

The Babe's Other Record: Cancer Pioneer

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At Babe Ruth Day at Yankee Stadium in 1947, the baseball hero of the generation stood before an admiring crowd, deep in pain and emaciated from advancing cancer, not yet aware of what ailed him. In the dugout moments before, clad in a topcoat and golf hat, he suffered a coughing spell, then, pulling himself together, walked to home plate, mentally recalling the day Lou Gehrig had made the same trip.

In a broadcast heard around the world, Ruth spoke slowly and extemporaneously in a raspy voice.

"You know how bad my voice sounds," Ruth told the roaring crowd. "Well, it feels just as bad."

Sixteen months later, at 53, he was dead.

This year, the 50th anniversary of Ruth's death, his sports legacy has been extolled again as baseball heroes of newer generations breezed past the home-run record the Babe held for 34 years, until 1961.

But unknown to many, Ruth also left a legacy in the annals of medical history.

In fact, he was among the first patients anywhere to receive experimental chemotherapy, and some researchers say he was the first ever to receive a combination treatment of chemotherapy and radiation for his type of cancer. For Ruth, the chemotherapy worked dramatically — but only temporarily. Nevertheless, knowledge gained from his case helped shape the combination



Memorial Sloan-Kettering Cancer Center

An unidentified boy visited Babe Ruth in the hospital in 1948, shortly before the slugger died.

therapy that is now standard for his disease.

Shortly after his death, the nature of his disease became clear, and well publicized. Ruth suffered from a rare cancer, naso-pharyngeal, that arose in the air passages in the back of his nose and mouth.

But the images of a hoarse Ruth, perpetuated in audio and videotapes on the Internet, in movies and in sports broadcasts, in addition to his well-known smoking and drinking proclivities, have contributed to the myth that Ruth had throat cancer, which is generally taken to mean

cancer of the larynx, or voice box.

The distinction in cancer type may be a demic to fans, but to patients and the doctors who treat them, the difference is crucial.

Recently, even a peer-reviewed medical journal has erred in stating the cause of Ruth's death.

Earlier this year, *Cancer Therapeutics*, official journal of the Coalition of National Cancer Cooperative Groups, published an article by Dr. Dennis L. Cooper, a Yale oncologist, s

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United Press International

Babe Ruth hitting one of his 60 home runs in 1927.

The Babe's Other Record: a Pioneer in Chemotherapy for Cancer

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that Ruth had cancer of the larynx, and that even 50 years later his chances for being cured were only slightly improved.

The article prompted an intense discussion among doctors at the University of California at San Francisco, who then turned to original source materials, microfilm of The New York Times and Ruth's autopsy report. Next month those doctors are publishing another article, helping to correct the record, in the journal *Laryngoscope*. Its editors have imposed an embargo on the new paper, even though it is largely based on 50-year-old newspaper accounts.

Ruth's battle against cancer offers a rare glimpse into the many dramatic changes in medicine and attitudes toward research that have occurred in just half a century. The changes include greater accuracy in diagnosis, more effective therapy and stronger rules to inform patients about diagnoses and the consent now required from patients participating in experiments.

Yet the sobering fact is that more than half a million people will die from cancer in 1998 in this country.

Ruth's health began failing in September 1946 when he sought to return to baseball as a manager. His voice became progressively hoarser. He was gripped with severe and relentless pain in his left eye. His head ached. In November, he entered French Hospital in New York City, where doctors diagnosed sinusitis, then looked at possible dental problems and pulled three teeth, without improvement. His face swelled, his left eye became shut and he lost the ability to swallow. Ruth said he "seldom could speak." When he did, he wrote in his autobiography ("The Babe Ruth Story," E. P. Dutton & Co., 1948), his "voice sounded like somebody gargling ashes."

X-rays showed a large abnormality at the base of Ruth's skull. But several biopsies of tissues in his mouth showed nothing abnormal. Ruth's symptoms worsened. His neck enlarged from swollen lymph nodes. His jaw hurt when he ate and he was unable to swallow. Later, Ruth was fed intravenously. Although doctors were unable to diagnose Ruth's problem, they treated him with radiation. His hair fell out in chunks.

In December, the doctors operated on Ruth and documented extensive spread of the cancer in the neck. But in the operation, surgeons had to tie off the external carotid artery be-

accounting for his hoarseness, and making swallowing even more difficult.

In February 1947, Ruth spent his 52d birthday in the hospital. He had played before throngs of cheering fans in his 22-year professional career, which ended in 1935. Now, Ruth was secluded and allowed few visitors. "I often felt so alone that the tears would run helplessly down my cheeks," Ruth wrote.

In April 1947, every ball park in organized baseball celebrated Babe Ruth Day when Ruth, bolstered by his radiation treatments, uttered his famous hoarse words. By June, those benefits from radiation had waned. Severe pain had returned; he could not sleep.

Ruth then joined the often-unaware group of anonymous patients who ushered in the modern era of anti-cancer treatment, which grew out of American research into chemical warfare agents during World War II. In 1942, researchers at Yale University tested one such agent, nitrogen mustard, in a human for the first time. But Government secrecy restrictions prevented publication until 1946, after several hundred patients had been treated.

At the time, a team headed by Dr. Richard Lewisohn, a surgeon at Mount Sinai Hospital in New York City, was experimenting with an anti-cancer drug, teropterin, in mice. There were different teropterins, all extracted from brewers' yeast, and their effects on mice varied widely with the preparation.

Over the violent objections of Dr. Lewisohn's team members, who believed the substance was not ready for tests in people, Ruth began receiving daily injections of teropterin on June 29. (A closely related drug, methotrexate, is now widely used in treating cancer and other diseases.) Ruth said he knew teropterin had rarely been used on humans and "asked no questions," and probably signed no formal consent, as is required today, before receiving injections for six weeks.

Ruth knew the risk: The drug could help or hurt. "I realized that if anything was learned about that type of treatment, whether good or bad, it would be of use in the future to the medical profession and maybe to a lot of people with my same trouble," Ruth wrote.

The drug had dramatic effects. His pain waned; his spirit improved. Able to eat again, he began regaining some of the 80 pounds he had lost. By August, the enlarged lymph nodes in his neck had completely disappeared. In September, Dr. Lewisohn



Corbis-Bettmann/U.P.I.

Babe Ruth was hoarse from naso-pharyngeal cancer when he addressed a crowd at Yankee Stadium in 1947. His treatment with chemotherapy and radiation broke new ground for patients with his type of cancer.

nal's lead story of Sept. 11, 1947, suggested scientists were on the verge of a cure for cancer.

Meanwhile, Dr. Lewisohn's teammates left Mount Sinai because the hospital refused to support further research on teropterin, said Dr. John Laszlo, whose father, Dr. Daniel Laszlo, was a team member. The younger Dr. Laszlo is a retired official of the American Cancer Society. The Babe Ruth trials clearly exemplify just how much has changed in a half century. Today, besides requiring more extensive animal testing, Federal officials demand that researchers obtain written patient consent and gain approval from formal committees before testing experimental therapies on volunteers.

Whether Ruth was even fully aware that he had cancer is open to question.

On June 13, 1948, Ruth participated in the 25th anniversary of Yankee Stadium, wearing his old No. 3 Yankee uniform and telling misty-eyed fans how glad he was to be with his old pals again. A few days later, Ruth

Memorial. Memorial is a cancer hospital. Why are you bringing me here?"

Not all patients at Memorial have cancer, his physician, Philip MacDonald, replied. But the radium put in his neck was used only for cancer.

Claire Ruth wrote that she believed the Babe never knew he had cancer, though she quoted her husband in a conversation with a visitor: "They think they are kidding me. But they aren't. I know what I got."

On Aug. 16, Ruth died of pneumonia. An autopsy showed the cancer that began in the nose and mouth had spread widely through his body.

Ruth apparently never received teropterin again. Mount Sinai has no records on Ruth or the research, a spokesman said.

Memorial Hospital's news release emphasized that Ruth "received no special drug or chemical in the attempt to control his tumor." Teropterin was not included in Ruth's treatment at Memorial because it "had been previously shown to be

specialists at the University of California at San Francisco discussed a patient with naso-pharyngeal cancer. A pathologist, Dr. Harvey Z. Klein, said that while in training he had learned of Ruth's diagnosis.

"That created a great stir because virtually everyone else in the room said Ruth died of laryngeal cancer," said Dr. Jeffrey H. Spiegel, a specialist in head and neck surgery at the center.

The doctors made a friendly wager. "The reason we were so quick to make the bet is that we had just read the article in *Cancer Therapeutics* saying he had laryngeal cancer, and we were going to bring him a reputable medical journal at the next meeting to show him, saying here it is in print," Dr. Spiegel said.

Dr. Cooper, the Yale author, said in an interview that he talked about Ruth's case in his frequent lectures on head and neck cancer, but did not know about the news reports stating the type of cancer and the autopsy findings.

much more than cancer of the vocal cords.

A colleague, Dr. Nadim B. Bikhazi, was asked to ascertain the cause of Ruth's death and found it in microfilm of New York Times articles, which described the autopsy findings. Dr. Bikhazi then received permission from Ruth's daughter, Julia Ruth Stevens, to examine the autopsy report. The crucial finding, Dr. Bikhazi said in an interview in San Francisco, was that no cancer was found in the larynx.

Much has been made of Ruth's heavy drinking, smoking and use of snuff and his habits' links to his cancer. Those links would hold for cancer of the larynx, but the case for naso-pharyngeal cancer is far less clear-cut.

About 1,000 cases of naso-pharyngeal cancer are now diagnosed each year in the United States. Of the three types of naso-pharyngeal cancer, the most common occurs among Asians and is linked to the Epstein-Barr virus but not tobacco.

Ruth had one of the two other types, which occur more commonly among Caucasians. The links between these two types of cancer and tobacco are controversial, in part because of the rarity of the cancers.

While there is no evidence that tobacco killed him, Dr. Bikhazi said it probably played a part.

Today, doctors can diagnose naso-pharyngeal cancer quicker and less painfully than in Ruth's time. A nose bleed, lump in the neck and hearing loss in one ear are clues to the diagnosis of naso-pharyngeal cancer.

Instead of performing surgery to biopsy a swollen lymph node in the neck, doctors often insert a thin needle to remove tissue for later examination under a microscope. Sophisticated imaging techniques developed since Ruth's death now can pinpoint an abnormality's location and help distinguish a tumor from an abscess and other benign conditions.

In the case of naso-pharyngeal cancer, the combined information allows doctors to classify, or stage, the tumor and to customize the now standard course of radiation and chemotherapy.

Because Ruth was in the most advanced stage of the cancer, his case would still be difficult to treat today. However, Dr. Bikhazi said, "Ruth definitely would have had much less pain, an improved quality of life, and probably prolonged survival, though not a cure."

Today, about 40 percent of patients with advanced naso-pharyngeal cancer survive at least five years.