MEMORIAL RESOLUTION

HENRY S. KAPLAN
(1918 – 1984)

Henry Seymour Kaplan died at home February 4, 1984, only four months after his lung cancer was identified. Ironically, he was a victim of the same disease that had killed his father when Henry was a boy of 15 and against which he had fought so effectively throughout his professional life. Henry was born April 24, 1918, and raised in Chicago where he attended the University of Chicago and then Rush Medical College where he earned his M.D. degree at the age of 22. He interned and trained in general radiology at Michael Reese Hospital and then completed his training as a Fellow with Leo Rigler at the University of Minnesota. From there he went to Yale as an instructor and then assistant professor in radiology. After three years he spent one year doing research at the National Cancer Institute in Bethesda and while there was recruited at age 30 to be professor and chairman of the Department of Radiology at Stanford.

At that time, both the Medical School and its Department of Radiology were a far cry from what they are today. Also, radiological practice in the Bay Area was largely in the hands of private practitioners many of whom did not look kindly upon this upstart who was trying to put Stanford's radiology on a fulltime salaried basis. As Henry related it, when he came to Stanford the Department had three non-shockproof machines for radiography and another for flouroscopy -- with bare wires carrying up to 200,000 volts, dangling above the patient. The Department had been primarily a service unit; and when Henry came, its faculty consisted of himself and one of us (H. H. J. - also from Yale) who had preceded him by just a few months. From that beginning Henry Kaplan built what is now considered one of the outstanding radiology departments in the world. When he resigned from the department chairmanship 24 years later and 13 years ago, the department had achieved essentially its present size and stature. Initially, Henry was the complete radiologist, and indeed his two books on angiocardiography, written together with Herbert Abrams and Saul Robinson, were at that time definitive and important ones.

During his 36 years at Stanford, Henry achieved distinction in several spheres. These include direct benefits to hundreds of individual cancer patients through his efforts as a physician and a radiation therapist; personal responsibility for major advances in his young and evolving clinical specialty, radiation therapy; personal responsibility for the nurturing and training of medical students and radiotherapists; the advancement of scientific knowledge relating to the etiology and treatment of cancer through laboratory experimentation; the advancement of medicine in general and cancer research in particular through his involvement in science planning and implementation nationally and internationally; and the development and maturation of Stanford's Medical School and indeed the University as a whole.

Although trained as a general radiologist, Henry's main interest was in cancer and radiation therapy, and just three years after he came to Stanford he met Ed Ginzton who, with W. W. Hansen and others, had been developing a new atom smasher, the linear accelerator. Henry could see that this device had characteristics that might make it especially applicable to cancer therapy. At his instigation and with his encouragement, the physics team built the first linear accelerator in the western hemisphere tailored expressly for radiotherapy. The machine was

installed at the old Stanford Hospital in San Francisco; and the first patient, a 7 months old baby with a malignant tumor (retinoblastoma) of the eye, was treated with it in 1956. Entirely by coincidence, the British had also been developing a medical linear accelerator and the two machines started service at about the same time. As Henry recounted one aspect of that treatment, it was necessary to provide shielding for all but the treated area: "I don't think I will ever forget the puzzled look on the face of the garage owner down on Fillmore Street when I asked to borrow a heavy-duty automobile jack, and then explained that it was to carry a huge block of lead with a pinhole in it, to enable us to position that pinhole day after day for six weeks directly opposite the tumor in the baby's eye, while missing the lens and cornea. That boy is now in his twenties and doing very well, with his vision in the treated eye intact.' Today, linear accelerators much like the original one developed by Kaplan and Ginzton are standard equipment throughout the world and radio-therapy owes much of its success to this major technical advance.

While that development was proceeding and Henry was increasing the Department's faculty (having recruited all of the undersigned, plus many others), he was pursuing laboratory research that stands as a milestone in our understanding of the biology of the malignant lymphomas. Henry had brought with him from Yale a small colony of highly inbred mice of a unique genetically pure strain, C57BL. He and his co-workers found these mice to be exquisitely sensitive to the induction of thymic lymphomas by exposing them simply to four small, non-lethal, weekly doses of radiation. Henry's group discovered too that this phenomenon could be blocked either by shielding a small volume of bone marrow during irradiation or by administering unirradiated bone marrow cells to the irradiated mice; and that indeed the disease could be induced without ever exposing to radiation the thymic cells that would ultimately become transformed into this malignant disease. It was from these observations that Henry, together with Miriam Lieberman, deduced that a virus must be responsible for the cell transformation, and they then succeeded in identifying, isolating, and characterizing this unique oncogenic virus. That 1959 discovery, showing the essential intermediation of a virus in the radiation induction of cancer, was germinal to much of Henry's research career during subsequent years. His dream of orchestrating a major multifaceted research program aimed at radiation cancer viruses culminated with the construction of his Cancer Biology Research Laboratory, which opened in 1975. There he initiated, designed, and supervised research that he continued to manage even during his final months when his own death was imminent.

Simultaneously with his research in mice, Henry attacked the problem of human lymphomas, their origin and treatment. He and Saul Rosenberg, together with many others, developed an aggressive treatment program to treat Hodgkin's disease, converting a disease that was almost invariably fatal within 10 years into one which can now be permanently cured in more than 80% of the cases. In the Cancer Biology Research Laboratory, he and his co-workers have established several in vitro cell lines of human lymphomas and related neoplasms, and have done crucial experiments to explain at the molecular level how the radiation leukemia virus is integrated into and transforms otherwise normal cells.

When Henry came to Stanford, it was rare for faculty members in clinical departments to become deeply involved in basic research. Henry could see that his school could never flourish and achieve excellence under the old rules. He strongly supported the goal of consolidating this Medical School with the rest of the University on the Palo Alto campus, while changing its faculty into a far more progressive and inquiring one. This was neither simple nor automatic, for

many of the established and influential faculty and administrative leaders were opposed to moving from San Francisco. Henry spearheaded the architectural development, and worked closely with Wallace Sterling, then president of the University, to place administrative control in the hands of progressive medical scientists. He had a major and decisive influence in identifying and recruiting key faculty members who were to provide essential impetus for the maturation of his school that is now so highly regarded universally. Throughout his career and never without significant opposition, that was sometimes honest and well-meaning and sometimes overtly malicious, he continued to fight to achieve the fruition of ideals that he held dear. Although he never avoided conflict, he never really enjoyed it; and his legendary antipathy to many medical school deans accrued at the expense of considerable heartache. In order that the dream of building a major center of education on the Stanford campus be achieved, he deemed it necessary to mount a relentless fight against complacency and vested interests, whether these resided in the faculty, the dean, or within the University's Board of Trustees. As Henry put it, the fact that "the Trustees had originally budgeted the total sum of six million dollars for the entire Medical Center project means either that the center was eventually built by mistake or by a ludicrous misunderstanding of anticipated costs."

At about the same time that Stanford was undergoing this renaissance in medical education, leaders in the field of radiology had come to the recognition that this field really embraced at least two separate disciplines, diagnostic radiology and radiation therapy. The latter was relatively under-populated with well trained physicians and was poorly funded. As one of the very first radiological scientists with major involvement in basic laboratory research, Henry rapidly became prominent in national concern politics, serving first as a relentless and searching judge of the quality of research proposals during his service on the Radiation Study Section and later as a member of the National Cancer Advisory Council. Henry is well known for his pithy sense of humor which, combined with his superb ability to turn a phrase, made him both a formidable proponent and highly respected and feared foe. While on the Study Section, he tried relentlessly to follow the dictum that what isn't worth doing isn't worth doing well. At the time Henry served on the National Cancer Advisory Council in 1960, there were about 120 radiotherapists in the United States and about twelve people being trained for that specialty. It was certainly clear then that radiation was the treatment of choice for many kinds of otherwise fatal cancer and that administering radiotherapy properly was more than a part-time job. This was reflected in the sentiment becoming widespread among its practitioners to separate the training of radiation therapists from that of diagnostic radiologists. As a direct consequence of an obviously compelling lecture by Henry to the National Cancer Advisory Council, a national committee was formed to look into this problem. Henry was chosen to head this committee, and then almost single-handedly designed programs for research and clinical training to build up radiotherapy. The result is that today radiation therapy is practiced by people trained exclusively in that specialty. The American Society for Therapeutic Radiology and Oncology, the definitive professional society that Henry helped to found in 1959, now has a membership of over 2000, 1145 of whom are board-certified radiotherapists. Another noteworthy involvement began when Henry was asked to serve as a consultant to the Yarborough Committee, the congressional committee that drafted the National Cancer Act of 1974. The committee was composed of spokesmen of several constituencies; but too few of the members were practicing and knowledgeable scientists.

Ever since the early fifties when the extramural research program of the National Cancer Institute was just beginning to gather momentum, Henry predicted the intimate, pervasive,

dominant, and largely benevolent role that the federal government would develop in cancer research. Somehow, Henry and this vitally important effort seemed to fit each other like hand and glove; he fed ideas to federal health policy makers, and when he was not the actual architect of the policies that were adopted by the NCI, he had the uncanny knack of finding programs that benefited his department. While gaining major financial support through grants and gifts, he never compromised his standards, nor would he tolerate blind conformance to rules or custom, or inefficiency, or what he considered sheer stupidity. Rather, he continually challenged complacency, and demanded that evidence be examined critically before conclusions could be accepted. In this and other qualities he was the ideal preceptor. He was universally recognized as the supreme and rare example of master clinician combined with superb scientist, and because of his rigorous intellectual honesty, his all-pervasive curiosity, his breadth of scientific understanding, and his uncanny ability to identify quickly and articulate the essentials of an argument or a thesis, he was the ideal teacher.

Henry surely must have been one of the most widely traveled physician-scientists in modern history, and yet he would never compromise his standards by visiting or in any other way lending support to countries whose policies ran counter to peace in the world, deliberate progress, and human dignity. Thus, he refused not only to attend congresses or accept invitations to the Soviet Union when that nation showed its contempt for the world by exploding megaton nuclear devices or to Argentina when that government was known to have severely compromised the dignity and rights of its citizens. He carried the same contempt for officials of our own government who were responsible for destructive policies and participated in public boycotts and demonstrations against them. It is likely, in fact, that his visible participation in an anti-Agnew/Nixon demonstration at a major scientific congress was responsible for his never being proposed subsequently for a high post in government health/science bureaus. His championship of individuals or groups who in his view were the victims of injustice or discrimination probably accounted greatly for his involvement in shaping the evolution of medical science in the state of Israel. Because of his admiration for the superb intellectual efforts, the dogged determination, and the magnificent successes achieved by Israeli scientists in the face of great adversity, Henry became closely identified with several major institutions in that country, a recognition that immediately became mutual and resulted in his being named to the Boards of Governors of the newly formed Ben Gurion University of the Negev in Beer Sheba, and of the Weizmann Institute in Rehovoth. In addition, he served on the Scientific Advisory Committee of the Sharett Institute of Oncology, Hebrew University-Hadassah Medical Center in Jerusalem. He was in the purest sense agnostic, so to attribute his involvement in the affairs of Israel to a sense of religious commitment or duty would, he would hasten to explain, be hypocrisy.

Henry's work output was simply prodigious. His innumerable successes and achievements, though certainly reflections of considerable genius, must be seen in the context of the enormous effort that he put forth -- studying, reading journals, working in the laboratory, seeing patients, and finally, serving as a devoted husband and parent. In addition to writing three books and editing five others, he was the author of 490 papers published in the scientific literature, mostly in peer-reviewed journals. Though he was senior author of most of these publications, he shared authorship with 295 others. His achievements, have not gone unrecognized, and he numbers among his honors the following: Phi Beta Kappa; Alpha Omega Alpha; Freer Prize for Excellence in Medicine, Rush Medical College; Harlow Brooks Medal, New York Academy of Medicine, 1959; Teplitz Award in Cancer Research, 1959; Distinguished Service Award, University of Chicago Medical Alumni, 1961; Chevalier de la Legion

d'Honneur, Republic of France, 1965; Fellow, American Academy of Arts and Sciences, 1968; Modern Medicine Award, 1968; Atoms for Peace Award, 1969; Order of Merit, Republic of Italy, 1969; Lucy Wortham James Award, James Ewing Society, 1971; Robert Roesler de Villiers Award, Leukemia Society of America, 1971; National Academy of Sciences, 1972; Esther Langer Award, Ann Langer Cancer Research Foundation, 1972; Annual National Award, American Cancer Society, 1972; Honorary Fellow, Royal College of Radiologists, United Kingdom, 1975; G.H.A. Clowes Award, American Association for Cancer Research, 1976; Prix Griffuel, Association pour le developpement de la recherche sur le cancer 'a Villejuif, France, 1977; First Annual Gold Medal, American Society of Therapeutic Radiologists, 1977; Ungerman-Lubin Award, St. John Medical Center, Tulsa, Oklahoma, 1978; First Medal of Honor, Danish Cancer Society, 1978; Lila Gruber Cancer Research Award, American Academy of Dermatology, 1978; first Charles F. Kettering Prize, General Motors Cancer Research Foundation, 1979; Gold Medal Award, Association of University Radiologists, 1979; Golden Plate Award, American Academy of Achievement, 1979; Meyer and Anna Prentis Award, Michigan Cancer Foundation, 1980; William Lister Rogers Award, San Francisco Regional Cancer Foundation, 1981; Gold Medal, American College of Radiology, 1981; Walker Prize, Royal College of Surgeons, Great Britain, 1981; Foreign Associate, Academie des Sciences, Institut de France, 1981; officier de la Legion d'Honneur, Republic of France, 1982; Hubert Humphrey Award, Boston University School of Medicine, 1983.

In 1972, he was named the Maureen Lyles D'Ambrogio Professor in the Department of Radiology; and he has been awarded three honorary Sc.D. degrees: from the University of Chicago, Hahnemann Medical College, and New York Medical College. In addition to serving on an endless list of committees and editorial boards, Henry was elected to the following offices: President (1966-67) and Board of Directors (1969-70), American Association of Cancer Research; President (1954-57) Association of University Radiologists; President(1974-79) International Association for Radiation Research; and President (1956-57) Radiation Research Society. He was generous in acceding to invitations to serve as visiting professor in various institutions and in accepting onerous committee memberships or other tasks, but he never failed to participate to his utmost and invariably made major contributions to these bodies. In recognition of his major achievements and contributions, Stanford University's Board of Trustees has created the Henry S. Kaplan Professorship in Cancer Biology. Candidates for that endowed chair are currently being considered and a choice is to be announced within the 1983-84 academic year.

While Henry was in medical school he met Leah Hope Lebenson who was then a student at the University of Chicago. They married in 1942 and while Henry served on the Yale faculty, Leah trained in psychiatry and social work at Smith College. They have two adult children, Ann and Paul. Leah enjoyed an incredibly rich and full life with Henry, sharing in the achievements as well as the frustrations that are inevitable in a career as busy and productive as his. Though he professed disdain for administrators in general, he would occasionally admit under pressure that this was largely for effect; so it was to the delight of their numerous friends and his own pride and considerable pleasure when Leah herself achieved deanhood -- a state that could not escape the inevitable teasing from those who knew this couple. (She is now Director of the University's Help Center.) Henry and Leah, both individually and together, developed an extraordinary circle of close friends. They enjoyed sharing their lovely home with their friends and their professional colleagues. Together they entertained graciously and with a style that has, unfortunately, almost gone out of fashion.

Although obviously a giant in his incredible array of achievements and activities, Henry Kaplan was above all a compassionate human being who agonized with every patient he treated. When asked in an interview roughly two months before his death how he would like to be remembered, he said, “I'd like to be remembered as somebody who has been basically kind and deeply concerned about his patients and very humane in dealing with them. At the same time I want to be remembered as somebody who was tough enough to be willing to fight the battles with a number of deans – battles that were needed to create and maintain high standards not just for our Department but for the School, and I guess I'd also like to be remembered as somebody with a reasonably good sense of humor, with a love of art and music and literature, and hopefully as a good husband and good father and a loyal friend.”

Malcolm A. Bagshaw, Chair
Henry E. Jones
Robert F. Kallman
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