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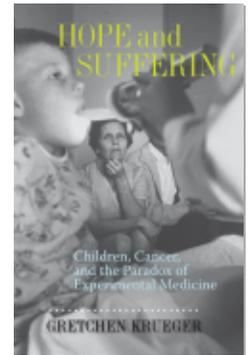
Hope and Suffering

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“Cancer, The Child Killer”

JIMMY AND THE REDEFINITION
OF A DREAD DISEASE

On the evening of May 22, 1948, Ralph Edwards, host of the popular radio program “Truth or Consequences,” introduced his audience to a special guest. He announced, “Tonight we take you to a little fellow named Jimmy. We’re not going to give you his last name, because he’s just like thousands of other young fellas and girls in private homes and hospitals all over the country.”¹ Without further explanation, the program commenced as Edwards prompted Jimmy to list his favorite Boston Braves players. Members of the team’s starting lineup filed into his hospital room one by one and presented the boy with autographed baseball memorabilia. Jimmy then joined the men in singing “Take Me Out to the Ballgame” and received special permission to attend a game the next day—a day designated as “Jimmy’s Day” at the ballpark. After his young guest signed off, Edwards told listeners that Jimmy was a twelve-year-old boy undergoing cancer treatment in Boston. He asked them to contribute money toward a television set for the boy’s room and, more generally, to aid “Jimmy and the boys and girls of America.”² Members of the show’s audience responded generously, reportedly donating more than \$200,000 to the fund and sending tens of thousand of get-well cards to Jimmy.³ By drawing upon child-centered fundraising strategies pioneered by other voluntary health agencies, the newly created Jimmy Fund and its mission to direct research and treatment toward childhood cancers were launched with overwhelming public support.

As Memorial Hospital for Cancer and Allied Diseases’s scientific and clinical activities grew and other investigators became interested in problems posed by this set of cancers, the images, voices, and stories of individual childhood cancer patients like Jimmy personalized the face of childhood cancer and helped transform childhood cancers from a set of nearly invisible diseases to a problem that attracted widespread public attention. Parents were expected to fear cancer, the “dread disease,” because of its unexplainable origin,

its associations with pain and suffering, and its incurability but, at the same time, maintain hope that scientific medicine would quickly develop a safe, effective cure for this deadly set of childhood diseases.

Children in Danger

The publication of *Cancer in Childhood* marked the beginning of pediatrician Harold Dargeon's child-centered work at Memorial. Although Dargeon characterized the prognosis of childhood cancer as "grave," he looked to earlier detection and record keeping as contributing important sources of knowledge that would result in better cure rates.⁴ Memorial was well positioned to facilitate large-scale studies and make comparisons among children's cancer cases, but several obstacles confronted physicians charged with this task. Cancer often mimicked other childhood diseases, and without a single, definitive laboratory test it was difficult to identify suspicious cancer symptoms and make an early, accurate differential diagnosis. In the nineteenth and early twentieth century, the most common symptoms of cancer—fever, lethargy, and wasting—were so similar to the many infectious diseases that they probably remained masked. As Dargeon noted, some tumors, including those of the brain or the central nervous system, followed a "subacute or almost chronic course" and "in 50 percent of the cases of brain tumors . . . the symptoms had lasted between two and six months prior to treatment."⁵ Thus, a number of children may have died with their illness undiagnosed and unreported.

Dargeon viewed systematic, comprehensive record keeping as a key arm of the cancer control effort. Conceding that childhood cancers were rare, he lamented the number of difficulties that hampered an accurate count. In the 1930s, cancer was not a reportable disease, so mortality rates could not be relied upon to determine its incidence. In the face of numerous infectious diseases at the time, public health officials did not consider cancer especially important, and the disease was neither well defined nor classified. The first hospital-based cancer registry was established in 1926 at Yale–New Haven Hospital. Dargeon warned, however, that the cases admitted to pediatric hospital wards often depended on the particular research interests of the staff. Therefore, tracking the number of children in wards or compiling autopsy records from hospitals could lead to misleading numbers. In addition, the first centralized state cancer registry (also in Connecticut) did not report data until 1935. Dargeon used mortality data from the Bureau of Records of the

Department of Health in New York City to demonstrate that, while the number of pediatric cancer deaths was not large, it was significant when compared to mortality from such childhood diseases as pertussis, congenital syphilis, cerebrospinal meningitis, measles, and scarlet fever. Statistics recorded by the U.S. Bureau of Vital Statistics in 1947 listed accidents as the primary cause of death in all children, but neoplasms followed as the second most common cause of death in children between the ages of five and nine and ten to fourteen. In the youngest cohort, ages one to four, neoplasms were listed fourth, behind accidental death, pneumonia, and congenital malformations.⁶

As part of his program on childhood cancer, Dargeon established the Children's Tumor Registry at Memorial Hospital to capture both a quantitative record of cases and a qualitative description of the common childhood tumor types. The registry attempted to more accurately measure infant and child mortality from childhood cancer.⁷ Sponsored by the American Academy of Pediatrics and supervised by Dargeon, the registry's data and services reached beyond the hospital's walls to physicians and young patients across the country. The registry facilitated two goals—increasing awareness within the medical community about childhood cancer and serving as a resource for physicians. Exhibits and slides highlighting common problems in children suffering from cancer were made from the cases submitted to the registry and displayed at medical meetings and medical schools. Physicians throughout the country could consult the registry when they encountered difficult or rare questions about their own pediatric cancer cases. Physicians working in remote locations could send clinical records, tissue samples, and other laboratory data for Memorial's specialists to review. If the initial cancer diagnosis was confirmed, physicians affiliated with the registry either recommended treatment procedures or accepted the child for care at Memorial. Free treatment was provided for needy patients and families. By recording cases from Memorial's own service as well as outside sources, the tumor registry became a valuable bank of knowledge and a tool for raising awareness of pediatric cancers.

In 1939, Memorial moved and expanded on a new site donated by John D. Rockefeller, Jr. The general education board and Edward S. Harkness, an oil magnate and American philanthropist, donated funds to build and equip the new institution. Notably, the enlarged hospital facility contained the seventeen-bed Helena Woolworth McCann Children's Pavilion, which primarily served young cancer sufferers from low-income families. Approxi-

mately 300 general cancer clinics existed throughout the United States, but this was the first designed especially to house children. Articles printed in newspapers and magazines highlighted the pavilion's "children's corner," an outdoor terrace that housed a slide and carousel, a classroom designed for young patients who felt well enough to complete schoolwork, and multipurpose areas for working on crafts or singing along to the piano. The corner was compared to a family's living room with its fireplace, furniture, and toys.⁸ Many photos also showed children gathered around a large, gaily painted wooden cart overflowing with balloons, plastic toys, dolls, and comic books that was regularly wheeled to the pavilion and outpatient clinic by volunteers and members of the recreation department staff. In contrast to the few photographs taken of young patients in the early 1930s that depicted bleak hospital rooms and ill children aided by slings or wheelchairs, images released by Memorial's public affairs department in the 1940s featured their expanding medical and social programs for children hospitalized for cancer.

A few years later, administrators at Memorial planned a dramatic expansion of facilities and services to increase its capacity. The major construction project that included the James Ewing Hospital, the Tower Building for Memorial Center outpatients, and the Sloan-Kettering Institute also included the McCann Children's Pavilion. To solicit funds for its annual campaigns, the public relations department used photographs of young children housed in these new spaces.

In some cases, the hospital's public affairs department masked or downplayed physical manifestations of cancer in photographs. Instead, they paired the sentimental images with provocative headlines, captions, or text to jar readers and amplify the impact of the photos. A photograph reprinted in dozens of regional newspapers featured three little boys in bib overalls walking together to the washroom toting toothbrushes, towels, and cups. In another image from the same series, one of the boys perched on a step stool to reach the sink. At first glance, such images seemed to be snapshots of healthy children caught in the midst of a simple, daily routine. The declaration "Cancer Struck All Three" and the stern warning "Guard those you love from this scourge of childhood," however, revealed the underlying message the publicity staff wanted to convey to donors.⁹

Similar techniques were also used in one of the most common types of publicity photograph—the holiday snapshot. Festivities with lavish decorations provided celebratory backdrops for many photos as children donned

Halloween masks, visited with the Easter bunny, and opened gifts from celebrities dressed as Santa Claus.¹⁰ The caption for one such image read, “An Easter Day party in the Children’s Ward of Memorial Center for Cancer and Allied Diseases. People often do not realize that cancer strikes children as well as adults. Yet more children in this country between the ages of 5 and 9 die of cancer than of any other disease.”¹¹ The stark contrast between the joyous scene filled with spring flowers and plush toy rabbits and grim facts about a little-known disease must have shocked viewers. The use of everyday images, grave statistics, and stern warnings alerted parents of this newly recognized menace to child health but provided little information about the signs of the disease, the limited treatments, or its deadly course. Instead, the staged publicity photos focused attention on the hospital’s growing pediatric spaces and services—the means for preserving and restoring child health. Photographs of patients in the children’s ward were used to raise funds for Memorial Hospital generally, not only for pediatric activities. Sentimental images showing children with cancer (only a small percentage of the total cancer cases) were commonly employed by public relations departments to solicit funds for all sufferers.

According to announcements about the newly opened facilities or appeals for construction funds, there was a dire need for Memorial’s initiatives. The section of the hospital’s 1947–1951 quadrennial report devoted to the pediatric service claimed, “Cancer and allied diseases now constitute a major child health problem.”¹² Memorial’s pediatric service claimed to be the first institution in the United States to “accept responsibility for all aspects of the control of childhood neoplasms,” including “demands for diagnosis, therapy, and rehabilitation of the patients, for research and for education on all lay and medical levels.”¹³ Despite the series of building expansion projects at Memorial and drastic increase in the number of child-focused activities in the 1930s and 1940s, the institution could not provide a bed for every ill child. Young patients from across the nation and around the world, from South America to Europe, flocked to this ward specifically dedicated to treating children with cancer. Children without reservations—even those whose families had traveled long distances—had to be refused admission. These children were diverted to other neighboring hospitals for care.

Memorial’s efforts reached beyond treatment to cancer education and detection with the opening of the Strang Prevention Clinic in January 1947. The American Cancer Society’s (ACS) educational campaigns had long encouraged adults to receive periodic cancer screenings. Establishing cancer centers,

dispatching mobile units, operating specialized clinics within industrial settings, and supplying specialized equipment to smaller hospitals helped the ACS cancer mission reach all geographic areas. These creative means of providing cancer prevention and treatment, however, focused only on adult patients. Dargeon, Strang's first director, taught other physicians and parents about the importance of periodic physical examinations of children at home and the clinic, warning that symptoms of other, milder childhood conditions such as persistent cough, headache, vomiting, or weakness that could all be due to cancer growth. He lamented such vague symptoms were often "ignored and shrugged off as unimportant by parents." Drawing on his own experience, Dargeon also found that parents who identified frightening signs did not seek treatment earlier because they assumed that cancer was always fatal. Targeting both areas of concern, he advised his colleagues, "increased vigilance in this group should bring many children under observation in time to effect a cure."¹⁴

In "Children in Danger," a *Newsweek* article describing the new clinic, a photograph showed two tables of children busily working on crafts as they waited to be called for their appointments. The image promoted the idea that the young visitors to the clinic often appeared perfectly healthy but needed to undergo a complete medical assessment to ensure wellness. The clinic's medical staff reported a number of disturbing observations: "One small boy had a persistent swelling on his leg which his careless mother dismissed as a 'bump.' Another child's eyes were strangely protuberant. A third's head changed its size so rapidly he needed a new hat every few months."¹⁵ The contradictory message conveyed by juxtaposing the image of "normal" children in the waiting room with Dargeon's warnings and the graphic descriptions of physicians' findings moved parents to action. Only two weeks after the clinic first opened its doors, appointments were filled for a year in advance.

This dim outlook toward cancer among laypersons and many physicians was warranted by a dearth of curative options, but Dargeon viewed life-prolonging therapy and experimental treatments as the best hope for achieving long-term survival. The outpatient clinic for pre- and posthospital observation dedicated part of its attention toward juvenile patients by maintaining a special pediatric clinic attended by two pediatricians and the resident. An article in *Reader's Digest* described the scene in room 102L of Memorial Hospital on Friday mornings, when children with acute leukemia returned for medical care. The head of both the hospital and scientific institute, Cornelius Packard Rhoads, expressed the depressing truth about leu-

kemia as he observed the children playing in 102L, “We can help only 25 percent of them and they have remissions only. Their disease will recur and recur, perhaps in more violent form.”¹⁶ When asked why physicians worked so diligently to keep the children alive when they faced certain death, he responded, “We’re moving faster now. Perhaps, before they exhaust their last remission, we’ll have something really good.”¹⁷

Leukemias, a set of cancers of the blood-forming tissues that affected children and, to a lesser extent, adults, merited guarded optimism from Rhoads and his colleagues. In the late nineteenth century, technological developments in microscopy had enabled physicians to observe particular blood components both qualitatively and quantitatively. New biological stains aided in the differentiation and classification of white blood cells, while hemacytometers, wells printed with a grid pattern, were used to count cells.¹⁸ With these tools, normal blood counts and diseased states were standardized, and in 1897 the pediatric textbook *The Diseases of Infancy and Childhood*, published by L. Emmett Holt, contained color drawings of blood cells in leukemia.¹⁹ In the twentieth century, physicians using blood counts and bone marrow aspirations definitively differentiated acute leukemia from other minor childhood illnesses. *Decreasing* platelets and hemoglobin levels alongside dramatic *increases* in leukocytes (white blood cells) signaled the presence of leukemia. Investigators found that children commonly suffered from the acute form of the disease, dying within weeks or months from uncontrollable bleeding or rampant infection.

Although Rhoads labeled the young patients “doomed,” the article encouraged readers to think of the Sloan-Kettering Institute, the research facilities associated with Memorial Hospital, as a “Tower of Hope.” Beyond simply diagnosing the disease, doctors were now able to briefly suspend its rapid progress in a small fraction of its patients. Many writers and parents looked to the promise of scientific research as their only source of encouragement when their child’s condition and the physician’s prognosis seemed bleak.

Leukemia brought Memorial Hospital and the Sloan-Kettering Institute’s staff of chemists, physicists, biologists, and clinicians together to analyze a common problem.²⁰ At Sloan-Kettering, a research facility funded by a \$4 million building grant by Alfred P. Sloan, Jr., chairman of the board of General Motors, Joseph H. Burchenal, Director of Clinical Investigation, supervised an extensive program that tested a variety of chemical compounds against transplanted cancers in mice and other animal models. Each week, dozens of chemotherapeutic agents arrived at Sloan-Kettering from com-

mercial laboratories, pharmaceutical companies, university scientists, and physicians. Promising results produced at Sloan-Kettering were then applied clinically at Memorial.²¹ The *Reader's Digest* article labeled Memorial Hospital the "Human Laboratory," yet noted, "the patients in Memorial are never used as experimental subjects. But virtually all patients beyond the help of surgery are willing to have new treatments tried on them."²² As at other research institutions, the line between patient and subject was blurred.

In the late 1940s, Memorial Hospital became a center for medical training opportunities in childhood cancer at the graduate and postgraduate levels. In 1948, the American Board of Pediatrics approved the Memorial Hospital pediatric residency to educate pediatricians in the diagnosis and management of tumors in children. Other pediatricians completed shorter rotations through the pediatric service at Memorial Hospital or attended lectures or courses given a few days a week on the problems of childhood neoplasms. Medical students received a portion of their training at Memorial and then disseminated their knowledge during their residency or practice. Thus, some children turned away from Memorial and sent to other area hospitals still benefited from the institution's programs. Despite this new, advanced training program and the other child-centered activities pioneered at Memorial in the 1940s, the public soon became aware that a diagnosis of acute leukemia or other common childhood cancers equaled a certain death sentence for children.

Cancer, The Child Killer

Cancer had long inspired alarm among laypersons because of its associations with pain, disfigurement, and inevitable death. In 1913, the American Society for the Control of Cancer—renamed the American Cancer Society in 1944—began to lead public education efforts about the dread disease. At the time of the organization's inception and during its early years, physicians and surgeons dominated its small membership and conducted much of the public education program, initiatives that narrowly targeted an adult audience. Beginning in 1936, the Women's Field Army of the ASCC set out to educate the public about the seven warning signals of cancer. Focusing on prevention and early detection, their door-to-door campaigns, radio spots, printed materials for industrial sites, and articles in popular magazines all urged Americans to raise their awareness and to seek prompt treatment by regular physicians if they observed any suspicious signs.²³ Diagrams in the organization's

pamphlets pinpointed common cancer targets on simple line drawings of mature male and female bodies, highlighting tumors of the breast, lungs, and reproductive organs.

While the ASCC narrowly targeted cancer in adults at the organization's inception and throughout its early years, it used new methods to raise awareness of cancer in America beginning in the 1940s. As James Patterson has argued, the ASCC owed much to the leadership of Mary Lasker, a society woman and health philanthropist, for this transformation.²⁴ Under Lasker's direction, the newly renamed ACS emulated the March of Dimes campaigns led by the National Foundation for Infantile Paralysis, implementing modern advertising concepts to raise funds and spread their messages of cancer prevention and control. The ACS campaigns encouraged Americans to not only not fear cancer but also actively fight the "dread disease" on both a national scale and personal level. Focusing on prevention and early detection, Americans were urged to seek prompt treatment from orthodox physicians if they observed any suspicious signs. The ACS and its health writers gradually applied this message to cancer in children.

At first, health writers inserted brief sections about childhood cancer into their general cancer articles. *Hygeia*, a magazine published by the American Medical Association for lay readers, featured a monthly series on cancer awareness and prevention. The author of one article asked his readers, "Do You Fear Cancer?" and recommended the proper attitude, information, and actions to adopt when confronted with the disease. Its messages mirrored those promoted by the ACS: the problems caused by delaying diagnosis and treatment, the value of regular exams by orthodox physicians, and the dangers of "quack" healers. Only one sentence addressed childhood cancer: "A misconception which has proved costly is the belief that cancer occurs only in older patients. This theory has long been discarded, for cancer does appear in steadily growing numbers among young people."²⁵ By the end of the decade, a few full-length pieces on childhood cancers dotted the pages of popular magazines.²⁶

As the number of articles about cancer increased, authors (sometimes physicians) began to enlarge their scope to include children as possible cancer victims. Popular articles in women's magazines began identifying cancer as a menace to children, proclaiming, "Cancer Kills Children Too!" and "Cancer, The Child Killer."²⁷ Authors alerted parents—especially mothers—to cancer's threat and entreated them to minimize their risk by watching for common cancer symptoms and scheduling regular physical examinations for

their child. In the March 1947 issue of *Woman's Home Companion*, Frank Rector, secretary of the Cancer Control Committee of the Michigan State Medical Society, provided basic information about cancer in children and classified the common cancers according to the most frequent age group affected by each type. He reported that Wilms's tumor (kidney), eye tumors, and central nervous system tumors struck the youngest age group, brain tumors and leukemia targeted those between the ages of five and ten, and bone tumors affected those older than age ten. Most authors, by contrast, combined factual information with distressing headlines or frightening testimonials in order to capture readers' attention and rally them around this newly identified set of diseases. Articles advised mothers to work with their child's pediatrician to identify suspicious signs of cancer and procure timely treatment for the young. One physician wrote,

The best hope for preventing needless deaths lies with mothers everywhere who must recognize that there is such a thing as cancer in children and that it isn't something to be frightened of or fatalistic about. The signs of cancer in children are so often those which any observant mother cannot help but notice.²⁸

Because cancer's symptoms often mimicked those of common childhood ailments, such advice may have needlessly induced unwarranted anxiety and blame. Cancer joined a long list of conditions for which mothers had responsibility.

A Grave Burden

Cancer placed a grave burden on mothers—for the timely diagnosis of their children's illnesses, the losses of their children, and the societal blame attached to all phases of the disease. Since the late nineteenth century, authority over children's health in America had been a contested subject between domestic caretakers and medical professionals. Whereas lay experience equaled expertise early in the period, the rise of the scientific, formal health system later challenged women's partnership in medical knowledge and practice.²⁹ Pediatricians became proponents of a new bond between mothers and specialists in child health by integrating child-rearing wisdom with professional practices to formulate methods of scientific motherhood.³⁰ Experts endorsed regimented feeding and sanitation techniques to prevent infectious disease and reduce mortality, a considerable responsibility for all mothers.³¹ In the 1930s, the range of experts again expanded as psychologists and child guid-

ance experts began to advise women in the proper way to discipline and feed their child and to preserve their child's mental and emotional health.³²

Molly Ladd-Taylor and Lauri Umansky have argued that mother blaming reached its peak during World War II and the postwar years when mothers were targeted for seeking wage work, contributing to the decline of the home, and creating juvenile delinquents.³³ Mothers were expected to rely on expert guidance as a corrective. Published in 1946, Benjamin Spock's bestseller *Infant and Child Care* addressed physical and emotional health by providing detailed descriptions of specific methods appropriate for each developmental stage and championing a permissive style of childrearing; the pediatrician's readable manual became an essential handbook for many mothers. Mothers also retained responsibility for maintaining child health, though the nature of childhood diseases shifted from acute to chronic conditions. Ladd-Taylor and Umansky noted, "Death serves as 'evidence' of failed motherhood; the refusal (or inability) to protect one's children from danger, or even from disease."³⁴ Mothers who neglected to follow professional guidance at home were blamed for the poor health or deaths of their children.

By employing rhetoric of maternal responsibility in childhood cancer articles, authors blamed mothers for their child's death during a period when a timely diagnosis generally did not contribute to a better outcome for childhood cancer victims. In the 1940s, few effective treatments beyond surgery and radiation were available for childhood tumors and a diagnosis of acute leukemia was an inevitable death sentence; however, mothers' frequent interactions with their children meant that medical professionals relied heavily on them to make vital decisions about the seriousness of symptoms and the appropriate action to take after detecting any suspicious signs of cancer.

During World War II, reports about special furloughs granted to servicemen whose children were gravely ill with leukemia or other cancers appeared in the popular press.³⁵ The stories reinforced a turn toward domestic life that had occurred as the hard times of the Depression gave way to a strong wartime economy. Birth rates rose from a low of 18.4 per 1,000 women during the Depression toward a high of 25.3 per 1,000 in 1957, and the average family size grew markedly during this period.³⁶ Children were viewed as the center of the patriotic American family and a source of security during a tumultuous time. As husbands and fathers left to serve overseas, wives were entrusted with responsibility for managing the home, securing jobs in war industries, and, most important, rearing children. In a few publicized cases, though, families

separated by war were reunited prematurely under the dark cloud of childhood cancer.

The travails of the Truax family made the *New York Times*. In 1944, the mother of eighteen-month-old Therese Truax sent a letter to President Roosevelt requesting that her husband be returned from service in the South Pacific to visit their dying child.³⁷ Therese had been diagnosed with acute leukemia and had little time left. Mrs. Truax rushed her baby from the local New Jersey hospital to Babies Hospital at the Columbia-Presbyterian Medical Center desperately hoping to find a new treatment or cure, but the doctors had no lifesaving treatments to offer. Therese's father received a month-long leave via presidential order and immediately flew back to the United States via military plane, and doctors gave her regular blood transfusions in order to prolong her life until her father arrived home. Upon his return to New Jersey, the newspaper reported that he shared his wife's view that there was "real hope" for the recovery of the infant, but only six days after his well-publicized return, baby Therese died of leukemia and related complications.³⁸

A cluster of stories in newspapers and magazines told of other urgent wartime reunions. A young mother in the Midwest found a mysterious swelling on her nine-month-old son Arthur's groin. After a week of observing little change, she took him to the family physician. The doctor excised a tissue sample and sent it to the state capital for careful study. When the second opinion confirmed the initial cancer diagnosis, Arthur and his mother traveled to Memorial Hospital in Manhattan. Arthur's father, who was serving in Frankfurt, Germany, received a cable containing urgent news of his son's precarious condition. When he arrived in New York to join his wife and to see his son for the first time, the swelling had been successfully removed and Arthur was recovering. His father proclaimed, "Thank God my wife acted so quickly!" to interviewers reporting the story of his son's illness and his own return from serving overseas.³⁹ In 1946, Lieutenant Keith DuBois flew from Germany to Memorial Hospital on emergency leave to see his eight-month-old son, Allan, for the first time. His wife and son had come to New York from Green Bay, Wisconsin, after his pediatrician had recommended the trip. His father affirmed that it was "wonderful" to see his son but when questioned further about his homecoming admitted, "This isn't the way I dreamed about it . . . this isn't the way I wanted it."⁴⁰ A fourth father rushed home from his post at Pearl Harbor to be at his dying daughter's bedside.

These news stories emphasized the consequences of prompt cancer detec-

tion by watchful mothers. Mothers could save or prolong their child's life by detection and proper treatment or, at the very least, could arrange a final family reunion during a child's illness or death. The articles also repeated themes of wartime heroism and underscored the importance of family togetherness during a tenuous time. By granting emergency leave and providing transportation directly to hospital sites, the federal government and military administration illustrated value of children and family at the national level.

Some mothers immediately turned to their local physicians and then nationally known specialists for help, but others (like the Vaskos and Colans) intentionally delayed treatment. In "Cancer, The Child Killer," Lawrence Galton noted that this attitude occurred more frequently with cancer than other diseases. "Doctor after doctor has his hands tied when parents refuse to let him take a tiny section of tissue from the suspected area and analyze it to make certain."⁴¹ This denial may have been due to several factors, including fear and dread of a cancer diagnosis, ignorance about the disease, a lack of available medical care, and, at times, thoughtful resistance to the proposed treatment. Articles about such families used them as examples that even a short delay could mean death for a child with a benign or malignant cancer that hindered his or her growth or impeded a vital physiological function. At times, they also served as thinly veiled critiques of immigrant families, those living in rural areas, or families of low socioeconomic status.⁴² The articles implied that all parents (especially mothers) were to act quickly and should follow the advice of physicians or, ideally, cancer specialists without hesitation.

Dying Young

The story of sixteen-year-old Robert de Villiers' death from acute leukemia in 1944 poignantly demonstrated that no physician could slow the progression of the disease, let alone provide a cure. Parents, nevertheless, maintained hope in the face of terminal prognoses. "We had hoped," Robert's father recorded in his diary, "that we would succeed in keeping our Robbie alive until a cure had been found."⁴³ Only three months after physicians made their initial diagnosis, Robert died. Robert's unpreventable death from acute leukemia demonstrated the disease's rapid course and fatal outcome in children. In the early 1940s, no life-prolonging treatments were known, but physicians used radiation therapy to reduce pain and swelling in children's joints and ordered blood transfusions to strengthen young leukemic patients, albeit temporarily. Children diagnosed with acute leukemia at Memorial in the early

1940s survived an average of only 27 days following admission.⁴⁴ Severe side effects, including infections and massive hemorrhages, commonly caused death rather than the disease itself.

A few physicians cautioned their colleagues and a general readership that the proliferation of the disease could not be stopped by medical means. In 1946, William Dameshek, a hematologist at Memorial, was outspoken in challenging the optimistic portrayal of acute leukemia and false hope furthered by the popular media. Addressing these misconceptions, he wrote,

There is nothing worse than to make a diagnosis of *acute* leukemia. The tabloid press, once it hears of a case, gives all the harrowing details, and the radio blares loudly of blood donors, particularly from "cured" cases, and of the new "atomic bomb" treatment and other matters. The family is deluged with suggestions, and in the meantime the patient goes steadily downhill. Much as one hates to admit it, there is practically *nothing* to offer in the acute or rapid case of leukemia.⁴⁵

As a way to describe leukemia to *Hygeia's* lay readership, he compared a person with leukemia to a healthy garden overtaken by "an overgrowth, like a weed, of a special type of white cell that arises in one of the three white cell forming tissues."⁴⁶ Dameshek warned that particular challenges faced the few physicians and scientists who dared to devote themselves to the investigation of this disease: difficulty in diagnosis, unknown etiology, and no efficacious therapies. Despite his grim assessment of the available treatment options, Dameshek alluded to a series of highly secret series conducted through the war on the effects of mustard gas and related substances on the blood. Although mustard gas caused only temporary relief for patients with the acute form of leukemia, some scientists had begun researching related agents as wartime projects and equipment were redirected to investigating and improving civilian health after the war had ended. Dameshek concluded the article on a positive, yet tempered, note, hoping for a scientific breakthrough on their research related to the "leukemia monster."⁴⁷

The de Villiers, devastated by the loss of their son and frustrated at the inability of physicians to cure him, established the de Villiers Foundation in 1949 to memorialize their son and support leukemia research in the hope that a cure could be found for others. The foundation, headed by Robert's mother, Antoinette de Villiers, began in a Manhattan office with two thousand dollars and a small staff of volunteers. Following public announcements about possible medical applications of chemical warfare agents, the foundation elected

to support this proliferating, multidisciplinary field of research. This organization, renamed the Leukemia Society of America in 1955, sponsored annual, international research competitions with monetary awards seeking a treatment for the devastating disease.⁴⁸ At a time when there was little government support for research in childhood cancers, voluntary agencies helped to fill this role.

The Leukemia Society also coordinated fundraising and public education efforts. During its early history, from 1949 to 1955, many of the contributions were given in honor of family members or friends who had died of cancer. The Leukemia Society also acted as an information clearinghouse by releasing statistics and news on recent research developments to the press. Public education was the third branch of the Society's activities. The group published brochures that described leukemia and furthered the need for intensifying lines of research directed toward the disease, they broadcast a panel discussion on the Society's major functions over local radio and television stations, and Allen Funt, the producer of the television program *Candid Camera*, made a documentary film on the subject.⁴⁹

Jimmy Captures the Limelight

As the de Villiers family established their foundation, the first chemotherapeutic agent effective against acute leukemia was evaluated in the lab and clinic. Sidney Farber, chief pathologist at Children's Hospital in Boston, observed that daily intermuscular injections of aminopterin (4-aminopteroylglutamic acid), a folic acid antagonist that disrupted cancer cells' metabolism—halting all cell activities, including growth and reproduction—induced temporary remissions in ten of fifteen young patients with acute leukemia.⁵⁰ When Farber first publicly announced his findings he asserted, "It is the most wonderful hope we have, and we know now that with this drug, and with other chemical agents, we are working in the right direction."⁵¹ Previous experimental therapies had not produced an effect in the 300 patients with the disease treated at the hospital.

Farber had collaborated with Yellapragada Subbarow of Lederle Laboratories, a unit of the American Cyanamid Company in Pearl River, New York, to test the effects of folic acid and other compounds on disease.⁵² Correspondence between Farber and Subbarow in 1944 alluded to Farber's interest in folic acid. In March 1944, Farber wrote asking Subbarow about the general contents of capsules containing liver powder and, "in particular, approxi-

mately how much folic acid these capsules contain."⁵³ Louis Diamond, a pediatric hematologist at Boston Children's Hospital, had observed promising results after administering a particular liver fraction on patients with several different types of anemia, especially a severe form. On hearing these results, Farber requested an additional supply of capsules for his laboratory animals, pediatric cancer patients, and older patients he was trying to study in neighboring hospitals.⁵⁴ Farber also collaborated with other physicians in the Boston area. George Foley, first of the Department of Preventative Medicine at Harvard Medical School and then of Massachusetts General Hospital, conducted preliminary laboratory studies to evaluate folic acid as a possible treatment for acute leukemia. On April 8, 1948, Farber made his public announcement that a drug had induced temporary remissions in acute leukemia patients.

Newspaper reports of the announcement minimized the collaborative nature of the folic acid investigations, but an extended letter sent to Subbarow revealed Farber's view of the events, his reliance on related scientific fields, and the importance of joint programs between industry and academia. In his letter, Farber amended the articles and emphasized the valuable contributions made by Lederle Laboratories. Farber characterized the overall research program as a cooperative one, stating,

We in biology and medicine can make no progress without the cooperation and research of men in the various branches of chemistry; those in chemistry require the biologic proof . . . there is nothing but good that can come from such association of scientists who approach the same problem by different routes.⁵⁵

He assured Subbarow and his associates that proper credit would be given in his published work, including future publications. He also invited representatives from Lederle to participate in the First Conference on Folic Acid Antagonists in the Treatment of Leukemia, a symposium sponsored by the institutions involved in the aminopterin research program including Harvard Medical School, Children's Hospital, Peter Bent Brigham, and Deaconness Hospital held in January 1949.⁵⁶

Farber and many science writers advanced the discovery of aminopterin as a preliminary step in the synthesis and testing of chemical agents for all systemic cancers and solid tumors, but his results invited skepticism among some clinical investigators who doubted that Farber had been completely truthful when describing his experimental design, methods, and results. Doubts grew when researchers were unable to reproduce Farber's findings in

adults with cancer.⁵⁷ Dr. Leo Meyer, a physician testing aminopterin in older patients, met with Farber's group to discuss his data. Farber wrote Subbarow to share the results of the discussion:

It appears that Dr. Meyer has not had an encouraging experience with aminopterin in his adult patients. Our experience with children so far in acute leukemia has been striking from the point of view of clinical improvement and important hematological changes. We have never used more than 1 mg. a day and are using as little as 1/2 mg. a day.⁵⁸

Confident of his results, Farber and his group began administering aminopterin and a closely related drug in sequence to test whether two drugs would induce a longer remission in a pediatric patient population.

As a way to sidestep his critics, Farber looked outside his home institution for endorsement of his work, becoming a leader and spokesperson for the ACS, providing expert testimony at congressional hearings, and establishing a new fundraising organization. By forging partnerships with civically minded groups in the Boston area, Farber established the Children's Cancer Research Foundation (CCRF), a regional platform for expanding the provision of advanced treatment for children with cancer and furthering his own clinical program.

The initiative began with a major commitment from the Variety Club of New England. Variety Club International, an organization of men in the motion picture and theater business, first formed from a philanthropic project focused on an abandoned child. After finding a child in a Pittsburgh movie theater in December 1929, a group of showmen devoted themselves to the child's well being. In the years that followed, the organization's efforts branched out in many directions, but remained focused on the spiritual, physical, and medical needs of underprivileged children. In 1947, the Variety Club pledged \$50,000 to establish a blood bank and blood research department at the Children's Medical Center in Boston. After one of the club's committees toured the children's cancer ward during a hospital visit and learned about Farber's promising investigations, they joined with the Boston Braves to establish the CCRF. The Massachusetts Chiefs of Police Association also later adopted the foundation as its official charity.

Two years after the March of Dimes introduced its first "poster child," the CCRF began planning for its inaugural event. It molded its young representative by changing the boy's name from Einar Gustafson to "Jimmy" to protect his privacy and, perhaps, to attach a popular, favored boy's name to their

efforts. By choosing this pseudonym and playing up his avid interest in the local professional baseball team, publicists created a poster child with all-American attributes and interests. Jimmy served several important purposes: he appealed to potential donors, personified cancer, and reminded listeners that cancer did not spare children. The Variety Club launched the Jimmy Fund in 1948 by hosting Edwards's national radio broadcast from his bedside as a way to build an intimate connection between a patient and audience members. The original Jimmy only participated in the fund's launch before returning to his family's farm in Maine, but the foundation retained its focus on child sufferers by permanently associating his name and a sketch of a boy's profile with all of its fundraising and promotional activities.

The Jimmy Fund employed a number of visual techniques to convey their message that, by contributing dollars to biomedical research, a cure for cancer would surely be discovered. Fundraising canisters placed at stores and sporting events used a "before and after" strategy also pioneered by the March of Dimes. The fund pictured a line drawing of a boy in a wheelchair gazing out a window under the line, "I can DREAM can't I?" Beneath the plea, a second image displayed the boys' wish to slide into home base, barely evading the catcher's efforts to tag him. Overhead, the umpire declared him "safe." Between the two images, the legend "Jimmy Fund" was boldly printed to identify the boy's source of hope and recovery. Fundraising canisters, movie theater collections, ballpark promotions, and appearances by such celebrities as famed Red Sox outfielder Ted Williams prominently featured children in their appeals.⁵⁹

Early donations to the CCRF financed the construction of the Jimmy Fund Building, a facility nicknamed the "Building of Hope" and now part of the well-known Dana Farber Cancer Institute. At the formal dedication day ceremonies on January 7, 1952, Farber and other noted speakers reaffirmed their commitment to a child-centered fundraising mission, research agenda, and building design. Farber said that he mobilized his staff by framing research projects around "a given patient—a patient with a name, a patient with a personality, a patient, the child of parents who are concerned over the welfare of their child."⁶⁰ The individual patient who suffered from a particular cancer—like Jimmy—became the motivation for his research programs, and the "total care" model implemented at the facility. This model emphasized the physical, emotional, and social components of disease as they affected patients and their family members. Similarly, the comments made by the dean of the Harvard Medical School (an affiliated facility) underscored the particular tragedy caused by malignant disease when it affected a young person. He posited that



The advent of coin-collection canisters helped the Jimmy Fund raise more than \$200,000 by the end of its first campaign season. Canisters—often labeled with the names of young patients with cancer—were commonly displayed at the entrance to ball games or were passed through movie theaters by ushers (above). Poignant film clips featuring Hollywood stars such as James Cagney, Joan Crawford, and Spencer Tracy urged patrons to give generously (opposite). Reprinted with permission of the Dana Farber Cancer Institute.

it was the age of the victims that had moved donors to give generously. A third speaker framed the link between the Jimmy Fund and the protection of children in terms of national strength and pride, stating that the people of New England had generously undertaken “this project dedicated to the alleviation



of suffering among children and the building of strong bodies and strong minds in true American tradition.”⁶¹ Nearly a dozen prominent physicians and administrators of medical research facilities—including J. R. Heller, director of the National Cancer Institute; Martin J. Mullin, president of the Children’s Cancer Research Foundation; Shields Warren, director of the Division of Biology and Medicine of the Atomic Energy Commission; Samuel Pinanski, chief barker of the Variety Club of New England; and Jim Britt, a national sportscaster and trustee of the Children’s Cancer Research Founda-

tion—emphasized this two-part message common in the 1940s: children waged courageous, yet futile battles against deadly cancers, but targeted scientific research would insure medical progress and certain cures.

The speakers' comments also revealed the value of children in America—as individuals, as part of a defined cohort, as family members, and as future citizens. Premature death from cancer was a tragedy that deeply affected the family as well as the prospering nation. Rather than simply appending new child-focused research and treatment programs to an existing cancer center, pediatric cancer was now promoted in Boston and in New England as a major problem of child health that merited the public's support and an independent facility. For many, Jimmy symbolized the tragic, premature loss of innocent lives but also a source of hope that a cure was near.

In the late 1930s and 1940s, as mortality from infectious diseases of children declined, the definition of cancer expanded from a dread disease common in adults to a rare, but deadly threat to children's health. During the 1940s, Memorial created new spaces, services, and training programs that addressed the needs of a new population, and preliminary results from clinical chemotherapeutic research demonstrated that a chemical agent could temporarily halt acute leukemia. Fears heightened about the silent growth and expanding reach of cancer in children, but hope about the promise of new, curative chemical agents characterized medical and popular literature.

Stories of individual sufferers emphasized to the public that cancer potentially threatened the life of every young person and the happiness of every family. By founding their organizations in reaction to the illness or death of specific cancer victims, the Leukemia Society of America and the Jimmy Fund personalized the public face of cancer in children. They prioritized the child by prominently featuring their experiences in their materials but assured their audience that death from cancer was not inevitable. At a time of concern over the unpredictability and paralytic power of polio and great enthusiasm about the promise of scientific research, cancer organizations, physicians, and parents of childhood cancer sufferers often embraced and promoted an optimistic message like the one spread by the March of Dimes—that debilitating disease could be conquered by supporting scientific and medical research. But what were the emotions and obstacles experienced by young patients with cancer and their caregivers at this time? *Death Be Not Proud*, a slim volume that documented one noted family's yearlong struggle with cancer, illustrated the turmoil that accompanied the tragic, premature loss of innocent life.