNA DOROTHEA (1894–1969), was born in Volksdorf, near Hamburg, on 8 July 1894, the daughter of Minna Margaretha Ferk and Carl Friedrich Hamann, professor of physics at the University of Hamburg. She attended the Johanneum Gymnasium and received her *Abitur* in 1913. She studied architec-

ture for three semesters, then registered to study medicine at the University of Munich. The professor of physics of the medical school was the aging Wilhelm Röntgen. Her studies of medicine (1914–1919) took place during the first World War. She served in a general hospital in Barmbeck (1921–22), spent one year under Holthusen in Hamburg (1922–23), and another year in the department of gynecology of the University of Munich. In 1924 she presented her doctoral thesis, “Die Entwicklung der biologischen Grundlagen der Radiumtherapie,” which was received *cum laude*. She went into the private practice of radiology in Kronach, southern Germany, from 1924 to 1929; then took a position as assistant to Holthusen in the Saint Georg Hospital of Hamburg. She was put in charge of radiumtherapy, wrote papers on gynecological radium therapy, and devoted great attention to radium dosimetry.

In the summer of 1937, Anna Hamann attended the International Congress of Radiology in Chicago, and made a three-week visit to the United States. Alexander Brunschwig (1901–1969), professor of sur-

gery at the University of Chicago, presented her to Paul Hodges (1893–), professor of radiology. She returned and served as an exchange radiotherapist to the University of Chicago on loan from Dr. Holthusen (1938–39), and was then offered a permanent position as assistant professor in charge of radiotherapy at Billings Hospital. Her decision to leave Germany was in part due to the fact that her father was a member of the socialist party, at odds with the Nazi regime.

“She was a well-informed, skillful, painstaking radiotherapist,” said Dr. Hodges. “Almost at once, she gained the confidence and respect of our colleagues.... She made frequent trips to Germany to visit her ailing mother, she was suspected of being a messenger. The FBI kept her under surveillance but never questioned her. I am confident that their suspicions were groundless ... but the fact denied our department any but a marginal connection with the Manhattan Project.” (Taped communication from Prof. Paul Hodges, March 1987.)

In 1946 Dr. Hamann was certified in therapeutic radiology by the American Board of Radiology. In 1948, still an assistant professor, she abandoned Chicago for a position at the Evanston Hospital and on the faculty of Northwestern University, of which she eventually became an associate professor. She developed an excellent department of radiotherapy at the Evanston Hospital, and served at the Swedish Covenant Hospital. She published papers on dosimetry, the effects of radiations on the gastric secretion, and the treatment of leukemia.

Hamann was an honest and dedicated professional who was admired and respected by her colleagues. She was also a generous, kind, and affectionate woman adored by her patients and students. She was a founding member of the American Club of Radiotherapists (1956) and an enthusiastic supporter of its early activities. At seventy-five, she died in Evanston on 7 September 1969; she is buried in Hamburg. It was revealed in her will that she bequeathed her estate to the American Society of Therapeutic Radiologists, which has created an Anna Hamann Scholarship.

HAHNEMANN, SAMUEL CHRISTIAN FREDERICK (1775–1843), was born in Meissen, Germany, attended school in Vienna and Leipzig, and received his doctorate from Erlangen in 1779. A genial and restless man, he alternately practiced medicine and worked in chemistry. He originated a healing system based on the “law of similia” (*similia similibus curantur*). He maintained that drugs which in large doses could produce certain morbid conditions, would be able to relieve those same conditions occurring spon-



taneously, if administered in minute doses. In 1810, he expounded his views on *homeopathic*, as opposed to *allopathic*, therapy in his book *Organon der Rationelle Heilkunde*. Expelled from the Faculty of the University of Leipzig in 1821, he moved to Paris, published numerous books, and acquired a large clientele. He died in Paris on 2 July 1843, and is buried in the Père Lachaise Cemetery. In the United States, homeopathy enjoyed much success, and there were several homeopathic schools, two in Chicago. Early in the century, after the Flexner Report, most of them converted to regular medical schools or were closed. One, the Hahnemann Medical College of Philadelphia, has kept his name.



**HARRIS, WILLIAM** (1894–1953), was born in New London, Connecticut, on 19 October 1894, the eldest of six brothers. He attended Brown University, received his M.D. degree from Harvard in 1919, and served a two-year internship in surgery at the Mount Sinai Hospital of New York. He planned to practice gynecology,

but decided to explore the field of therapeutic radiology and undertook an extensive travel program to observe the work of outstanding centers for the treatment of cancer. At the Radium Institute of Paris he was primarily interested in the work of Coutard. His pioneer spirit led him to develop a strong department of radiotherapy at Mount Sinai and to the establishment of a Tumor Clinic to which all other departments were brought to cooperate. His success with a first case of cancer of the larynx treated by fractionated roentgentherapy led him to a prolonged study of cancer of the larynx and its treatment, a subject on which he became a recognized authority. He was a successful lecturer and teacher and a respected advocate for radiation oncology. A cultured gentleman with refined tastes, he was also a musician and painter. After a prolonged illness, he died on 7 April 1953, at fifty-nine.



**HEYMAN, JAMES** (1892–1956), was born in Gothenburg, Sweden, on 13 November 1892. He received his medical education at the University of Uppsala. As an undergraduate he was taught tumor pathology by recognized authorities and received his medical licentiate in 1912. He had two years of surgical internship,

and entered training in gynecology and obstetrics at the Karolinska Institute of Stockholm. During his training he worked at the Radiumhemmet and, in 1916, he was appointed director of a department of gynecological radiotherapy there. A second lieutenant to Forssell, in three decades he was to bring this department to a position of world leadership in gynecologic radiotherapy. Heyman extended the concept of the “Stockholm method” to the treatment of cancer of the cervix, originally three and later two intensive intracavitary applications of radium with an interval of three weeks. The vaginal application varied according to the needs of the case. At a time when adenocarcinomas were generally considered radioresistant, Heyman maintained their radiocurability. In 1928 he became chairman of a sub-committee of the League of Nations that proposed the staging of cancer of the cervix. He also implemented the annual reports of results in dozens of institutions.<sup>277</sup> He practiced and promoted the “packing method” for intracavitary application of radiators for the treatment of cancer of the endometrium.<sup>279</sup> He died in 1956, at seventy-three.



**HICKEY, PRESTON MENASSEH** (1865–1930), received his M.D. degree from the Detroit College of Medicine and Surgery in 1892. He was a practicing otolaryngologist until 1900, when he became interested in X rays. He became a member of the A.R.R.S. in 1901, served as President in 1907, and was the first editor

of the *American Journal of Roentgenology*. A prolific writer, he had many early publications to his credit. A fine teacher, he was among the first to concern himself with the methods of instruction and the organization of training in radiology. He was appointed Professor of Roentgenology at the Detroit College of Medicine in 1910, and was Chief of the De-

partment of Radiology of Harper Hospital until 1922, when he was appointed Professor and Chairman of the Department of Roentgenology at the University of Michigan. More than any other of his contemporaries, Hickey seems to have understood the need for exclusively trained therapeutic radiologists in academic centers to provide equitable training in general radiology. He went to France as a radiologist in the U.S. Army during World War I. On his return, he enticed Traian Leucutia<sup>B</sup> to join him at Harper. To Ann Arbor he drew another European-trained radiotherapist, Ernst Albert Pohle.<sup>B</sup> Hickey fashioned an early tube-head applicator for radiotherapy which he called a "cone": the designation was generally adopted thereafter for any tube-head applicator, regardless of shape.

HODGES, PAUL CHESLEY, M.D., Ph.D. (1893–), was born in Anderson, Indiana, on 8 January 1893, the son of Josephine Chesley and Dr. Fred Jenner Hodges. He had a Bachelor of Sciences degree from the University of Wisconsin in 1919, then went as an instructor in physiology with Harvard University in Shanghai (1919–1923). Returning to the U.S., he attended Washington University in St. Louis and received his M.D. degree in 1924. That same year, he received his Ph.D. from the University of Wisconsin. Having had early experiences in X rays with his surrogate father and uncle, William T. Reinhart, M.D., he maintained his interest in radiology. As a medical student, he served as an X-ray technologist in charge of developing the glass plates then in clinical use. Following brief service in the U.S. Army, Hodges returned to China, engaged by the Rockefeller Foundation to serve as radiologist to the Peking Union Medical College (P.U.M.C), which he did until 1927. At one time, one could say that any Chinese radiologist would certainly have been trained by Hodges. He was appointed professor and chairman of the department of radiology at the University of Chicago (1927), a position he held for thirty years. He was visiting professor at Taiwan (1961–1963), then visiting professor at the University of Florida in Gainesville (1963–1980). At age eighty-seven and having difficulties with his sight, he retired first to Palmetto, Florida, and later to Green Bay, Wisconsin. He answered our inquiries on Paterson and Hamann with tape-recorded letters in a clear and distinct voice at age ninety-three. He had a brother, Fred Jenner Hodges, Jr., M.D. (1895–1977), who was also a professor of radiology at the University of Michigan. At one hundred, Hodges maintains an interest in world events and in the field whose life-span has paralleled his own.



denHOED, DANIEL (1899–1950), was born in Gouda, Holland, on 19 October 1899. He graduated from the University of Amsterdam and worked at the Anton van Leeuwenhoekhuis of that city from 1922 to 1939, then became director of the Rotterdamsch Radiotherapeutisch Institute. He made original studies of the comparison of roentgen and gamma rays, of their biological effects, and their application to the treatment of malignant tumors. He also reported on the hematologic effects of total body irradiation. The Rotterdam Institute of Radiotherapy is now named after this dedicated pioneer of the Netherlands.



HOLFELDER, HANS GEORG DYONISIUS (1891–1944), a radiologist of Frankfurt-am-Main, gained a world-wide reputation after the first World War for his advocacy of intense short treatments for "deep therapy." A widely used 200kv unit manufactured in Germany was known as the "Holfelder cannon."



HOLWECK, FERNAND (1880–1941), was Chef de Travaux at the Radium Institute of Paris and did important seminal work in the physics of radiology. He invented a pump to achieve high vacuum, a wireless emitter valve in which the filament and electrodes could be easily replaced, and also a special pendulum to measure ground gravitation. Workers at the Foundation Curie were hopeful that his project of a high-frequency high-voltage unit would be made available. At the time of the German occupation of Paris during the second World War, Holweck had been working on an improved machine gun for the French Army. Made prisoner by the Nazis, his mutilated body was delivered to his family.



HUGUENIN, F. RENÉ (1894–1955), was born 22 July 1894 at Reims (Champagne). After his elementary and secondary education, he was admitted to the Ecole Normale Supérieure of Paris, where he might have found a career in letters or teaching, but he shifted to the study of medicine at the University of

Paris. In 1914 he was already an *externe* preparing for the contest of the *internat*. In the first World War, he served with the infantry in a regiment of Zouaves. After the war, he was an intern at the Hospital Laennec and became an early recruit of Roussy for the Cancer Institute. An excellent internist who insured his patients of proper medical attention, he also took an interest in all facets of oncology. He wrote an early book on cancer of the lung which had a preface by Roussy, and wrote articles on thyroid tumors and cancer in children.<sup>338</sup> He authored a popular book, *Quelques Verités Premières sur le Cancer*, that was enlightening and useful. As he became director of the Cancer Institute, Huguenin created new services of pediatrics and otolaryngology as well as satellite sections of cancer detection in various hospitals. He organized and conducted annual *Journées du Cancer* that gathered workers from other parts of France to the Institute. In 1950 the Faculty of Medicine offered him a chair of medical and social cancerology. A typical *ancien interne*, gregarious, amiable and kind, he had an interest in teleroentgentherapy as well as hormonetherapy and chemotherapy.<sup>337</sup>



HUNT, HOWARD BEEMAN (1902–), was born in Winthrop, New York. He received an A.B. degree in 1922 and an M.A. degree in 1926 from the University of California, then he graduated *cum laude* with an M.D. from Harvard in 1927. He served a surgical internship at the University Hospital of Michigan and entered

training in general radiology there (1927–1929). He was an instructor in radiology at the University of Michigan, and then was appointed assistant professor of radiology at the University of Nebraska. He was chairman of the Cancer Committee and director of the Tumor Clinic during his tenure. As a general radiologist, Hunt developed a special in-

terest in radiotherapy and wrote on the treatment of cancer of the cervix and other malignant tumors. He was president of the American Radium Society in 1953, and in 1968 rescinded his obligations as chairman of radiology at Nebraska, but remained as director of radiation therapy, serving as a senior consultant until his retirement.

JACOX, F. HAROLD WILLIAM (1904–1990), received his M.D. degree from the University of Michigan in 1928. After one year of internship at the Naval Hospital of Boston, he served another year of internship at the University Hospital of Ann Arbor. In 1930 he was appointed Assistant Resident in Roentgenology under Prof. Hickey, who died that year. He continued his residency under Hodges. In 1932 he was put in charge of the Division of Radiotherapy and held the position until 1936, when he left to become head of Radiation and Physical Therapy at the West Pennsylvania Hospital of Pittsburgh. During World War II, he served in the U.S. Navy, rising to the rank of commander. In 1947 he was appointed Professor of Radiology at Columbia University, and was for years in charge of radiotherapy at the Harkness Pavilion of the Columbia-Presbyterian complex. In 1969 he was elected Professor Emeritus and retired from active practice. He continued to serve as a consultant in radiotherapy and lived in Englewood, New Jersey, until his death in 1990.

JANEWAY, JAMES HARRINGTON (1873–1921), was born in New Brunswick, New Jersey, on 19 March 1873. He received his A.B. degree from Rutgers College and his M.D. degree from Columbia University in 1909. He practiced surgery, and in 1914 was the first chosen assistant of Ewing at the Memorial Hospital of New York. In charge of radium and of its use for the treatment of cancer patients, he was resourceful and original in the development of devices and techniques of brachytherapy. He wrote the earliest reports of results of radiumtherapy at Memorial.<sup>341</sup> He engaged Failla to assist him. He suffered for twenty-three years from an adamantinoma of the jaw and treated himself with radium. He died in 1921 of pulmonary tuberculosis.

KAMMERER, B. PAUL (1880–1926), was a genial zoologist of the Biologische Versuchsanstalt of Vienna. A Lamarckian biologist with a knack for breeding reptiles and amphibians, he made notable studies of animal adaptation and of the inheritance of acquired characteristics. He raised cave-dwelling newts under red light, and their rudimentary eyes and sight were

developed to normal. Most sensational was his claim that by forcing the habitually land-mating midwife toads to mate underwater, they developed "nuptial pads" on the frontal extremities. These experiments became the center of an international scandal. Kammerer retired and accepted a research position in the Soviet Union. Just before his scheduled departure, in September 1926, he committed suicide on the Schneeberg near Vienna. His life and works were made the subject of an essay by Arthur Koestler.<sup>361</sup>



KAPLAN, HENRY SEYMOUR (1918–1984), was born in Chicago on 24 April 1918, the son of Sarah Brilliant and Nathan M. Kaplan. He received a B.S. degree from the University of Chicago and his M.D. degree from Rush Medical College in 1940, then served an internship at the Michael Reese Hospital. He went to

Minneapolis for training in general radiology under the prestigious radiodiagnostician Leo Rigler at the University of Minnesota. There he received his first exposure to radiation therapy under Karl Stenström, Ph.D. (1891–1973).<sup>B</sup> With Rigler, Kaplan made an interesting study of early detection of cancer of the stomach. He was certified in general radiology by the ABR in 1944 and took a position as instructor and assistant professor of radiology at Yale University Medical School, where he pursued his radiodiagnostic interests. A laboratory worker at heart, Kaplan took a fellowship to do experimental research at the National Cancer Institute where he did original work on experimental leukemia. While in Bethesda he was offered the position of professor of radiology at the Stanford University Medical School, then in San Francisco. The position called primarily for competence in radiodiagnosis, but Kaplan chose to emphasize the needs of therapeutic radiology with which he was less conversant and in which he achieved undisputed leadership. At the time, most patients with Hodgkin's disease were being inadequately treated by general radiologists under the assumption that small doses of radiations were sufficient to give lasting palliation. Kaplan had learned that it was possible to sterilize the tumor locally with moderately high doses, and also that it was advantageous to irradiate neighboring areas of potential sub-clinical involvement. He made this his own subject and wrote extensively on it. He recommended vast fields irradiating the cervical, thoracic, and abdominal areas of potential involvement with moderately high doses in

relatively short time. This approach was widely adopted, not without untoward effects resulting from the emphasis on dose and disregard of the safety of greater fractionation. Kaplan went on to recommend staging laparotomies and splenectomies, also not without risk. His tenacious efforts made his name famous. The need for a training program for radiation oncologists was evident, and Kaplan, in his position as member of the National Advisory Cancer Council, contributed to the extension of federal grants for the establishment of training centers.<sup>483</sup> In Europe, linear accelerators had been produced and were being put to use in the treatment of cancer. Edward Ginzton undertook to build a linear accelerator at Stanford. Kaplan encouraged him and endeavored to put its originally fixed horizontal beam to the treatment of various forms of cancer with unquestionable success. Aware of the fact that previous important progress in clinical radiotherapy had been due to radiobiological understanding, Kaplan emphasized the role of radiobiological research, putting his hopes successively in electrontherapy, hibaroxyc therapy, radiosensitizers, and other promising approaches. He was one of the founders and president of the Radiation Research Society, elected to the National Academy of Science, received the Atoms for Peace Award, the Charles L. Kettering Award, and the Gold Medal of ASTRO: all richly deserved. An ambitious man who could be ruthlessly aggressive, he was kind and generous with his associates and residents who revered him devotedly as a patriarch and to whom he bequeathed his thoughts as to how he wished to be remembered. As his father had, Henry Kaplan died of cancer of the lung on 4 February 1984. He was survived by his wife Leah, his daughter Ann, and his son Paul.



KAPLAN, IRA I. (1887–1963), was a New York general radiologist who made a reputation as a radiotherapist and wrote a book on radiation therapy. In the 1920s Kaplan sought to treat young women complaining of sterility by irradiating their ovaries to produce temporary amenorrhea. The hope was that

they would be able to conceive when their menses resumed. He irradiated hundreds of women on this assumption. Thirty years later Kaplan published a follow-up account of 644 women, 18 to 42 years of age, who had been so irradiated. 351 of them had subsequently conceived 688 times and delivered 560 children. Neither the sex ratio nor the occurrence of ab-



normalities showed any deviation from the general population, although the women had been treated for sterility, in itself a possible genetic defect. None of the children or grandchildren of these women had leukemia or any of the pediatric forms of cancer.



**KASSABIAN, MIHRAN KRIKOR** (1870–1910), an Armenian, was born in Casseria, Cappadocia, Asia Minor, on 25 August 1870. As a boy he experienced earthquakes and was exposed to epidemics of cholera. He was educated in the American Missionary Institute in Cappadocia, where he became an instructor and aspired to

be a medical missionary. In 1893 he journeyed to London to study theology, and there acquired a greater interest in medicine while supporting himself with photography. He emigrated to Philadelphia and registered at the Medico-Chirurgical College and, just before graduation, volunteered to serve in the U.S. Army in the Spanish-American War. After discharge, graduation, and American citizenship, he traveled to the country of his origin to fetch an Armenian bride. He then chose the clinical specialty of electrotherapy to which he added his growing interest in X-rays. In 1902 he was appointed director of the Roentgen Ray Laboratory of the Philadelphia General Hospital, where he became one of the outstanding American pioneers of radiology. He was a charter member of the ARRS. In 1907 he published a book on roentgen-rays and electrotherapeutics.<sup>347</sup> The appendix of this book is a radiation oncologist historian's delight: a report of a survey of radiotherapeutic practices among national and foreign practitioners. It reveals an amazing disparity of views in the choice of generators, interrupters, and tubes, as well as absolutely no agreement on fractionation, dosimetry, etc. He was a strong advocate of fluoroscopy, which he practiced daily. He consequently exposed himself excessively and developed numerous carcinomas of the skin of his hands which, despite surgical mutilations, ended in uncontrollable metastases. He required long dressing care administered by his wife. He died on 10 July 1910 at only forty years of age. His name is among those on the stelae in the garden of the Sankt Georg Hospital of Hamburg.<sup>439b</sup>

**KELLY, HOWARD ATWOOD** (1858–1943), was born in Camden, New Jersey. He received a B.A. degree (1877) and his M.D. degree (1882) from the Univer-

sity of Pennsylvania, and practiced gynecology there until 1889 when Osler invited him to join the charter faculty of the new Johns Hopkins Medical School. There he was professor of obstetrics and gynecology until 1899, then professor of gynecology until 1919. He wrote several books on abdominal and pelvic surgery and also on diseases of the urinary tract, all of which were exceptionally well-illustrated with several new procedures of his own. He pioneered the use of cocaine as a local anesthetic, contributing unwittingly to the professional downfall of several of his colleagues. The name of Howard Kelly is intimately connected with the early development of the use of radium in the United States. In 1913 he was part of a triumvirate that developed the production of radium from Colorado's ore (see chapter 14). He practiced radiumtherapy and trained others in its use. He was also a medical historian and produced a volume of *American Medical Biography*. After his retirement he became interested in and practiced electro-surgery. He lived to eighty-five, and died in 1943.



**KIENBÖCK, ROBERT** (1871–1953), was born in Vienna on 11 January 1871. He studied medicine in Paris and London, as well as at the University of Vienna. He started his work with X rays in the medical department of the University of Vienna in 1897. With Holzknecht he established a lectureship in medical radi-

ology and became an authority in the radiodiagnosis of bone and joint diseases. In 1905 he developed a method to measure doses of radiations: strips impregnated with silver bromide, placed at the portal of entry on the patient's skin, with changes in color compared with Kienböck's quantimeter as a standard and expressed in Kienböck's units. In 1907 he wrote his *Lehrbuch für Radiotherapie* and was among the first to advocate X rays for the treatment of skin diseases. He lectured and published in German, French, and English and was widely acclaimed. In 1910 he suffered a fracture of the skull in an accident. He continued his intellectual activities and published several books. During the second World War he suffered from lack of food and medicine, but wrote letters of appreciation to friends abroad. He died in Vienna on 7 September 1953.

**KEEFER, C. CHESTER SCOTT** (1898–1972), was born in Altoona, Pennsylvania. He received his M.D.

degree from Johns Hopkins University in 1922 and was resident in internal medicine at Billings Hospital of Chicago in 1926–28. He was appointed professor and chairman of the department of medicine of Boston University (1940–1959) and was dean of the medical school (1958–59). Keefer played an important role in the early clinical trials of penicillin and later became chairman of the Committee on Chemotherapeutics of the National Research Council. He received the Medal of Merit (1948) and the Medal of Freedom. He died on 3 February 1972.



LABORDE, E. SIMONE (1883–1976), studied in the Medical School of the University of Paris and intended to become a pediatrician. She married Albert Laborde, a faithful collaborator of Pierre and Marie Curie, who turned her interest to radiology and radium-therapy. With Henri Dominici,<sup>B</sup> she studied the

effects of inhalation and ingestion of radon. During the first World War, she served at the Military Hospital of the Grand Palais, where she made use of radium emanation in the treatment of keloids. After the war, she participated in a series of lectures given at the Faculty of Medicine under the professor of physics, André Strohl (1887–1977), working towards a Certificat d'Eléctro-Radiologie. Her published lectures attracted the attention of Roussy, who invited her to the Cancer Institute. In 1925 she published a 322-page book on curietherapy of cancer.<sup>364</sup> With Roussy, she studied the effects of radiations on neoplastic and normal tissues.<sup>558</sup> She was a charter member of the International Club of Radiotherapists and attended its meeting in Cuernavaca, Mexico, in 1956. An attractive lady, she was an ardent feminist. She served as the archivist and, for many years, the secretary of the Association Française pour l'Etude du Cancer. Having survived her friends and collaborators, Roussy, Leroux, Oberling, and Huguenin, she died in 1976 at ninety-three.<sup>363,365</sup>

LIDLAW, GEORGE FREDERICK (1871–1937), was born in Jersey City on 26 June 1871. An 1890 graduate of the New York Homeopathic College, he engaged in the general practice of medicine for thirty years. He made some twenty publications on various topics and translated from the French (1924) the book *Diseases of the Heart*, by Louis Henri Vaquez (1860–1936). In 1926 Laidlaw developed papillary

growths of his bladder, changing the whole orientation of his career. At fifty-five, he decided to enter the field of oncologic research. He visited Santiago Ramon y Cajal (1852–1934) in Madrid, Jean Nageotte (1866–) in Paris, and Pierre Masson<sup>B</sup> in Strasbourg; the latter was about to leave for Montréal and agreed to accept him in his laboratory there. Masson was surprised by Laidlaw's hunger to learn and disturbed by his idea of starting the study of tumors with the nevi. Laidlaw rapidly mastered the basics of normal and pathologic histology and the particulars of histo-technique. After six months with Masson, Laidlaw met Penfield, who had just established a laboratory of neurocytology at the Presbyterian. Penfield asked him to find an adequate connective tissue stain, and he developed a silver stain method for collagen and reticulin. He also worked on a simplified and reliable technique for Bloch's dopa reaction. He was writing on the histopathology of islet cell tumors when, after repeated fulgurations and two interventions, cancer ended his research on 22 June 1937. "A remarkable physician and scholar," Masson said of him, "a man of letters for whom the German and French classics had no secrets." "No young man ever surpassed him in devotion, enthusiasm, or productivity," said Stout, "He was an inspiring and stimulating companion and valued friend."<sup>624</sup>

LATTES, RAFFAELE (1910–), was born in Turin, Italy, on 22 May 1910. He received a degree of Doctor of Medicine and Surgery from the University of Turin in 1933 and served his internship (1933–1936) at the university's departments of medicine and pathology. He became an assistant in the department of surgery. In 1940 he came to the United States and served as instructor of pathology at the Women's Medical College at Philadelphia. In 1943 he was appointed resident in surgical pathology of the Presbyterian Hospital and instructor in surgery at the College of Physicians and Surgeons. He received a degree of Doctor of Medical Science from Columbia University in 1946 and certification by the American Board of Pathology in 1947. He was an assistant professor of pathology under Professor Maurice Richter at New York Post-Graduate Hospital (1946–1948), then returned to become an assistant to Stout. He collaborated with Virginia Frantz in the research of hemostasis with absorbable gauze and with Stout on the AFIP fascicle on tumors of the esophagus, as well as the second edition of the fascicle on soft tissue tumors. His dedicated studies of tumors of the mediastinum have won him recognition as an authority in this area. On Stout's retirement in 1951, Lattes was appointed director of the department of surgical pathology and professor of surgery. In 1961 he was

made professor of surgical pathology.<sup>224,354</sup> A Professor Emeritus since 1978, Dr. Lattes has continued to give his interest to surgical pathology at P and S.



LEBORGNE, FELIX (1904–1970), was born in Montevideo and received his M.D. degree from the University of Uruguay in 1922. A brilliant and resourceful improviser, Leborgne devoted his talents to radiology. In 1930 he became chief of the radiological service of the Hospital Pereyra-Rosell of Montevideo. He wrote numerous

articles, pamphlets, and books on various aspects of radiology. In 1932 he produced a “radium gun” for telecurietherapy. With limited resources he built a 600kv generator for radiotherapy. In 1933, he invented a device to make tomography with ordinary units. He wrote a remarkable book on the tomography of normal and pathologic larynx. He was a charter member of the International Club of Radiotherapists, a member of the ARS, and an honorary member of the ACR. A handsome man with a fertile mind, he was permanently in search of new possibilities. After more than a decade of seclusion and loving care, he died of Alzheimer’s disease in 1970. He was survived by his wife Angelica, and by his two sons, Felix Jr. and José, both radiologists. His brother Raúl, also a researcher, originated the techniques and interpretation of mammography.

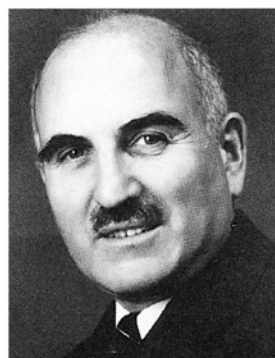


LEDERMAN, MANUEL (1911–1984), was born in London on 10 December 1911. He studied medicine at the Westminster Hospital Medical School from which he graduated in 1936. He became interested in the treatment of malignant tumors and took the course at Cambridge leading to the D.M.R.T. certification in

1937 and to appointment as medical officer of the Radium Annex of the Westminster Hospital. In 1938, he became medical officer in the Radium Department of the Royal Cancer Hospital, in charge of the newly-installed telecurietherapy unit. Lederman applied himself to the treatment of cancer of the upper air passages and in particular to cancer of the larynx. An eloquent advocate of telecurietherapy, he was also an

inspiring teacher to the increasing post-war numbers of young physicians in search of guidance in radiation oncology. His department became a regular stop for foreign visitors. He drew great attention with his treatment of epibulbar melanomas of the eye. In 1973 he became director of the department of radiotherapy of the Royal Marsden Hospital and received the Barclay Medal of the British Institute of Radiology. He was a frequent attendant of the annual meetings of the American Radium Society and participant in its programs. He died on 27 June 1984, at seventy-two, after a short illness.

LENARD, PHILIP EDWARD ANTON (1862–1947), was an ingenious researcher in the field of physics. He was working under Hertz at Breslau in 1892 when he made experiments on the transmission of cathode rays through metal foils. Lenard also observed the bouncing of “corpuscles” (later called electrons) from metal strips submitted to varied monochromatic light. The phenomenon was later to be explained by Einstein as the photoelectric effect. It later became evident to Lenard, as well as to others, that they had been producing X rays for some time but had not recognized them. Lenard acknowledged Röntgen’s discovery and congratulated him in writing, adding that the discovery had brought new light to his own work. But when Röntgen received the first Nobel Prize for Physics in 1903, Lenard became bitterly envious. Lenard received the Nobel Prize in 1905 for his own work on cathode rays, but he bore a lifelong grudge, insisting on presenting Röntgen as just a midwife, present at the birth but not responsible for it. His antisemitic feelings led him to ugly public attacks on Einstein.<sup>175</sup> Bigotry corroded his mind, once brilliant, and maimed his character.



LENZ, MAURICE (1890–1974), was born in Kovno, Russia, and emigrated to the U.S. in 1909, at eighteen. He received his M.D. degree from the College of Physicians and Surgeons of Columbia University in 1913. During World War I he was a lieutenant in the U.S. Army Medical Corps and went to Europe with the

American Expeditionary Force. Originally interested in dermatology and in radiotherapy of skin diseases, Lenz went to Freiburg, Germany. Jacob R. Freid, a New York friend, was a *stagier* at the Radium Institute of Paris and suggested that Lenz should join

him. Thus he was introduced to Lacassagne, Regaud, and Coutard and also became an early *stagier* of the Fondation Curie. He was particularly impressed with Coutard's clinical work. On his return to New York he became radiotherapist at the Montefiore Hospital and wrote several articles on the methods of treatment at the Radium Institute of Paris, published in New York. As an advocate of fractionated roentgen-therapy, he wrote on the treatment of cancer of the pharynx and larynx and was published in national journals. In 1941 he was appointed director of the division of radiotherapy of the Presbyterian Hospital of New York and Professor of Radiology of the College of Physicians and Surgeons of Columbia University. He lectured and organized symposia to demonstrate the value of properly conducted radiotherapy in the treatment of cancer. He blazed the way to a better understanding of the role of radiotherapy in the U.S. He was president of the ARS in 1949. In 1967 he spent a whole year at the Radiumhemmet of Stockholm in an effort to secure a better understanding of oncology. That year he received the Silver Medal of Columbia University. Lenz was president of the New York Roentgen Ray Society and also of the American Radium Society. In 1959 and again in 1967 he made prolonged visits to the Soviet Union, where he lectured in the language of his ancestors. A tenacious and ambitious worker, Maurice Lenz died on 4 January 1974, at eighty-three. He was survived by his wife, the former Anna Malmberg, and two sons, Robert and Benjamin.

LEROUX, ROGER (1892–1950), was born in Châlons-sur-Marne (Lorraine) and received his secondary education in Nancy, where he began to study medicine. He transferred to the medical school of the University of Paris, and in 1913 successfully passed the examination to become an *externe* of the hospitals of Paris. He was a medical lieutenant in the first World War and received the Croix de Guerre with two citations. A chance encounter with Captain Roussy during the war decided his future. After presenting his doctoral thesis in 1921, he worked up the ladder of the department of pathologic anatomy as *preparateur*; Chef de Travaux, and in 1927, Professor Agregé. Leroux was a brilliant teacher whose clear exposition and innovative approaches rendered the learning of pathologic anatomy exciting. A dynamic lecturer, Leroux gave spectacular presentations in a specially-built amphitheater at the Cancer Institute. Gross specimens were projected on the screen by reflection; then histologic slides were projected. Students seated in the amphitheater each had a microscope and a box of the same slides projected on the screen for their own inspection. He used films and up-to-date technol-

ogy. He wrote numerous articles, often in co-authorship with Roussy as well as textbooks for students.<sup>556b</sup> On Roussy's assumption of higher duties, Leroux assumed the full obligations of the Department of Pathology. He died suddenly in 1950 at fifty-eight.<sup>439</sup>



LEUCUTIA, B. TRAIAN (1892–1977), was born in Calacea, Transylvania. He received his M.D. degree from the University of Vienna in 1916. He served as Romanian liaison officer to the French army during World War I. He received post-graduate training and obtained the Certificat d'Electroradiologie (1920) from the University of Paris; he also qualified for the Diploma of Medical Radiology and Electrology in Cambridge, England. He was working at St. Thomas Hospital in London before he was invited to join the firm of Preston M. Hickey, William A. Evans, and Lawrence Reynolds at Harper Hospital in Detroit, where he spent the rest of his professional life. He became president of the A.R.R.S. in 1961 and received the Gold Medal of the American College of Radiology in 1967. He was editor of the *American Journal of Roentgenology* from 1961 to 1974, when he retired. He was the victim of criminal violence and died of its consequences in 1977. He was a highly respected American therapeutic radiologist for several decades.

LOW-BEER, BERTRAM VOLJTECH ADELBERT (1900–1955), was born in Topolcany, Czechoslovakia on 11 December 1900. He began his medical education at the University of Budapest, and completed it at the German University of Prague in 1924. He received training in radiology at various European centers and engaged in the practice of radiology in Prague. In 1939, he left his native country and went to Paris and then to Birmingham, England, where he worked on radioactive isotopes under professor Elephant. In 1941 he emigrated to the U.S. In 1943 he joined the staff of the department of radiology of the University of California at San Francisco and, in 1951, became a professor there. Low-Beer pioneered the clinical trials of radioisotopes and became interested in other practices of radiation oncology. He was a charter member of the International Club of Radiotherapists in Copenhagen, 1953. He died of leukemia on 25 September 1955.





**MACHADO, OSOLANDO J.** (1914–1990), was born in Porciuncula, Rio de Janeiro, on 21 July 1914. He received his M.D. degree from the Medical School of the National University of Brazil in 1938. He was initiated in oncology at the Cancer Institute of Rio, and also worked at the Cancer Institute of Montevideo. In 1942 he be-

came chief of radiotherapy at the National Cancer Institute of Rio de Janeiro. In 1946 he went to Manchester and received training in brachytherapy under Ralston Paterson. In 1958 he was elected professor of therapeutic radiology at the Pontifical Catholic University of Rio de Janeiro, where for years he taught a number of young Brazilian physicians. A dedicated worker, he participated in the founding of the Brazilian Society and Brazilian College of Radiology. He also enjoyed the relaxation of his country farm which he visited frequently. Osolando and his American wife Priscilla had only one son. At the celebration of President Eisenhower's visit to Brazil there was a collision of two small aircraft on the bay of Rio, and the young boy died there. Widowed, Osolando died on 28 April 1990, almost seventy-four years old.



**MAISIN, JOSEPH HENRI FERNAND** (1893–), was director of the Cancer Institute and professor of the University of Lovain, Belgium. He was the permanent secretary of the International Union Against Cancer and the president of the second International Congress of Cancer in Belgium, 1936.



**MARTIN, CHARLES LOUIS** (1893–1979), was born in Massey, Texas, on 2 December 1893, the son of Doctor J.M. Martin, a general practitioner who adopted radiology as a specialty in 1900. He graduated from Bryan High School in Dallas in 1910, then earned a degree in electrical engi-

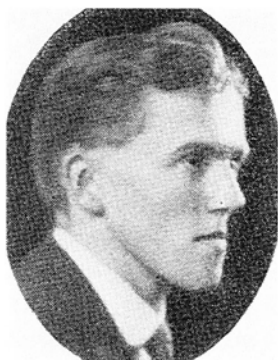
neering from the University of Texas in 1914, taking an additional year of pre-medical training there. He received his M.D. degree from Harvard University in 1919, then he became one of the earliest residents in radiology under professor Holmes. He returned to Dallas and was a radiologist at the Baylor Hospital of that city. In 1925 he was made a full professor. In 1943 he became professor of radiology at the new Southwestern Medical College, while he and his father built an x-ray and radium clinic for private practice. Charles Martin was president of the ARS in 1947 and its Janeway lecturer in 1949. His subject was what he called "low intensity" radium element needles. These were needles with small amounts of radium per centimeter of length as used by the French school and as opposed to the stronger sources of the Swedish school. Their virtue was to facilitate more protracted applications with milder reactions and possibly better results. A forceful advocate, he was also a working member of a variety of entities of organized medicine, as well as a president of the ARRS. He died early in 1979, at eighty-five.



**MARTIN, HAYES ELMER** (1892–1977), was born in Dayton, Iowa, on 24 June 1892, and received his M.D. degree from the University of Iowa in 1917. He served two years in the U.S. Navy and, on discharge served an internship at the Bellevue Hospital of New York, followed by a surgical residence completed in 1925. He

was then appointed attending surgeon at the New York Memorial Hospital for Cancer and Allied Diseases. In 1932, substituting for Douglas Quick, he was appointed acting head, then chief, of the so-called Head and Neck department, actually in charge of the treatment of malignant tumors of the upper air passages. Hayes Martin extended the indications of surgery in the treatment of these tumors with considerable success. He endeavored to prove the superiority of surgery over radiotherapy of cancer of the larynx by contrasting his excellent surgery with radiotherapy as practiced by his surgical residents. A frequent speaker at radiological as well as surgical meetings, he presented finely-crafted and well-illustrated papers. He was president of the ARS in 1942. Of all of Ewing's associates he was the one most dedicated to the perfecting of patients' records and to the training of residents, who deservedly respected him. He retired in 1957 and, after a long period, his death was announced on 25 December 1977.

MASSON, PIERRE (1880–1959), was born in Dijon (France) where he received his early education and premedical (P.C.N.) credentials. He studied at the medical school of the University of Paris. A severe case of typhoid fever forced him to return to Dijon, where he worked for five years under Bataillon on artificial parthenogenesis, developed an interest in histotechnology, and received a master's degree in biology. He returned to Paris and received his M.D. degree after presentation of a thesis on neuromas of the sympathetic nerve. He was chief of the laboratories at the Lariboisière and Salpêtrière Hospitals, then became *preparateur* at the Pasteur Institute. From 1909 to 1914 he published forty papers on carcinoids, histochemical techniques, and what he called "argentoffin" cells of the intestines. He was made prisoner and then subject of an exchange in the first World War. He worked under Regaud in the war front center of Bouleuse. After the war, he was appointed professor of pathology at the University of Strasbourg. In the next decade, he published thirty-eight original works on the neural origin of pigmented nevi, on benign hemangioendotheliomas, and the neural-myo-arterial glomus complex. He also published a book on the histologic diagnosis of tumors in 1923. In 1926 he accepted a three-year engagement as professor of pathology at the University of Montréal and stayed there for the remainder of his life. In Montréal he wrote fifty-three papers on the malignant Leydig cell tumor, the spermatocytic variant of seminoma, the role of the neural crest in Wilm's tumors, and another book, *Tumeurs Humaines*, in 1956. He established a widely recognized school of histopathologists there and trained distinguished successors. He died on 11 May 1959.<sup>571</sup>



MAYNEORD, WILLIAM VALENTINE (1902–1988), was born in Radditch, in Worcestershire, England, on 14 February 1902, the youngest child of Elizabeth and Walter Mayneord. When the child was only two-and-a-half years old, his mother died and his father remarried. Young Val was legally adopted by his moth-

er's sister Polly and her husband William Watkins, who brought him up as their own in Evesham. He received his secondary education at the Prince Henry's Grammar School. He was a server in the All Saints Church and received piano lessons from its organist. He went to the University of Birmingham on a scholarship and was a brilliant student, graduating with

honors in physics in 1922. He continued his research work at the University, but in 1924 took up a position as demonstrator at the Saint Bartholomew's Medical School of London, teaching physics to medical students and doing research in the field of radiations. He was greatly impressed by the work being done in the treatment of cancer by radium and x rays. In 1927 he took a one year fellowship to study the effects of radiations on the blood at the Royal Cancer Hospital. This led to his appointment as a physicist on the staff collaborating with physicians, the first of hospital physicists. Interested in carcinogenesis, Mayneord made an original spectroscopic study of coal tar and other carcinogens. In 1929 he published his book, *Physics of X-ray Therapy*, another step in the progressive merging of physics with the clinical practice of radiation oncology. A man who added drive and ability to his brilliant intellectual powers, he brought about the establishment of a department of physics in the Cancer Hospital. His numerous pragmatic contributions became integrated into the daily practice of radiotherapy. Having completed the academic requirements, he received his D. Sc. degree in 1933. He was then appointed Professor of Physics as Applied to Medicine in the University of London. His department grew in size and in number of associates. Through the years he worked with the full support of the director of radiotherapy, David Smithers.<sup>B</sup> In 1945 and 1946 he played an important role in the work of the Canadian Research Council at Chalk River, Ontario. In 1948, Mayneord and Smithers visited Berkeley and were impressed with the prospects of nuclear medicine. Twelve years later they achieved a long-planned project, the Sutton Branch, an extension of the Royal Marsden Hospital for the application of physics to medicine. Mayneord had great interest in radiation protection and wrote another book, *Radiation and Health*. He also pursued the concept of integral dose and developed one of the earliest scanners. A quiet man with an appreciation of art, music, and literature, Val Mayneord would have been a success in any other profession. He was a Fellow of the Royal Society and was made a Commander of the British Empire. He also received the Gold Medal of the Royal College of Radiology and the Bécclère Medal as well as many other honors. He was an Honorary Fellow of the American College of Radiology. His first marriage to Joan Eaton, a grammar school classmate, ended in divorce. In 1963 he married Audrey Mornell, a former secretary and collaborator who spent with him his twenty-four years of retirement. Val Mayneord died on 10 August 1988, at eighty-six.



MEREDITH, JOHN (JACK) (1913–), was born 28 April 1913, in Welchspool, Wales, the only son of Elizabeth Edwards (1883–1956) and Thomas Meredith (1887–1950). After elementary school in Wales and grammar school in England, he received a scholarship to the University of Manchester, where he had a

B.Sc. in 1936 and a teachers diploma in 1937. He then became a part-time assistant physicist at the Holt Radium Institute under Herbert Parker. In 1938 when Parker left for Seattle, Meredith became the head of the physics department. An excellent teacher, his fame brought to Manchester innumerable radiologists particularly desirous to take his course of lectures on radiation physics and radium dosimetry. In 1947 he published the first edition of his classic book on the subject.<sup>432</sup> He also authored numerous articles and chapters on the subject of radiation physics, and was honorary lecturer at the University of Manchester. He lectured abroad, in Brazil, Spain, and in the U.S. A faithful associate, he wrote obituaries on both Paterson and Parker.<sup>433,434</sup> A modest man, he returned to Lancaster where his interest in radiotherapy has grown ever more fond.

MURRAY, MARGARET RANSONE (1901–1986), was born in Mathews, Virginia, on 16 November 1901, a descendant of English, Irish, and Scottish pre-revolutionary settlers of Virginia. A Phi Beta Kappa graduate of Goucher College (B.A., 1922) and Washington University (M.S., 1924), she received her Ph.D. degree in 1926 from the University of Chicago. After presentation of her thesis on *in vitro* culture of planarian tissues, she remained there as a National Research Fellow from 1926 to 1928. Following a year spent at Florida State College, she was engaged in 1929 to research *in vitro* absorption of calcium by cultured tissues at the P and S. Appointed to the department of anatomy and assigned to surgery, she remained in the surgical pathology laboratory as an investigator of cell physiology for forty years. Her attention turned first to cellular neurobiology, where her cine recordings of axion myelinization were notable. With Gertrude Kopech she co-authored a two-volume bibliography of research in tissue culture in 1953. She trained more than a score of national and foreign students who became early experts and leaders in tissue culture. A diligent worker, she served as secretary, and later president, of the Tissue Culture Association, which she nurtured to mature strength.

She traveled widely in Europe and Asia, visiting research centers, colleagues, and students. Emeritus Professor of P and S in 1970, she visited briefly the Neurological Institute in Bethesda, then retired to Mathews, Virginia. On 13 July 1986, at eighty-five, she died of congestive heart failure near her birthplace.

MURPHY, JOHN THOMAS (1885–1944), received his M.D. degree from the University of Toledo in 1906. He worked in radiology at Cook County Hospital of Chicago, then went to Toledo. Very active in organized radiology, he was the first secretary of the AMA Section of Radiology. He was also secretary of the Executive Council of the ARRS, of which he became president in 1933. He was an early member of the Commission on Safety Standards of the ARRS in 1924, which was chaired by Henry Kunrath Pancoast (1875–1939). Other members included William Duane (1892–1935), William David Coolidge (1873–1976), Bernard Henry Nichols (1876–1964), Preston Menasseh Hickey (1865–1930), and James Lloyd Weatherwax (1874–1965). He was elected president of the American College of Radiology in 1935. His memorable presidential address launched an ambitious program which transformed the College.<sup>492</sup> Dr. Murphy was an excellent ice skater, with a great interest in track events. He piloted his own airplane, and was a speedboat enthusiast as well as an excellent photographer.



NIELSEN, JENS (1899–1964), was born in Ribe, Jutland, Denmark, on 19 December 1899, the son of Peter Nielsen, a surgeon. After passing the students' examinations with honors, he studied medicine and graduated in 1923. After diversified clinical experience, he was appointed as a member of the staff of the Radium Center of Copenhagen in 1928. Nielsen sought experience in the developing methods of roentgentherapy of cancer advocated by Coutard. He made short visits to the Curie Institute to attend the follow-up clinics and to consult with the staff. In time Nielsen became the outstanding therapeutic radiologist in Scandinavia. He published work showing exceptional results of roentgentherapy of cancer of the larynx and cancer of the cervix, as well as other forms of cancer. Attempting to obtain results in the

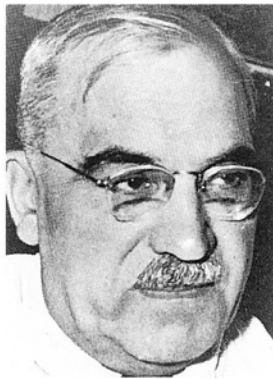


treatment of carcinoma of the esophagus with conventional equipment of 200 kilovolts, he originated the procedure of rotation therapy for which he became known. Coinciding with this, the developers of Cobalt<sup>60</sup> teletherapy and supervoltage units adapted rotation as a feature of their new equipment. He visited the United States and was an honorary member of the ARS.



NORIEGA-LIMÓN, JOSÉ (1917–1991), was born in Mexico City on 18 November 1917, and received his diploma of doctor of medicine from the National Autonomous University of Mexico in 1943. He had a scholarship for one year of study at the University of Tokyo, then went to London for a diploma in medical radiology in 1944.

From 1943 to 1945 he worked at the Royal Cancer Hospital of London and also at the Holt Radium Institute of Manchester. He then became radiotherapist at the General Hospital of Mexico City from 1946 to 1948. He organized a department of radiotherapy in the Oncologic Hospital and an oncologic service for the hospital known as “20 de Noviembre.” In 1969 he became chief of the department of radiotherapy of the Instituto Nacional de Cancerología, where he became director from 1972 to 1983. An indefatigable worker, Noriega wrote a great number of papers on the treatment of cancer, and devoted considerable time to clinical investigations. He was the General Secretary of the eighth International Congress of Radiology in Mexico City, giving exemplary proof of his great abilities as an organizer. He was a member of numerous societies including the ARS, and was Fellow of the ACR. He also was a charter member of the International Club of Radiotherapists. In his retirement Pepe Noriega suffered from the disease against which he had fought most of his life. He died in 1991, at seventy-four. He was survived by his wife, Peggy Munro, who followed him shortly, and by his son Ricardo.



OBERLING, CHARLES (1895–1960), was born in Metz (Moselle), received his early education in Germany, and registered to study medicine in Strasbourg. As a medic, he was wounded twice in the first World War. The Armistice brought him a fateful encounter with Pierre Masson and Amedée Borrel, two new French professors who were

to influence his scientific views as well as his destiny. In 1920 he presented his doctoral thesis, *Cancers heteromorphes et metaplasie épithéliale*, and was appointed by Masson as *Chef de Travaux* in Pathological Anatomy. He wrote on meningeal tumors, the reticulo-endothelial system, lymphangitic metastases of the lungs, endometriomas, and chronic nephritis. In 1926 he won the position of *Agregé* in Pathological Anatomy at the Faculty of Medicine of Paris under Roussy, who asked him to organize a research laboratory for the Cancer Institute. There, in association with Maurice Guerin, he studied oncogenesis, as well as the carcinogenesis of thorium and various chemicals. He embraced the viral theory first ventured by Borrel and collaborated with Roussy on a classification of tumors of the nervous system. Studying Ewing's sarcomas with a sound knowledge of the reticulo-endothelial system, he made his outstanding contribution on reticulosarcomas of bone.<sup>446</sup> In 1935–36 he spent a year as a fellow of the Rockefeller Foundation, working under Peyton Rous in New York.<sup>541</sup> In 1936 Oberling was recalled to Strasbourg to succeed Borrel as professor of bacteriology and hygiene. As the second World War soon disrupted work at Strasbourg, Oberling accepted an invitation to become dean and to modernize the Faculty of Medicine of Teheran. He improved the curriculum and converted the hospitals into university centers with capable staffs, and also contributed to improving sanitation in the city. In 1942 he left his work in Iran to become pathologist of the Mary Imogene Basset Hospital of Cooperstown, New York. He organized his notes and, helped by the excellent library facilities of the hospital, produced his widely read and successful book, *The Riddle of Cancer*.<sup>447</sup> In 1944 he returned to Iran and founded additional medical schools in Meched, Chiraz, Ispahan, and Taurus. In 1948 he was recalled to resume his work as director of cancer research at the Cancer Institute, to become part of the National Center of Scientific Research. In 1949 the Faculty of Medicine of Paris created a chair of carcinology and entrusted it to Oberling. On Lacassagne's retirement in 1956, he also became professor of

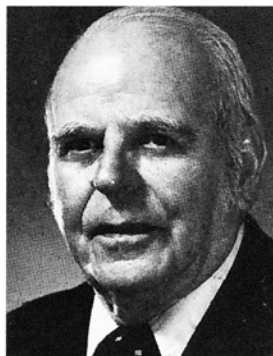


experimental medicine at the College de France. In February 1960, despite failing health, he traveled to New York to honor Peyton Rous on his eightieth birthday. Shortly after his return, he was found to have incurable cancer. A brilliant and erudite polyglot, a courteous and humorous friend, a cultured gentleman who lived in awe of nature, he greatly enjoyed the adventure of living and was unquestionably one of the great oncologists of our time.<sup>381,84</sup>



**O'BRIEN, FREDERICK WILLIAM** (1881–1965), was born in Boston. He received his education at St. Andrews in Poughkeepsie and at Woodstock College in Maryland. He had a B.A. degree from Boston College and graduated from Tufts University Medical School in 1911. After three years of general practice he sought

training in radiology and studied biophysics under William Duane at Harvard.<sup>501</sup> In 1918 he became an instructor in radiology at Tufts, and in 1930 became professor. A general radiologist, O'Brien favored radiumtherapy, and his counsel and expertise were sought primarily on matters of radiumtherapy. He was an early trustee of the ABR, a member of the ACR Board of Chancellors, president of the ARS in 1941, and of the RSNA in 1947. A pioneer of radiumtherapy in New England, he could be counted on to defend the proper indications for brachytherapy. In 1946 he delivered the Janeway Lecture on radium treatment of cancer of the cervix. He received an LL.D. degree from Boston College (1948) and the Gold Medal of the RSNA (1958). A kind, quiet gentleman of inspiring wisdom, always neatly attired with a lapel gardenia, he spoke elegantly and was widely esteemed. He died on 20 December 1965, at eighty-five. He was survived by his wife, the former Marie Therese Foley, and by two sons, Fred Jr. and Richard, both radiologists.



**PARKER, HERBERT MYERS** (1910–1984), was born in Accrington, Lancashire, England, on 3 April 1910. He received his master of sciences degree from the University of Manchester in 1931, and shortly afterwards was appointed research physicist of the Holt Radium Institute. He worked out the elegant

mathematics that gave birth to the Paterson-Parker dosimetry. Coming out of a conference with Paterson, Parker is said to have declared: "R.P. has just repealed Ohm's Law."<sup>452,453</sup> In 1938 he emigrated to the U.S., and took a position as physicist of the Tumor Clinic of the Swedish Hospital of Seattle, Washington. In collaboration with Simeon Theodore Cantril (1908–1955) and Franz Buschke (1902–1983), he wrote one of the earliest books on supervoltage roentgenotherapy. In 1942 Cantril introduced him to Arthur Holly Compton (1872–1962) in Chicago, where Parker entered the Metallurgical Laboratory of the Manhattan Project. With Cantril, Ernest Omar Wollan (1902–1984), and Karl Ziegler Morgan (1907–), he assumed responsibility for radiation surveillance and protection of atomic researchers, an activity that came to be called "health physics." He was assigned to the Clinton Laboratories (Richland). Parker developed a rigorous program for the protection of thousands of workers. After the war, he originated the concepts of physical (rep) and biological (rem) doses, the direct ancestors of the Gray and Sievert units. He became director of the Hanford Laboratories, and remained active in international committees concerned with radiation protection and standards. He received the Janeway Medal of the American Radium Society, the Coolidge Award of the American Association of Physicists in Medicine, and the Distinguished Service Award of the Health Physics Society. Parker died of cancer of the lung on 5 March 1984.



**PATERSON, EDITH ISOBEL IRVINE MYFANNY JONES** (1899–), of Welsh ancestry, graduated from the medical school of the University of Edinburgh in 1923. She received training in pediatrics in San Francisco and in Saint Louis. In January of 1930, in Manhattan, she married her class-

mate Ralston Paterson. At the Holt Radium Institute of Manchester she was relied on as a fine clinician. She took particular interest in pediatric radiotherapy and developed protocols for treatment of cerebellar tumors. In their daily work at the Holt Radium Institute she was considered an equal partner. In 1962 she retired with her husband to their farm in Moffat in the Southern Uplands of Scotland, and dedicated themselves to breeding and marketing sheep, which she continued after his death.



PERTHES, GEORG CLEMENS (1869–1923), was a Leipzig surgeon, senior associate of Hermann Heineke, and director of the Polyclinic Institute of Leipzig. He was interested in the biologic effects of radiations, and demonstrated their effects on growth by irradiating one wing of a newborn chicken with resulting

asymmetry.<sup>467</sup> He was also credited with advocating homogenization of irradiation throughout the irradiated tumors. He moved to Tubingen, where he operated on Heineke, who died of post-operative peritonitis. He also wrote Heineke's obituary.<sup>468</sup> Perthes died in 1923, at fifty-four.



PERUSIA, FELICE (1885–1959), was born in Milan on 16 December 1881, and received his medical degree from the University of Pavia. On a fellowship, he received instruction in radiology under Albers-Schönberg in Hamburg and Holzknacht in Vienna. He was professor of medical pathology in 1913 and served in the Italian

army during World War I, establishing guidelines for the use of radiology. In 1914 he founded the journal *Radiologia Medica*, of which he remained editor all his life. In 1925 he became professor of radiology of the University of Pavia, and within a year was transferred to the University of Milan. As director of radiotherapy of the Istituto Nazionale dei Tumori he gradually became the undisputed higher authority on radiation oncology in Italy. He wrote an extensive treatise on roentgen- and curietherapy of tumors, and created a center for the education and training of young therapeutic radiologists. A notable teacher and

researcher, he was a man of stern character. A frequent attendant at international congresses of radiology, he was in Munich for the seventh congress, but knew already it would be his last. He died a few weeks later on 18 December 1959, two days after his seventy-fourth birthday.

PETERS, VERA (1911–), was born in Toronto on 28 April 1911, and received her M.D. from the University of Toronto in 1934. She trained with Gordon Richards at the Ontario Cancer Institute, now part of the Princess Elizabeth Hospital. She became Senior Radiation Oncologist and also Associate Professor of Biophysics and of Radiology at the University of Toronto. She is known for her early advocacy of extended field irradiation in Hodgkin's disease.<sup>571c</sup> A modest and kind physician, she received honorary degrees from York University and Queen's University. A member (CM) and an officer (OC) of the Order of Canada, she was twice vice-president of the ARS and received the Bécélère Medal and the ASTRO Gold Medal. A life member of the Canadian Association of Radiologists and of the Canadian Oncology Society, she is now Professor Emeritus of the University of Toronto.



PFAHLER, GEORGE EDWARD (1874–1957), was born in Numidia, Pennsylvania, the son of Sarah Stein and of William H. Pfahler. He received his M.D. degree from the Medico-Chirurgical College, then served a three-year residency at the Philadelphia General Hospital. During this period he was in charge

of the fledgling radiological laboratory. In 1902 he was appointed professor of symptomatology at the Medico-Chirurgical College and was in charge of radiology. In 1909 he was clinical professor of radiology, and in 1911 became a full professor. In 1916, when the College merged with the University of Pennsylvania, he was professor of radiology in the Post-Graduate School. Pfahler was a charter member and president of the ARRS (1909), president of the ARS (1921), and first president of the ACR (1923). The ACR accepted his gift of a ceremonial gavel made of the tusk of a mammoth which had been embedded in an Alaskan glacier for 250 centuries. He was a member of the executive committee of the first International Congress of Radiology (1925). During the third International Congress in Paris, 1931, he was present at

an ACR extraordinary convocation to deliver a Gold Medal and an honorary ACR fellowship to Marie Curie. A general radiologist, Pfahler had a special interest in radiotherapy. At a time when fractionation was greatly discussed, he was the principal advocate of the saturation method.<sup>469</sup> A fine gentleman, widely recognized as the quintessential pioneer of American radiology, he received gold Medals from all the major national societies and honorary memberships in foreign societies. He also received the Bécclère Medal from the hands of Bécclère's daughter. He died in 1957, at eighty-three.



PIERQUIN, JEAN (1887–1958), was a native of Charleville, Ardennes, France. He went to Paris to study medicine, and was a student *extern* serving in the departments of medicine and surgery. He also studied under Antoine Bécclère in 1910, then working with gas tubes and 50 kilovolt units. During World War I Pierquin

was made a prisoner. On his return he was recommended to Regaud by Bécclère, thus becoming associated with his classmate and friend, George Richard. They both were valuable collaborators in the hospitalization service of the Radium Institute at the Hôpital Pasteur. Painstakingly they contributed to the early development of brachytherapy techniques using radium with platinum needles, and measuring millicuries destroyed as dosimetry. After World War II he spent the last ten years of his life as radiotherapist at the Hôpital Saint Antoine of Paris. A modest and honest man, he was an unpretentious pioneer of radiotherapy. He died in 1958, at seventy-seven. He was survived by his son Bernard.



POHLE, ERNST ALBERT (1895–1965), was born in Wiesbaden, Germany. He received his M.D. degree from the University of Frankfurt-am-Main in 1921, and did postgraduate work under Friedrich Dessauer (1881–1963) at the Institut für Physikalische Grundlagen der Medizin in Frankfurt. In 1923 he came to the United

States and was first an assistant roentgenologist at the Mount Sinai Hospital of Cleveland. At the invita-

tion of Preston M. Hickey,<sup>B</sup> he became an assistant professor of roentgenology at the University of Michigan Medical School in 1925. While in Ann Arbor, he completed the requirements for a Ph.D. in biophysics and, shortly afterward, was appointed the first professor and chairman of the Department of Roentgenology at the University of Wisconsin. He installed a radium emanation plant for the production of radon seeds, and established Madison as a radiation therapy center. In 1938 he published a book, *Theoretical Principles of Roentgentherapy*, and edited a text, *Clinical Roentgentherapy*, containing a variety of chapters by American and European authors. These were among the few available authoritative works in English and were widely-used reference books for years. In 1951 he installed in his department one of the few one-million volt units. He retired in 1961, and died at seventy in 1965 from the consequences of a minor accident in his Shorewood Hills home.

POLK, WILLIAM MACKLEBURG (1844–1918), a Tennessean and a Confederate captain who became a graduate of New York's College of Physicians and Surgeons. He was first a professor of gynecology at New York University, and became the first dean of Cornell's Medical College. Dean Polk was one of Ewing's most trusted friends, who gave, said Ewing, "unswerving personal loyalty, loyalty in the pinches, where it counts."<sup>177</sup>



PONZIO, MARIO (1885–1956), was born in Turin on 12 August 1885. He became professor of radiology and electrology at the University of Turin and, from 1915 to 1952, was director of the Institute of Radiology of the Mauriziano Hospital in Turin. Ponzio was a recognized Italian pioneer of radiology and was respected as

an authority in radiation oncology. In later years he suffered eighteen surgical interventions and the eventual amputation of a hand. He died on 8 September 1956. His name is engraved on the stelae of the Saint Georg Hospital of Hamburg.



PORTMANN, URSUS VICTOR (1887–1966), was born in Jackson, Minnesota, and received his M.D. degree from Western Reserve University in 1913. He served an internship at the Saint Vincent Hospital, then entered the Cleveland Clinic, where in time he became director of the department of radiotherapy. He was certified in therapeutic radiology by the ABR in 1934. In 1950, Portmann edited a book of contributed chapters on *Clinical Therapeutic Radiology*.<sup>470b</sup> He was a sincere advocate of the practice of radiation oncology and, in 1959, wrote an eloquent article on therapeutic radiology as a specialty.<sup>470c</sup> In the 1960s he retired to Arizona. He died on 17 August 1966, at seventy-nine.

PRUDDEN, THEOPHIL MITCHELL (1849–1924), was an associate of Professor Francis Delafield, with whom he co-authored a *Textbook of Pathology*, known among students as “D and P.”<sup>134</sup> Prudden became professor of pathology at Columbia, and is considered a pioneer of modern pathology in the United States. A man of versatile interests, he is also known for his work and publications on the pre-historic cliff-dwellers of the American Southwest.



PUSEY, WILLIAM ALLEN (1865–1940), was born in Elizabethtown, Kentucky, on 1 December 1865, the son of a physician and heir of Quaker pioneers. He received an A.B. degree from Vanderbilt University in 1885, and an M.D. degree from New York University in 1888. Following graduation, he spent time at the

Skin and Cancer Hospital of New York and visited dermatologic clinics in Europe. In 1893 he settled in Chicago, specializing in dermatology. In 1897 he was appointed professor of dermatology at the College of Physicians and Surgeons of Chicago. He acquired an early interest in x rays and their application to the treatment of skin diseases, a subject that enhanced his leadership in the specialty of dermatology. He is credited with having been the first to treat a patient with chronic lymphogenous leukemia by x rays. In 1903, together with William Caldwell,<sup>B</sup> he published

an influential book on x rays in diagnosis and therapeutics.<sup>473</sup> A prolific writer, he authored books on dermatology and also on history. As treasurer and later president of the AMA, he introduced important reforms. But he remained principally a well-recognized and respected dermatologist. He died in his home in Chicago, on 29 August 1940, at seventy-four.



QUICK, DOUGLAS (1891–1966), was born in Canada and received his M.D. degree from the University of Toronto in 1914. He served an internship at the New York Welfare Island from 1914 to 1916, then was appointed attending surgeon at the New York City Hospital, where he worked from 1916 to 1921. Quick became

one of Ewing's earliest recruits for the staff of the Memorial Hospital. He was primarily in charge of the treatment of patients with cancer of the oral cavity, pharynx, and larynx, and worked with Janeway in the development of appropriate radium treatment for these tumors. In 1926 he was president of the American Radium Society. He was head of his department until 1932, when he entered into some disagreement with his peers as to the use of radium, and left the Memorial Hospital. Although originally a surgeon, he became primarily known for his use of radiumtherapy and in particular of radon “seeds.” He was certified in therapeutic radiology by the ABR in 1934. He was radiotherapist to the Roosevelt Hospital. In 1937 he delivered the Janeway Lecture on the treatment of cancer of the larynx. In the 1950s a loan permitted the construction of a 50 gram radium telecurietherapy unit designed by Failla and put under Quick's charge. He was an early trustee and examiner for the ABR. A man with various shifting activities, Douglas Quick's professional influence declined, and he died a pauper where his professional life had begun: at the New York Welfare Island, in 1966.



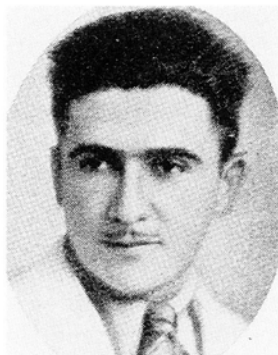


QUIMBY, EDITH HINKLEY (SEALY) (1891–1982), was born in Rockford, Illinois, on 10 July 1891. A B.A. graduate of Whitman College (Walla Walla, Washington), she taught high school science at Nyassa, Oregon in 1912, then obtained an M.Sc. degree from the University of California at Berkeley, where she met and

married Shirley Leon Quimby. They moved to New York, where he was to do graduate work as an instructor in physics at Columbia University. She took a position as assistant physicist at the Memorial Hospital in 1919. As an assistant, she developed activities of her own that brought her personal recognition and a wide following. In addition to the studies of filtration and depth doses she did with Failla, she published pioneer work in the study of time-dose relationships, and pioneered in the trials of radioactive sodium and iodine.

An educator by choice and a didactician by gift, she started teaching physics to residents in radiology before there was an American Board of Radiology. At Cornell, and later at Columbia, she taught a course of weekly lectures on radiation physics which, in time, was attended by over 1000 physicians, industrialists, physicists, and residents-in-training in radiology. With Glasser, Taylor, and Weatherwax, she wrote a compendium on the fundamentals of physics of radiations that was widely used by students.

She became a member of the American Radium Society and was its president in 1954. In 1966 she wrote the history of the ARS during its first half century. As a trustee of the American Board of Radiology, she established physics as part of the examination of residents in training. She received an honorary doctor of science degree from Whitman College and another from Rutgers University. She received the Janeway Medal and the Gold Medal of the RSNA. She and her husband lived in Greenwich Village and were avid theater goers. Her friends considered her an excellent cook. Quimby left a bevy of exceptionally well-trained hospital physicists. She died in 1982, at ninety-one.



del REGATO, JUAN ANGEL (1909–), was born in Camagüey, Cuba, on 1 March 1909, the son of Damiana Manzano Nuñez, of Mayan ancestry (Yucatán) and of Juan del Regato Castanedo, of Castillian ancestry (Santander). He received his high school education in Santa Clara, Cuba, from 1922 to 1926, then under-

took the study medicine at the University of Havana, from 1926 to 1930. He continued at the University of Paris, from 1930 to 1934. He received his M.D. degree after presentation of a thesis in 1937. He also followed a two-year course and received the Diploma of Radiophysiology and Radiotherapy of the University of Paris. He was an assistant at the Radium Institute of Paris and, early in 1938, came to the U.S. He was a Research Fellow of the National Cancer Institute (1941–43), Director of Radiotherapy at the Ellis Fischel Cancer Hospital, Columbia, Missouri (1943–48), and Director of the Penrose Cancer Hospital of Colorado Springs (1949–1974). He became Professor of Radiology at the University of South Florida, Tampa (1974–81), and Emeritus Professor of Radiology (1981–) and Distinguished Physician of the Veterans Administration. He has received doctorates from Colorado College (1969), Hahnemann University (1977), and Wisconsin College of Medicine (1981). He also received gold medals from the RSNA (1966), the ACR (1968), ASTRO (1977), and the AMA Scientific Achievement Award (1993).



REUTERWALL, OLLE GUSTAV MAGNUS (1888–1956), was born in Ankarsrum, Småland, on the Baltic coast of Sweden, on 13 October 1888. He spent his childhood in Finland, where his father worked as an engineer, receiving his elementary education in Dalsbruk and his secondary schooling in Turku, graduat-

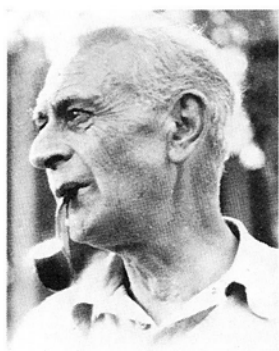
ing in 1906. He started his study of medicine at the University of Helsinki but, after his father's death, returned to Sweden and continued his studies at the Karolinska, graduating in 1912 and remaining as an assistant in pathology at the University Hospital from 1914 to 1917. He practiced medicine at the Sab-batsberg Hospital (1917–1923) and, during the same

time, was an assistant in forensic medicine (1920–1922). Reuterwall was the pathologist for the Radiumhemmet beginning in 1923. He became professor of pathology and forensic medicine at the Karolinska. He was director of the Institute of Radiopathology and professor of radiopathology from 1941 to 1954. He was in charge of cancer research, and became an authority on pathology of tumors. An unpretentious and humorous gentleman, Reuterwall lived in Danderyd, north of Stockholm, which was the center of operations for his boat. He repeatedly explored the Roslag archipelago, which he loved. He retired in 1954 for reasons of health, and died on 13 January 1956.<sup>437</sup>



RIACH, JEAN STEWART (1900–1974), a patriotic Scotswoman, received post-graduate training in the department of radiotherapy of the Radium Institute of the University of Paris (1932–34). This prepared her for assuming the directorship of roentgentherapy at the Marie Curie Hospital of London, an institution

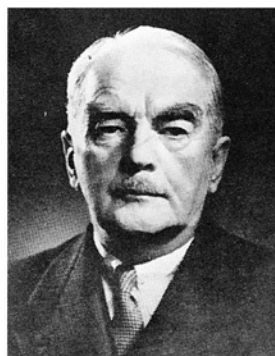
named for a woman, staffed exclusively by female doctors for the treatment of cancer in women. The hospital was opened in 1934, and Dr. Riach displayed her clinical ability as she implemented the methods of the French school. During World War II, the hospital suffered from V-2 bombardments and their radium was dispersed. The remains of the institution came under the direction of the Middlesex Hospital and were eventually reduced to a research wing of the Mount Vernon Hospital. Dr. Riach, an unmarried lady, died of cancer of the endometrium, at seventy-four.



RICHARD, GEORGES (1888–1962), was born in Langres (Bourgogne), on 16 February 1888. He had his secondary education at the College Diderot of Langres, and then went to Paris to study medicine. He and Jean Pierquin<sup>B</sup> were classmates and both served as *externs* under Bécélère. After World War I he was recom-

mended by Bécélère to work under Regaud, and was put in charge of the hospitalization service of the Ra-

dium Institute at the Hospital Pasteur. Richard contributed to the development of Colombia Paste that was so important in surface applications of radium. He also played an important role in the perfection of techniques of brachytherapy, both intracavitary and interstitial. An honest, religious, and modest man, Richard instructed dozens of foreign visitors in the disciplines of radiation oncology, while keeping himself modestly in the background and receiving little credit. After World War II he served as oncologic consultant to the Hospital Cochin. His fingers, overexposed by the handling of radium, became ulcerated and painful. He retired and, on 16 February 1962, died in poverty, as did many of the original workers of the Radium Institute. He was survived by his godson, Bernard Pierquin.



RICHARDS, GORDON EARLE (1885–1949), was born in Lyn, Ontario, in 1885, the son of a Presbyterian minister. He went to high school in Athens, near his hometown, and received his M.B. degree from the University of Toronto in 1908. He practiced briefly in British Columbia, and in 1911 initiated his study of

radiology. In World War I he served with the Royal Army Medical Corps at Lemnos and Alexandria. On his return from the Mediterranean, he became the first radiologist at the Toronto General Hospital and professor of radiology of the Toronto University. Successively, he was director of the Ontario Treatment and Research Foundation, and founder of the Ontario Institute of Radiology. An indefatigable pioneer, capable administrator, dedicated researcher, and capable teacher, he gave his abundant enthusiasm to the development of radiation oncology in Canada. He wrote papers on radiotherapy of cancer of the oral cavity, of the cervix, of the skin, and of the breast. In 1948 he was invited to deliver the prestigious Skinner Lecture in London. He inspired a host of his disciples who extended his work and constitute a monument to his memory. He died, at sixty-four, on 18 January 1949, of aplastic anemia resulting from his lifetime exposure to radiations.



**RIEBELING-ROBLES, MANUEL** (1904–1983), was born in Guadalajara on 4 November 1904, the son of Joaquina Robles and of Alejandro Riebeling. He received his M.D. degree from the University of Guadalajara, and had post-graduate training at the Mercy Hospital of Chicago, then visited European centers. He was

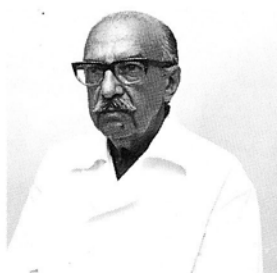
one of the first Mexican radiotherapists, and contributed greatly to the development of the specialty in his country. He was founder and director of the Tumor Clinic of the Civil Hospital of Guadalajara, and professor of Clinical Oncology of the University of Guadalajara. He was a charter member of the International Club of Radiotherapists. He wrote several books including some with reminiscences of his travels. He received a Medal from the President of Mexico for his fifty years of service. He died in 1983 and was survived by his wife, Joaquina Robles, and five children, one of whom, Manuel Jr., is a radiation oncologist.

**ROFFO, ANGEL H.** (1882–1947), was born in Buenos Aires, and presented his doctoral thesis in 1909 on the subject of cancer, to which he dedicated the rest of his life. In 1924 he was appointed director of the Institute of Experimental Medicine of the University of Buenos Aires. A dynamic leader, he guided the clinical and laboratory research of the various departments of the Institute. He founded the Argentine Society for the Study of Cancer and the League for the Fight Against Cancer, and also established the regular publication of the *Bulletin* of the Institute in which its workers published their results. Roffo is principally credited with his pioneer report on the production of cancer of the ear in rabbits by means of tobacco (1931), and also the experimental production of cancer of the skin of rats with ultraviolet rays (1935). He attended and contributed to the International Congresses of Cancer. He died in 1947, at sixty-five.



**ROLLINS, WILLIAM HERBERT** (1852–1929), was born in Charlestown, Massachusetts, the son of Sarah Stearns Patterson and John Rodman Rollins. His youth was spent in Lawrence, Massachusetts. He graduated from the Harvard Dental School (D.M.D. in 1873) and from Harvard Medical School (M.D. in 1879). Roll-

ins married Miriam Dunn, who was Dr. Francis Williams's sister-in-law. He became associated with Dr. Williams in the practice of medicine and made valuable contributions to the early armamentarium of radiology, with innovations adopted or simply appropriated by others. He wrote over two hundred short "Notes on X-Light" that were published in the *Boston Surgical and Medical Journal*. He privately published a book by the same title in 1904. Today a rare collector's item, the volume contains innumerable early designs of tubes, generators, and gadgets: it continues to amaze every historian who examines it. A shy, reticent, and modest man, he refused to attend meetings and did not believe in patents. He also contributed a great number of dental instruments that were orphaned or illegally appropriated and marketed by others. He developed an intraoral cassette and fluoroscope for utilization of X rays, dental hammers, burs, and root canal instruments. He wrote numerous articles with original ideas on dentistry, including porcelain inlays. He has been called the "Forgotten Man of Dentistry." He is also largely forgotten in radiology. He left over \$100,000.00 to the Smithsonian Institution as a Fund for Exploration Beyond the Boundary of Knowledge. Rollins and Williams, incidentally, were not actually brothers-in-law. Their wives were sisters, thus each was the brother-in-law of the other's wife. Their relationship is designated in Spanish as "co-cuñado" (co-brother-in-law) or "concuño." The English language, in all its richness, has no equivalent word!



**RÔXO-NOBRE, MATHIAS OCTAVIO** (1907–1979), was born in Jaú, Brazil, on 15 December 1907, the son of Eugenia Rôxo and Bolivar de Almeida Nobre. He graduated from the Ginasio in 1926, and received his M.D. from the University of São

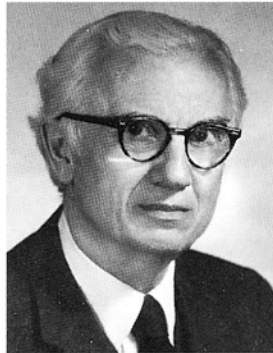
Paulo in 1934. He had an undergraduate surgical internship and, on graduation, served in the division of

surgical oncology. He had his training in radiation oncology at the Instituto de Radium of the Santa Casa de Misericórdia of São Paulo. In 1939 he was chief of radiotherapy at the gynecological clinic of the Instituto. In 1946, he became director of radiology at the Hospital Santa Cruz. He was an important protagonist in the Brazilian expansion of radiotherapy after World War II. He was a consultant to various institutions, director of the department of radiotherapy of the Antonio Prudente Foundation, and full professor of the faculty of science of the Santa Casa of São Paulo. A natural educator, he was devoted to the organization of conferences, symposia, and lectures on a variety of oncologic subjects, and to the recruiting and training of young therapeutic radiologists. He was a charter member of the International Club of Radiotherapists. He wrote several books and innumerable articles in Portuguese on aspects of radiation oncology. Rôxo was a virtuoso of the art of friendship across frontiers and languages, as well as a convivial host. He died on 25 May 1979 of cancer of the stomach. He was survived by his wife, Alice Dias, and by four daughters and a son.



SCHINZ, HANS RUDOLF (1891–1966), was born in Zurich on 13 December 1891, the son of Amalie Frei and of Hans Schinz, professor of botany. He received his M.D. degree from the University of Zurich and did post-graduate work abroad. In 1919, at the University of Zurich, he was appointed director of the Röntgen Institute,

which he transformed into a model institution. In 1931, during the third International Congress of Radiology, he made his acceptance speech in Latin as the president designate of the next congress to be held in Zurich in 1934. He was co-author of a famous textbook on radiodiagnosis that went into several editions in various languages. A brilliant and charismatic teacher, he organized courses attended by hundreds of German-speaking radiologists. In the early 1930s, Schinz and his associate Zuppinger<sup>B</sup> were responsible for designating the work of Coutard as the "protracted-fractional method." Schinz died on 14 June 1966, at seventy-five, after long suffering.



SCHULZ, MILFORD DAVID (1909– ), was born in Sister Bay, Wisconsin, on 12 December 1909, the son of Anna Fredericka Wilhelmina Luché and of the Reverend William George Schulz, a Methodist minister. He had a B.A. degree from the North Central College of Naperville, Illinois (1931), and his M.D. degree from

North Western University in 1936. He served an internship in the West Suburban Hospital of Oak Park, then entered training in general radiology at the Passavant and Northwestern University Hospitals of Chicago. He was certified in roentgenology by the ABR in 1940. He then took a job in Boston, where he worked until his retirement, and became pre-eminent among the American pioneers of radiation oncology. He was first an assistant at the Collis P. Huntington Memorial Hospital of the Harvard Cancer Commission, where he had early experience in super-voltage roentgentherapy with the earliest Van de Graaf unit. In 1942, he was appointed to the department of radiology of the Massachusetts General Hospital, which until then had no radiotherapist on its staff. For a quarter of a century Milford struggled in Boston against an ingrained prejudice against radiotherapy, a refusal to accept the exclusive practice of radiotherapy, and the resulting opposition to training young physicians as radiation oncologists--all this at a time when there were scarcely sixty radiotherapists in the nation. Schulz wrote on the results of super-voltage roentgentherapy of cancer of the bladder (1943), adding a review of all of the patients treated in an eight year period (1946). He published on the treatment of cancer of the eyelids (1949), as well as a chapter on supervoltage in Portmann's book on clinical roentgentherapy. In 1950 he co-authored, with the chairman of the Harvard department of radiology, the volume *Therapeutic Radiology*. In total he had over seventy-five publications to his credit. He was a charter member of the International Club of Radiotherapists (1953) and president of the American Radium Society (1959). After many years as assistant professor or associate clinical professor of radiology, it was only in 1970 that his faculty raised him to full professorship. His unparalleled odyssey in an outstanding medical center illustrates the bigotry with which therapeutic radiology struggled in its quest for academic recognition in the United States.

SEITZ, LUDWIG (1872–1961), received his medical education in Munich, and became professor of gynec-



cology and obstetrics at Erlangen and Frankfurt-am-Main. Concerned primarily with the treatment of cancer of the cervix, he and Hermann Wintz<sup>B</sup> in 1920 advocated courses of short intensive irradiation.<sup>468</sup> Their method was widely adopted in Germany and abroad, and "Seitz und Wintz" was an often quoted authority. Professor Emeritus Seitz died on 10 June 1961, at ninety.



SIEVERT, ROLF M. (1896–1966), became the physicist of the fledgling Radiumhemmet in 1919, assigned a room in the attic. Two years later, he published a paper on the isodose distribution around a radium needle. In 1922, he devised a small condenser ionization chamber which bears his name.

As director of the Institute of Radiophysics, a position he kept from 1932 to 1965, he was responsible for the licensing of all radiation work, medical or industrial, in all parts of Sweden. He pioneered the procedures for calibration and radiation protection. He was a long-time member of the International Commission on Radiologic Units and Protection, and served as its chairman from 1956 to 1962. He also played an important role on the Committee for the Effects of Atomic Energy of the United Nations. Sievert died on 3 December 1966.<sup>699</sup>

SIMON, SUZANNE, was a radiumtherapist of the Centre de Tumeurs of Brussels, Belgium. She kept meticulous records of the patients treated, which proved helpful to Ralston Paterson as he attempted to work out a reliable radium dosimetry.



SMITHERS, SIR DAVID WALDRON (1908–), was born in Knockholt, Kent, England. He went to preparatory school in Boxgrove and, at the age of thirteen, decided he was to become a physician. In 1926 he went to Clare College at Cambridge, where he received a more than adequate preparation for his eventual medical studies.

He then went to the Saint Thomas Hospital Medical School of London, from which he received his M.B. degree in 1933. He was attracted to cardiol-

ogy and, in particular, by the radiologic examination of the heart. A two-year course in radiology was being offered at the Royal Cancer Hospital, and he registered for it. At the Cancer Hospital surgery was paramount. It was there that William Ernest Miles (1869–1947) developed the abdomino-perineal resection for cancer of the rectum. In the cancer research laboratory of the hospital, Sir Ernest Laurence Kennaway had proven the carcinogenic power of hydrocarbons. But the hospital had no department of radiotherapy; it was carried out by the various surgeons according to their individual theories and methods. As a resident in radiology, Smithers would be summoned to receive verbal instructions from a surgeon as to the roentgentherapy he wished his patient to receive. The treatment facilities of the department of radiology were meager. Meanwhile, clinical radiation oncology was blossoming at the Middlesex Hospital under Windeyer and at Manchester under Paterson. In the process of creating and developing a department of radiotherapy, the stronger support came from Mayneord and his department of physics. In time the steady enhancement of radiation oncology at the Cancer Hospital brought attention and foreign visitors. A compassionate physician, Smithers kept an interest in patients with cancer of the breast, testicular tumors, malignant lymphomas, and leukemias. Manuel Lederman<sup>B</sup> took charge of those with cancer of the upper air passages, and Harris Julian Carter Bloom (1923–1989) of cranial tumors and cancer of the urinary tract. Their work contributed substantially to progress in these areas. The University of London recognized Smithers as professor of radiotherapy. A researcher with a brilliant mind and refined tastes, Smithers maintains that an artistic leap of the mind may be the initial step in the critical challenge of testing an idea by observation or experiment, and that an interest and appreciation of the arts is an advantage and perhaps even a necessity in the understanding and pursuit of a philosophy of science. After years of sustained efforts, he and Mayneord succeeded in building the Surrey extension of the Royal Marsden Hospital for research. After thirty-eight years at the hospital, Smithers retired to Ringfield in his hometown. Sir David and Lady Marjorie have become prize-winning rose growers. For a time he was in frequent demand for radio and television interviews on the socio-economics of medicine, but more lately has been conquered by his love of literature. An avid collector of books, he also writes them. His book *Dickens's Doctor* is an interesting account of physicians found in Dickens's writings. *Idle Trade* is a collection of fourteen short biographies of physicians who became famous men of letters. In support of this dual activity, he cites Anton Pavlovich Chekhov (1860–1904) in saying that medicine is his legal

wife and literature his mistress, that when he tires of one he spends the night with the other, but that neither suffers from his infidelity! Radiation oncology has been fortunate to have a man of Sir David's intellectual caliber as its advocate.

SNOOK, HOMER CLYDE (1878–1942), was born in Antwerp, Ohio, in 1878. He was a teacher of physics and chemistry at Xenia, Ohio, and at Meadville, Pennsylvania. He earned an M.A. degree in 1902 from Allegheny College, an M.Sc. degree in 1910, and a D.Sc. degree in 1926 from Ohio Wesleyan. Interested in induction coils, he undertook a series of experiments aimed at using both the direct and reverse high tension put through the x-ray tube. Searching for a synchronous means of achieving this, in 1907 he built a closed-core transformer and added a high-tension rotary switch, which he called the "interrupterless transformer" and others called simply the "Snook." It remained the best available generator until 1926, when hot cathode valves were introduced. In recognition of his contribution to the advancement of radiology, Snook received the Gold Medal of the ACR, as well as the Gold Medal of the RSNA. He died in 1942, at seventy.



SOLOMON, ISER (1880–1939), was born in Romania and had his secondary education there. He entered the Medical School of the University of Paris, where he graduated after presentation of a thesis in 1906. He was a naturalized French citizen that same year. As a student he was an *extern* under master clinicians.

While practicing medicine for a living, he studied physics, chemistry, and embryology and, in 1910, received the additional degree of Licentiate-es-Science at the Sorbonne. He was then attracted to radiology, and became an associate to Bécclère at the Hôpital Saint Antoine. In time he became Bécclère's successor as head of the department he had made a model for patient treatment. In 1921, Solomon introduced an ionometer of his design, and defined a unit of radiations, the *Roentgen* (R).<sup>54,496</sup> Both the ionometer and the unit were widely adopted and used for several years until the international unit, the *roentgen* (r) was established. In 1926, Solomon published a book on radiotherapy, which was well balanced with physics and radiobiology.<sup>497</sup> He wrote a total of sixty-eight papers, mostly on various aspects of radiotherapy. A

quiet and kind gentleman, he was greatly loved and admired. He died prematurely in 1939, at fifty-nine, after long suffering and surgical interventions. Shortly afterward, his eldest son, a distinguished physicist, was executed by the Nazis in Paris. His wife and daughter were sent to camps in Poland. His wife died there; his daughter, a physician, survived and, on her return, was elected to the French Chamber of Deputies.



STACY, LEDA J. (1882–), was born in Rochester, Minnesota, on 15 May 1882. She received her M.D. degree from Rush Medical College in Chicago in 1905. She went for a one-year internship to the Children's Hospital of San Francisco, one of the four hospitals in the U.S. that accepted women interns. She was there at

the time of the 1906 earthquake and fire. She then went to practice in Rochester. In January 1907 she entered the Mayo Clinic as an anesthetist, and one year later, became the eighth member of the staff of the clinic as an assistant in medicine. In 1915 she was appointed head of the section on radiumtherapy. In preparation for this assignment, she had spent time at the gynecological departments of Johns Hopkins Hospital of Baltimore and the Memorial Hospital of New York. Thus, she was among the first to use proper techniques of intracavitary radium therapy for cancer of the cervix. In addition, she used radium for the treatment of menorrhagia in over six hundred patients, and wrote on the treatment of carcinoma of the vagina. In 1935, she left the Mayo Clinic and went to practice medicine in White Plains, New York. In November 1966, after sixty years in the practice of medicine, she retired.



STENSTRÖM, KARL WILHELM (1891–1973), was born in Göteborg, Sweden. In 1919, preparing his doctoral thesis under Karl Manne Georg Siebahn (1876–1979) at the University of Lund, he found spectrographic evidence of departures from Bragg's law where, for varying angles of refraction, the wavelength did not remain the same but became larger.<sup>502</sup> A re-

port of Stenström's work read at the French Academy of Sciences impressed Compton, who confirmed the findings experimentally. Thus, Compton wrote that secondary rays show a distinctly larger wavelength, a fact he had denied previously. He then made the first suggestion of recoil electrons, later known as "the Compton effect." Stenström emigrated to Boston and worked under William Duane, who had developed a radon extraction plant. He went to the Roswell Park Memorial Institute to install one such plant and remained. There he made his studies on fractionation. In 1926, he went to the Cancer Institute of the University of Minnesota to install a radium emanation plant. Although not an M.D., he remained there, virtually in charge of the Division of Radiotherapy for forty-five years. Stenström wrote over one hundred papers with his observations on the treatment of cancer. He also wrote a book on physics of radiations and another on radiotherapy. He was an early advocate of extended field prophylactic irradiation in Hodgkin's disease. Shortly after his retirement, he died in Florida on 7 February 1973.



STONE, ROBERT SPENCER (1895–1966), was born in Chatham, Ontario, and began his study of medicine at the University of Toronto. During World War I he served and was wounded in France. He later taught anatomy at the Peking Union Medical College (1919). In 1924 he received his M.D. degree from the

University of Toronto, and served an internship (1924–25) at the Toronto General Hospital. He then became an associate of his compatriot Rollin Howard Stevens, receiving training from his senior associate while practicing general radiology at the Grace Hospital of Detroit (1925–1928). He was then appointed radiologist to the out-patient department of the University of California Hospital at San Francisco, then a dependence of the department of surgery. In 1934 he was among the few American radiologists with a one million volt supervoltage unit. He compared its skin reactions with those of a 200kv unit. In 1939 he became the first professor of radiology of the University. In 1940, with John Lawrence and Paul Aebersold, he was the first radiologist to participate in the use of neutrons for the treatment of malignant tumors.<sup>509b</sup> During World War II he was given a leave of absence (1943–1946) to assume the responsibilities of the Division of Health of the Metallurgical Laboratory, and was appointed visiting professor of radiol-

ogy of the University of Chicago. After the war he had the opportunity of using a re-activated 70 million volt synchrotron for the treatment of patients. Most of Stone's earliest papers were on radiodiagnosis, and the later ones mostly on the use of isotopes and on radiation protection. Although he was privileged with the early use of supervoltage and of neutrons, he made no transcendental clinical contributions to radiation oncology. A quiet, highly dedicated administrator and honest man whose opinions were often sought, he enjoyed the affection of his associates and residents. He received the Medal of Merit for his work in the Manhattan Project, and the Gold Medals of the RSNA (1946) and of the ACR (1959). In 1947 he delivered the Janeway Lecture of the ARS. Dr. Stone died on 18 December 1966. He was survived by his widow, the former Willona Rose Crawford, and their son Robert and daughter Margaret.



TAYLOR, LAURISTON SALE (1902–), was born in Brooklyn on 1 June 1902, the son of Nancy Bell Sale and Charles Taylor. He studied at the Stevens Institute of Technology (1920–22), and received an A.B. degree from Cornell University in 1926. He joined the Bureau of Standards in 1927, and was in charge of

the x-ray division and chief of the radiation physics laboratory. In 1928 he was one of the five members who planned and operated the International Committee on Radiation Protection (ICRP) under the second International Congress of Radiology held in Stockholm. He would hold the position of chairman for many years. He was also a member of the National Council for Radiation Protection and Measurements (1929–1960) and chief of the Biophysics Branch of the Atomic Energy Commission. In 1954 he delivered the Janeway Lecture of the ARS on the subject of education and protection. Taylor received the Sylvanus Thompson Medal of the British Institute of Radiology, and the RSNA (1954) and ACR (1965) Gold Medals. Dr. Taylor's lifetime dedication to the study of radiations, dosimetry, and protection is unparalleled.



TELLEZ-PLASENCIA, HELIODORO (1878–), was an early and dedicated Spanish radiation oncologist. He published atlases of isodose curves and practical details of technology. He was chief of physiotherapeutic services at the Casa de Salud Valdecillas of Santander. He headed the Spanish delegation to the fourth International Congress of Radiology in Zurich, 1934. He died after the civil war in the late 1930s.

He died after the civil war in the late 1930s.

TESCHENDORF, WERNER (1895–), was a German general radiologist who designed practical equipment. He also was one of the few to have experience with therapeutic total-body irradiation.



THORAEUS, GUSTAV ROBERT (1895–1970), was born on 6 October 1895, in Mönsteras, Kalmar, Sweden, to Hilma Augusta Andersdotter and Frank Gustav Carlsson. He finished his secondary education in 1914, and received a degree in civil engineering in the Tekniska Högskola of Kalmar in 1919. After practicing as an engineer, he became a student of physics at the University Lund (1922–1923) and then became an assistant in the department of physics at Uppsala. With Professor Siegbahn, Thoraeus did work in spectrography of radiations and on a high vacuum spectrograph for x-ray measurements from 1923 to 1926. In 1927, he became an associate of Sievert in the department of physics of the Radiumhemmet. In 1932, he developed the composite filter for radiation therapy that bears his name. He also worked to perfect the ionization cloud chamber. In 1958, he was appointed head of a new department for clinical radiation physics at the Radiumhemmet, and became responsible for expansion of the radiotherapeutic equipment to include  $\text{CO}^{60}$ , cesium, and newly developed accelerators. He was a regular member of the Commission on Radiological Units and Protection of the International Congress of Radiology. A generous, open-hearted, and optimistic man with friends in many countries, Thoraeus died on 11 September 1970.

He finished his secondary education in 1914, and received a degree in civil engineering in the Tekniska Högskola of Kalmar in 1919. After practicing as an engineer, he became a student of physics at the University Lund (1922–1923) and then became an assistant in the department of physics at Uppsala. With Professor Siegbahn, Thoraeus did work in spectrography of radiations and on a high vacuum spectrograph for x-ray measurements from 1923 to 1926. In 1927, he became an associate of Sievert in the department of physics of the Radiumhemmet. In 1932, he developed the composite filter for radiation therapy that bears his name. He also worked to perfect the ionization cloud chamber. In 1958, he was appointed head of a new department for clinical radiation physics at the Radiumhemmet, and became responsible for expansion of the radiotherapeutic equipment to include  $\text{CO}^{60}$ , cesium, and newly developed accelerators. He was a regular member of the Commission on Radiological Units and Protection of the International Congress of Radiology. A generous, open-hearted, and optimistic man with friends in many countries, Thoraeus died on 11 September 1970.



TOD, MARGARET CHRISTINE (1900–1953), a graduate of the University of Edinburgh and a surgeon, was associated with Paterson and became deputy director of the Holt Radium Institute of Manchester.<sup>46b</sup> She collaborated in the development of intracavitary applications of radium and the concept of ovoids for the

treatment of cancer of the cervix. She also wrote on the treatment of cancer of the endometrium. She died prematurely, at fifty-three.

WALTER, BERNARD KURT (1861–1950), was a physicist of the State Physics Laboratory of Hamburg. On the announcement of Röntgen's discovery, he quickly obtained a Crooke's tube from Carl Heinrich Florene Mueller (1845–1912), glassblower, and a Ruhmkorff coil from Frederick Wilhelm Richard Seifert (1862–1929), a manufacturer of electric components. Walter made his public demonstration of the taking of a radiograph of a hand in Hamburg on 15 January 1896. Mueller and Seifert became the first commercial manufacturers of X-ray units. Walter and Seifert later contributed to an early book on roentgenologic technique.<sup>7</sup>

WARTHIN, ALDRED SCOTT (1866–1931), was born 21 October 1866, the son of Eliza Margaret Weist, of German ancestry, and of Edward Mason Warthin, of English ancestry. In 1887 he received a teachers diploma in music while attending the University of Indiana. He first studied and taught botany. He then went to Michigan where he received his M.D. degree in 1891, and Ph.D. in 1893. Following graduation he became an instructor in internal medicine and in 1895 in pathology. He spent his summers in Europe learning pathology. He taught for thirty-nine years. He had a great interest in malignant neoplasms and did a classical study of heredity. In 1907 he made a histologic study of the effects of irradiation of the kidney by x-rays, one of the earliest demonstrations of radiobiologic interest in the U.S.<sup>653</sup> But it is his description of the papillary cystadenoma lymphomatosum, known as the Warthin tumor of the parotid, for which he is most remembered. He died on 23 May 1931, at sixty-five.

WIDMANN, BERNARD PIERRE (1890–1971), was born in Johnstown, Pennsylvania, on 21 July 1890,



the son of Magdalena Graf, of Swiss ancestry, and of John Widmann, of German extraction. He received his M.D. degree from the Medico-Chirurgical College of Philadelphia in 1916, and served a one-year internship at the College Hospital. During World War I he served as a lieutenant and was assigned to radiology. In 1922 he was appointed assistant professor of radiology in the Graduate School of the University of Pennsylvania, and rose to full professor in 1934. He was a trustee of the ABR from 1937 to 1964. An associate as well as a student under Pfahler, Widmann was among the rare general radiologists who favored the practice of radiotherapy. He had few publications, but was seriously interested in radiation oncology.<sup>857b</sup> He was president of the ARRS in 1952. A kind and considerate man, he was loved by many of his colleagues. He died on 21 February 1971, at eighty-one.



WINTZ, HERMANN (1887–1947), was a German surgeon turned radiologist. His name and that of Seitz<sup>B</sup> were forever linked by the method of intensive short courses of roentgentherapy which they advocated.<sup>568</sup> Their approach enjoyed a wide popularity until the value of fractionation was properly understood.



WITHERS, SANFORD MARTIN (1891–1938), was born in Clearwater, Missouri, in 1891, and received his M.D. degree from Washington University, Saint Louis, in 1919. He practiced general radiology in Denver and was a consultant to the Radium Corporation of Colorado. He organized a Tumor Clinic at the Denver General Hospital, and was president of the American Radium Society in 1921. In the early 1930s, Withers invited his radiological colleagues to a dinner at which he announced that on that day all radiodiagnostic equipment had been withdrawn from his office, and that thereafter he would practice radiotherapy exclusively. He was one of the few to be certified in Therapeutic Radiology by the ABR in 1934. Withers worked late hours on his well-kept records of patients, sitting at a desk in the drawers of which he kept some of his radium. He died of the consequences of radiation ex-

posure. His name is among the over four hundred engraved on the stelae of the Sankt Georg Hospital of Hamburg.



WOOD, CONSTANCE ANN POYSER (1897–1985), was born in Wolverhampton, Shropshire, England. She received her secondary education at the Wolverhampton School for girls and went to the Neunham College, then to King's College at Cambridge. She graduated in 1925, and then took the two-year course toward the D.M.R.E. diploma of radiology, which she received in 1927. For the next six years, until 1933, she was a clinical assistant in the Royal Cancer Hospital of London, and became interested in radiumtherapy of malignant tumors. She was appointed head of a team of researchers to work at the Ridinghouse Street Radium Institute. She endeavored to transform the empirical practices of radiumtherapy into scientifically conducted treatments, based on proper knowledge of radiophysiology and accurate clinical observation of reactions in the course of treatments of patients with oral pharyngeal and laryngeal cancer. She sought as much support as possible from the experience of others and frequently attended the follow-up clinics of the department of radiotherapy of the Radium Institute of Paris, in the company of her associate, Anthony Green. Her radiotherapeutic research was disrupted by war and then resumed at Hammersmith with her as director. In 1946, L.H. Gray was appointed to make their institution a leading center for research. Constance Wood was involved in the practical clinical utilization of the first linear accelerator of 8MEV in 1952. A quiet and modest lady, Connie was also a tenacious worker who accepted few compromises. In spite of opposition, she was also successful in having a cyclotron in her institution. She was a charter member of the International Club of Radiotherapists and attended some of its meetings abroad. She was president of the Section of Radiology of the Royal College of Radiology. Even after her retirement, she edited *Modern Trends in Radiology*. She died on 11 October 1985, at eighty-eight.



ZUPPINGER, ADOLF (1904–), was a close associate of Hans Schinz<sup>B</sup> in Zurich, and contributed to coining the expression “protracted-fractional method,” which was his interpretation of Coutard’s method. Together with Schinz, Zuppinger contributed greatly to shaping the practice of roentgentherapy in the Ger-

man-speaking world.<sup>704,705</sup>