A Report to Physicians
OncoLog

The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston • April-June 1987 • Volume 32, Number 2

Limited Chemotherapy and Radiotherapy Effective in Stage I and II Hodgkin's Disease in Adults

by Lillian M. Fuller, M.D.
Professor of Radiotherapy
Department of Clinical Radiotherapy

Lillian M. Fuller

Today's many diverse ways of treating Hodgkin's disease began to be developed almost four decades ago, when Vera Peters at the Princess Margaret Institute first demonstrated that patients with stage I or II disease treated with regional radiotherapy achieved significant 5- and 10-year survival rates. The news stimulated research activity in pathology, diagnostic radiology, pharmacology, and of course radiotherapy. Continuous new developments in these fields have affected treatment programs over the years, although the influence of older or even obsolete information still affects treatment policies. To make informed management choices for patients with Hodgkin's disease, physicians must understand all factors that influence current treatment programs.

Before 1950, the common belief that Hodgkin's disease could not be cured with radiotherapy was a self-fulfilling prophecy. In general, radiotherapy was reserved for relief of symptoms due to enlarged nodes or for cosmesis. In a few institutions, intensive, large-volume radiation was used in conventional fractionation to produce more lasting, if not permanent, local control. The aim was to achieve a better quality of life in the interval between relapse episodes.

First Use of Intensive Regional Radiotherapy

In 1950, Peters demonstrated that patients with localized Hodgkin's disease could be cured by treatment of the involved lymph node regions with moderately intense radiotherapy. Before that report, Hodgkin's disease was believed to have a multicentric origin. Regardless of whether patients presented with localized or generalized adenopathy, treatment generally consisted of either low-dose, limited-field radiation or mechlorethamine. Most patients died within five years.

Peters' report stimulated others to review their results and concentrate interest on the dosage needed to eradicate disease. Between 1970 and 1980, patients at UT MDAH with stage I or II Hodgkin's disease determined by laparotomy received one of three treatments: extended field irradiation, involved field or mantle irradiation, and involved field irradiation followed by six cycles of MOPP chemotherapy (mechlorethamine, vincristine [Oncovin], procarbazine, prednisone). None of these approaches was optimal for all disease presentations. When disease is staged by laparotomy and found to be stage I or II, extended field radiotherapy to mantle, para-aortic nodes, and spleen for upper torso presentations is not only unnecessary for most but is also insufficient for some. Patients with large mediastinal or hilar masses tend to have relapses in the intrathoracic rather than the abdominal areas. Regardless of the size of the mediastinal mass, patients with so-called B symptoms (unexplained fever, night sweats, or loss of more than 10% of body weight during the previous six months) are also prone to develop new manifestations of disease. Although six cycles of MOPP after involved field radiotherapy were effective in preventing the development of new manifestations of Hodgkin's disease, long-term sterility and second malignancies made the continued use of this treatment unacceptable.

Limited Therapy Program Refined

In 1980, therefore, we developed a program of minimal therapy for patients with favorable presentations, recognizing that those with unfavorable presentations required more extensive treatment. We continued to use laparotomy to stage upper-torso disease in patients with negative lymphangiograms. Factors influencing treatment selection included (1) the relapse patterns of patients with stage I or II disease who were treated with involved field or mantle irradiation, and (2) the effectiveness of either low-dose lung irradiation or two cycles of MOPP in reducing pulmonary relapse in patients with mediastinal disease. From our experience in treating patients who had stage III disease with two cycles of MOPP and radiation to the mantle and abdomen, but not to the pelvis, we learned that two cycles of MOPP seldom resulted in permanent sterility, and there was a low incidence

> In 1980 we developed a program of minimal therapy for patients with favorable presentations.

continued on page 2

A Report to Physicians
OncoLog

Limited Chemotherapy...

continued from page 1

(1.5%) of acute myelogenous leukemia. In most series, the average incidence is 7%.

In our study, we defined the patients' favorable presentations as those who had peripheral nodal disease in either the upper or the lower torso or small mediastinal masses with no hilar adenopathy and no B symptoms. Treatment for upper-torso favorable disease was limited to mantle irradiation alone. Patients with stage I inguinal or small pelvic masses were treated with involved field or the inverted Y radiation, without staging laparotomy. Patients with a small, single stage I neck node above the level of the hyoid bone were also treated with involved field radiation only, without a laparotomy.

Unfavorable presentations were defined as those with a large mediastinal component, any mediastinal mass with either hilar adenopathy or B symptoms, or large pelvic or abdominal masses. For such presentations, treatment consisted of two cycles of MOPP followed by definitive mantle irradiation for upper-torso disease or abdominal and pelvic irradiation for lower-torso disease. Patients with unfavorable, large mediastinal masses or hilar adenopathy received low-dose radiation to the lung in addition to the mantle. When feasible, patients with large mediastinal masses underwent staging laparotomies before any treatment. When tracheal compression or other risks made initial anesthesia undesirable, definitive mantle treatment plus low-dose lung irradiation was administered before laparotomy and the two cycles of MOPP. Three patients in whom the treatment fields for massive mediastinal disease would have put too much lung at risk for radiation pneumonitis received initial chemotherapy and were not treated in this program.

> Actuarial survival and disease-free survival rates improved for all patients.

At last analysis, 66 patients were enrolled in this study. Fifty-eight had upper-torso disease. Because of compromised airways, surgical intervention was deferred for eight of these patients until they had had radiotherapy. Of 44 patients with mediastinal disease, 29 had small masses. The other 15 patients had large masses measuring from 7.5 cm to 11.5 cm. After two of these 15 patients underwent surgical resection for diagnosis, one was classified as having a favorable and the other an unfavorable mediastinal presentation.

Comparable Results

The four-year actuarial survival rate for the entire group was 97%, and the disease-free survival rate was 77%. The freedom-from-second-relapse rate after appropriate rescue therapy was 92%. For patients with unfavorable disease presentations the survival rate was 100%; for the favorable group it was 92%. The corresponding disease-free survival rates were 78% and 79%, respectively. Both the survival and disease-free survival rates for 11 patients with B symptoms were 100%. The overall disease-free survival rate for all patients with unfavorable mediastinal presentations was 73%, but for a subgroup of patients with extensive mediastinal disease the disease-free survival rate was only 63%. Nevertheless, this was an improvement over our previous rate of 50% for a similar group of patients treated with radiation alone.

Mediastinal disease disappeared completely in 41 of the 44 patients, as judged by all posttreatment imaging procedures. Of the 24 patients with favorable presentations, only one had minimal, residual findings at six months that did not change in the ensuing 12 months. Follow-up radiographs were taken for 22 of these 24 patients during the first three months after treatment. Of these, 17 achieved complete remission during this time. The rest achieved complete remission in less than one year. A slightly higher percentage of patients with unfavorable mediastinal presentations required a little more than six months after treatment to reach complete remission or stabilization. Of the total group of 20 patients with unfavorable presentations, disease disappeared completely in 18, and only two had minimally abnormal mediastinal findings.

A Report to Physicians
OncoLog

President, The University of Texas System Cancer Center
Charles A. LeMaistre, M.D.
Vice President for Academic Affairs
James M. Bowen, Ph.D.
Associate Vice President for Academic Affairs
Robin R. Sandefur, Ph.D
Director, Department of Scientific Publications
Walter J. Pagel, B.A.

Editor
Susan O. Wilkinson
Contributing Editors
Lore Feldman
Carol Kakalec
Anne Sullivan
Diane Rivera
Art and Photography
Venetia DuBose, Layout
Don Kelley, John Kuykendall, Photographs

Published quarterly by the Department of Scientific Publications, Division of Academic Affairs, The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston, 1515 Holcombe Boulevard, Houston, Texas 77030. Made possible by a gift from the late Mrs. Harry C. Wiess.

Relapse patterns differed somewhat from our previous experience with patients with mediastinal presentations. Among the group with favorable disease, only one had a mediastinal recurrence; three others developed relapsing disease in multiple sites. In the group with unfavorable disease, one patient had a local recurrence, a second developed new disease in lymph nodes on both sides of the diaphragm, and a third had a relapse in the para-aortic nodes only. All three of these patients had had extensive mediastinal masses (8.5 cm to 11.0 cm).

Managing Relapses

Our current front-line treatment for patients with stage I and II Hodgkin's disease allows for effective rescue treatment. All nine patients with relapsing disease were treated with ABDIC (Adriamycin, bleomycin, dacarbazine, CCNU, prednisone) or with alternating cycles of ABDIC and CVPP (cyclophosphamide, vinblastine, prednisone, procarbazine). Eight achieved complete remission, and the ninth achieved partial remission. Only one patient who achieved a complete remission died of disease after deciding to discontinue his treatment.

Reducing Treatment Complications

None of the patients had infections or complications that required hospitalization. Sterility has not been a problem for the women. Nine women with normal menses received two cycles of MOPP without pelvic irradiation, and none has had subsequent menstrual dysfunction. Three have delivered healthy infants; two of these women had twins. A fourth patient is pregnant. Our previous experience with men who developed aspermia or azospermia after two cycles of MOPP indicated that most recovered adequate sperm counts within one year. In this series, four men received two cycles of MOPP and no pelvic irradiation. To date, two have recovered adequate sperm counts after periods of azospermia; one of these patients is now a father.

With limited therapy, sterility has not been a problem for men or women.

Second malignancies have not been a problem. In evaluating second malignancies, and especially leukemia, cytogenetic studies have become important in determining the relationship of these occurrences to previous therapy. In the only one of our patients who developed leukemia 18 months after two MOPP cycles and radiotherapy, cytogenetic studies of the involved bone marrow demonstrated 48,XY, + 8,inv(16), + 21. This suggested that the patient's leukemia may have been unrelated to his treatment for Hodgkin's disease, since most treatment-related leukemias demonstrate much more complicated cytogenetic patterns. Moreover, the time interval for treatment-related leukemia to develop is generally longer than 18 months. In addition, treatment-related leukemias have been associated with a poor response to further therapy, whereas our patient achieved a complete remission during treatment with AMSA-OAP (amsacrine, vincristine, cytosine arabinoside, prednisone).

Future Directions

Our plan for the immediate future is to continue classifying patients with stage I or II disease after laparotomy in "favorable" or "unfavorable" categories for making treatment decisions, and continue using the minimum treatment for maximum effect in each group. This approach should provide therapy appropriate to the extent of disease in each patient and advance the overall treatment results. Regardless of prognostic factors, any program with disease-free survival rates of 80% to 85% can be expected, with effective salvage therapy, to achieve survival rates of 90% to 95%, even for patients whose disease has adverse features.

Patients and physicians will have many options in choosing treatment programs.

Currently, we have many effective options for treating patients for early-stage Hodgkin's disease. One trend is to eliminate the staging laparotomy. In the future, most programs probably will not include a staging laparotomy, except perhaps for patients with favorable presentations who are not expected to need systemic therapy or even abdominal irradiation. According to our experience, adult patients with favorable presentations are those with peripheral upper-torso disease who have either small or no mediastinal adenopathy and no B symptoms. Information gained from computed tomographic chest scans may make it possible to limit the radiation fields to less than the mantle for those with neck and axillary presentations, thereby eliminating the risk of cardiac toxicity associated with mantle irradiation. For such patients, other treatment programs that do not include a staging laparotomy but that may be as effective include extended field irradiation and even combination chemotherapy alone. Toxicity associated with these treatments must be taken into account, however, when therapy is selected for the individual patient.

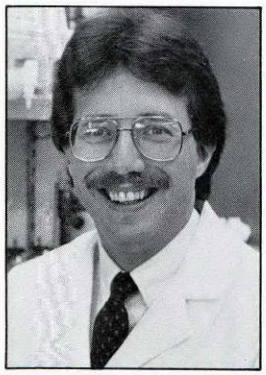
Patients with adverse features require combination chemotherapy. For the foreseeable future, combined-modality programs will continue to offer individual patients the best possibility for disease-free survival. These patients can be subdivided according to whether their risks of relapse are intermediate or high. Therapy for patients with an intermediate risk of relapse, the majority, is controversial at the present time.

continued on page 8

A Report to Physicians
OncoLog

Liposomal Antibiotic Better, Less Toxic Than Free Drug

by Gabriel Lopez-Berestein, M.D.
Associate Professor of Medicine, Immunobiology and Drug Carriers Section, Department of Clinical Immunology and Biological Therapy



Gabriel Lopez-Berestein

During the past few years, we have studied the use of liposomes as carriers of antifungal drugs in treatment of experimental and clinical systemic fungal infections. Systemic fungal infections are a major cause of morbidity and mortality in immunocompromised patients and in patients with cancer, particularly those with hematologic malignancies. Almost 20% of the fatal infections in patients with leukemia are caused by fungi, particularly species of *Candida* and *Aspergillus*. These prolonged infectious processes often lead to major delays in treating the patients' primary disease.

Amphotericin B (AmpB), a polyene antibiotic drug, is the mainstay of therapy for most systemic fungal infections, but its potential clinical effectiveness is hindered by its severe acute and chronic side effects. We initially studied the use of liposomes as carriers for AmpB in treating candidiasis and leishmaniasis, the latter caused not by a fungus but a protozoan parasite. Leishmaniasis is widespread in the populations of Asia, Africa, and South America. The disease is of particular interest because this parasite selectively infects the reticuloendothelial system, which is in turn the preferential target of liposomes. We showed that liposomal AmpB (L-AmpB) was far less toxic and more effective than free AmpB in the treatment and prophylaxis of systemic candidiasis in neutropenic and non-neutropenic mice (Figure 2). The compound was effective in treatment of leishmaniasis in hamsters and nonhuman primates.

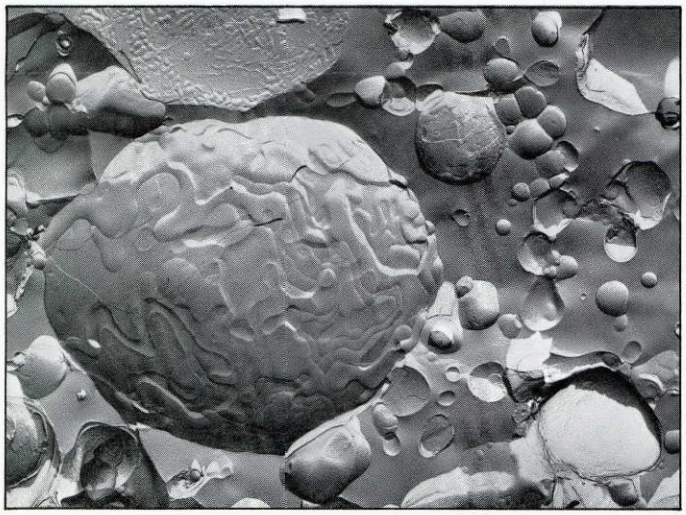
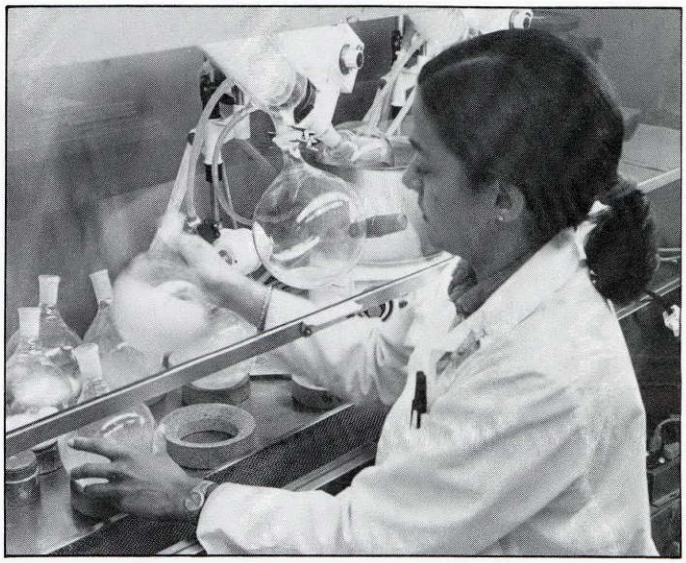


Figure 1. Freeze-fracture electron micrograph (magnification 12,000) showing multilamellar liposomes of different diameters. Layered structure is evident in the different vesicles observed.



Karen Francis, research assistant, mixes compound by adding saline to the dry lipid film.

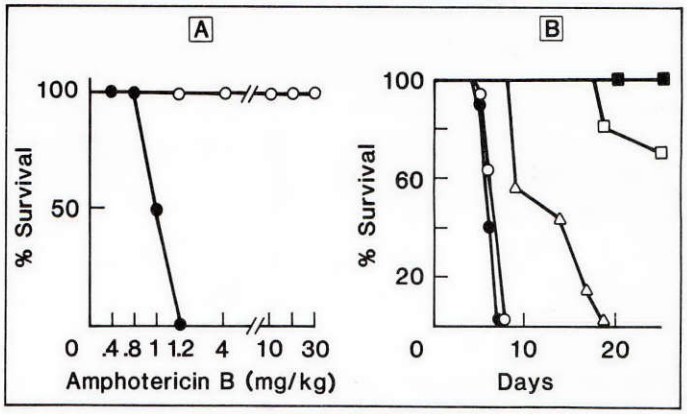


*Figure 2. Toxicity and antifungal activity of free versus liposome-encapsulated AmpB in mice. All drugs were administered intravenously in 0.2 ml of 0.9% NaCl solution. **A.** Toxicity: (●) free AmpB, (○) L-AmpB. **B.** Antifungal activity: The drugs were injected two days after inoculation of yeasts. (●) Untreated infected control, (○) "empty" liposomes, (▲) single dose of 0.8 mg/kg free AmpB, (□) 0.8 mg/kg free AmpB daily for five days, (■) single dose of 4 mg/kg L-AmpB.*

Cured Nearly Half of Patients

The early encouraging results in treating experimental candidiasis in animals led us to study the use of L-AmpB in the clinic. L-AmpB was used, under a compassionate investigational new drug permit from the Food and Drug Administration, for treating AmpB-refractory progressive systemic fungal infections in

Treating Fungal Infections

cancer patients. Initially these patients were treated extensively with the conventional form of AmpB (Fungizone), and the persistence or progressive nature of their fungal infections was documented histologically and by cultures. L-AmpB (0.4-5 mg/kg) was administered intravenously, daily for 10 to 45 minutes. Acute side effects such as fever and chills occurred infrequently, and no long-term kidney or central nervous system side effects were observed. L-AmpB was in general less toxic, easier to administer, and effective. Of 19 patients treated, nine were cured, six had partial responses, and four patients did not respond to the treatment.

The mechanisms leading to the improved effectiveness/toxicity ratio of L-AmpB are not well understood. Liposomes seem to alter the interactions of AmpB with cells; although its antifungal activity is maintained, its toxicity to normal cells—lymphocytes and monocytes—is decreased. Altered drug distribution also seems to play a role. When administered in liposomes, higher concentrations of AmpB were detected in the liver, spleen, and kidney of infected mice than in those injected with free AmpB. Other factors such as leakage of liposomes through damaged endothelium, enhancement of immunity, and secondary transport of liposomes by peripheral phagocytes may also play a role. L-AmpB is a less toxic and more effective modality of treating systemic fungal infections in patients with cancer.

Liposomes

Liposomes are vesicles composed of concentric phospholipid bilayers that are formed spontaneously upon the addition of an aqueous solution to a dried lipid film (Figure 1). Several types of liposomes have been developed: multilamellar vesicles (MLV), small unilamellar vesicles (SUV), and reverse evaporation vesicles (REV). MLV are used extensively as drug carriers for antineoplastic and antimicrobial drugs. Lipophilic drugs may be incorporated in the MLV's extensive lipid compartment, and hydrophilic drugs may be encapsulated between their lipid bilayers. The characteristics of liposomes—size, membrane charge, fluidity—may modify their in vivo behavior, and the changes in drug bioavailability and biodistribution associated with liposome incorporation have been exploited to alter toxicity and enhance drug targeting.

Physicians who desire additional information may write Gabriel Lopez-Berestein, M.D., Department of Clinical Immunology and Biological Therapy, Box 41, The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston, 1515 Holcombe Boulevard, Houston, Texas 77030.

Review:

The 1986 Year Book of Cancer

The latest advances in immunology, virology, and genetics highlight the *1986 Year Book of Cancer* (Year Book Medical Publishers, Chicago, 1986, $44.96).

The book is edited by Robert C. Hickey, M.D., professor of surgery, with Grady F. Saunders, Ph.D., professor of biochemistry and molecular biology, as associate editor, and R. Lee Clark, M.D., and Russell W. Cumley, Ph.D., as advisory editors.

This edition, the 30th volume in the *Year Book of Cancer* series, features abstracts of the previous year's most important and representative cancer-related literature selected by an international editorial board of medical specialists, many of whom are UT MDAH staff members.

With the recent addition of chapters on topics such as tumor markers, tumor biology, and biological therapy, and the expansion of others such as those on biochemistry and lung cancers, the *Year Book* continues to reflect the progress being made in cancer prevention, detection, treatment, and research as well as the ever-evolving nature of the disease itself.

New work in the currently active fields of immunology and immunotherapy, such as use of monoclonal antibodies, liposomes as vehicles for cytotoxic drugs, and interleukin-2, is well represented in the book. Notable among new information in virology are abstracts of research on the HTLV-III virus, the etiologic agent for human acquired immunodeficiency syndrome (AIDS), and on the involvement of oncogenes in the malignant process.

Because of the intensity of the research and the large volume of literature now related to immunology and immunotherapy, future editions of the yearbook will devote whole chapters to these topics.

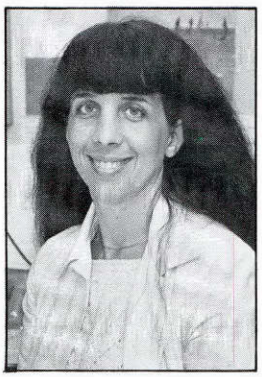
The *Year Book of Cancer* spans all medical disciplines. It has a large editorial board reflecting authority on all aspects of cancer and a broad but close knowledge of the literature. Authors of the articles chosen for the cancer yearbooks are asked to abstract their own reports, which retains the authors' perspective and strengthens the book's contents.

The *Year Book of Cancer* series was begun in 1956 by Dr. R. Lee Clark, then director and surgeon-in-chief of UT MDAH and later the institution's president for 32 years. Dr. Clark conceived the idea for a yearly volume on the various aspects of cancer treatment and research and presented the idea to Year Book Medical Publishers, who enthusiastically added it to their series of yearbooks on various medical topics. Dr. Clark served as editor until last year.

A Report to Physicians
OncoLog

Gene Rearrangement May Affect Prognosis of Some Chroni

A particular gene rearrangement may affect the survival of patients with Philadelphia-negative chronic myelogenous leukemia (CML), according to Razelle Kurzrock, M.D., assistant professor of medicine in the department of Clinical Immunology and Biological Therapy, and her colleagues at UT MDAH.



Razelle Kurzrock

Typically, CML can be cytogenetically identified by a shortened chromosome 22—the Philadelphia (Ph) chromosome. This chromosome is a cytogenetic anomaly that results from a reciprocal translocation between chromosomes 9 and 22, though some complex translocations may also occur. Breaks that occur on chromosome 22 are usually restricted to an area called the breakpoint cluster region (*bcr*). The *bcr* area is believed to play a key role in the development of CML.

> Hybrid protein may be the first cancer-specific marker involved in the malignant process.

Another anomaly associated with the Ph chromosome is the reciprocal translocation of the *c-abl* oncogene from its normal location at band 9q34 to the shortened arm of chromosome 22. In this position the oncogene is juxtaposed with *bcr*, creating the hybrid protein $p210^{bcr\text{-}abl}$. The potential for tumor development may be triggered by the relocation of the *c-abl* oncogene. Dr. Kurzrock and her colleagues believe that $p210^{bcr\text{-}abl}$ is likely to represent the first cancer-specific marker that is directly involved in the malignant process.

In general, the clinical course of CML runs 3.5 years and develops from a manageable phase of mature myeloid cell proliferation to a terminal blast transformation phase. However, a subgroup of patients who lack the Ph chromosome (Ph-negative) also have a myeloproliferative disorder similar to CML. These Ph-negative patients do not respond well to therapy and have a median survival of only about a year. Physicians routinely use this cytogenetic classification to classify CML. But Kurzrock and her colleagues recently described a Ph-negative CML patient whose disease has remained in the benign phase for 12 years and is morphologically the same as Ph-positive CML. As a result, further refinements in CML classification are possible.

Kurzrock's group examined the cells of nine patients with CML. Five of the patients had the typical Philadelphia translocation between chromosomes 9 and 22 [t(9;22)(q34;q11)] (Ph-positive). The four other patients had Ph-negative CML; three of them had a normal karyotype and one had a reciprocal translocation between chromosomes 9 and 11 with the break on chromosome 9 occurring at band 9q34—46,XY,t(9;11)(q34;q13) (Figure 1).

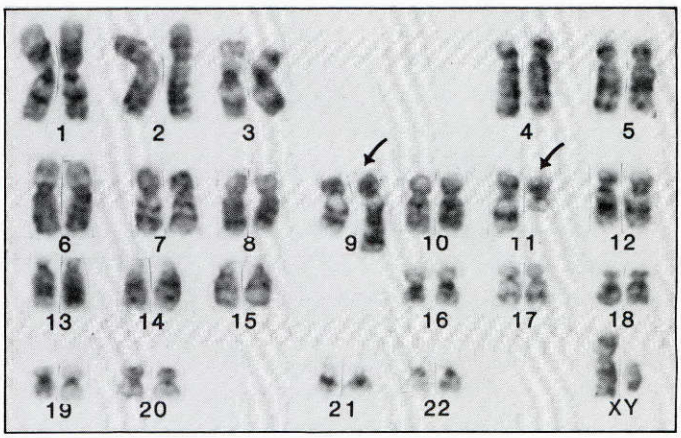


Figure 1. Karyotype of patient with Ph-negative chronic myelogenous leukemia with bcr *rearrangement. Giemsa-banded chromosomes of bone marrow cells show a pseudodiploid clone 46,XY,t(9;11)(q34;q13). The Philadelphia chromosome is not detectable. Figures 1 and 2 reproduced, with permission, from: Razelle Kurzrock, M.D., Mark B. Blick, D.O., Moshe Talpaz, M.D., et al. Rearrangement in the Breakpoint Cluster Region and the Clinical Course in Philadelphia-Negative Chronic Myelogenous Leukemia.* Ann Intern Med *1986; 105:673-678.*

Analysis of DNA from the five Ph-positive CML patients revealed a break within *bcr*. In contrast, three of the four Ph-negative CML patients did not have a break in the *bcr*; but the fourth patient showed *bcr* rearrangement (Figure 2).

Resemblance to Ph-Positive Profile

Analysis of the mRNA from the Ph-negative patient with the *bcr* rearrangement revealed an anomalous *bcr-abl* mRNA transcript similar to that seen in Ph-positive CML. Immune complex kinase assays of cells from this patient revealed the presence of a 210-kilodalton protein that is identical to the *bcr-abl* fusion protein believed to be pivotal to the pathogenesis of Ph-positive CML. Interestingly, his clinical course was indistinguishable from that of patients with Ph-positive CML; he had an excellent response to therapy and survived for more than 12 years. In contrast, the three Ph-negative CML patients without *bcr* rearrangement had rapidly progressive disease and died within about a year of their diagnosis.

The similarity between the clinical course of the Ph-negative CML patient with *bcr* rearrangement and that of most Ph-positive patients reinforces the view that this DNA region plays

Myelogenous Leukemia Patients

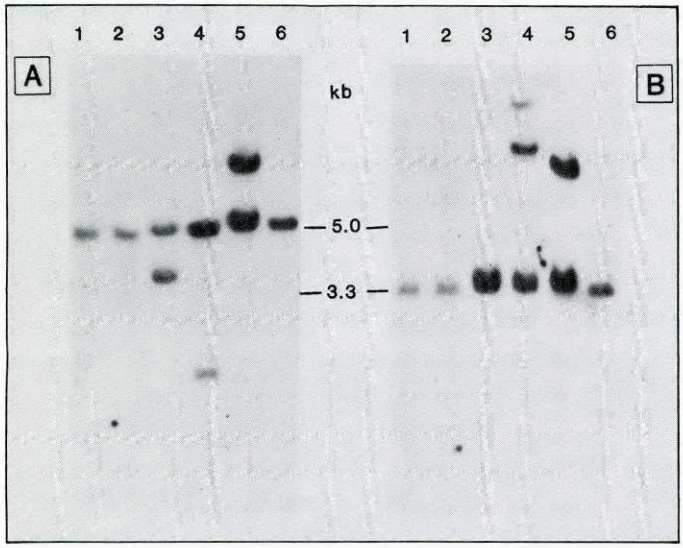


Figure 2. Southern blot analysis of DNA samples using a 3' HindIII-BglII bcr *probe. Restriction enzymes used to digest DNA were* BglII *(panel A) and* BamHI *(panel B). Lane 1 shows the results of an analysis using DNA from a normal volunteer; lanes 2, 5, and 6 show DNA from three patients with Ph-negative chronic myelogenous leukemia; and lanes 3 and 4 show DNA from two patients with Ph-positive chronic myelogenous leukemia. Rearrangements in* bcr *can be seen in the two Ph-positive CML patients (lanes 3 and 4) and in one of the Ph-negative CML patients (lane 5).*

a critical role in the development of CML. Further, these data and those of others show that the *bcr* rearrangement is not strictly a feature of Ph-positive CML and that molecular studies can identify unsuspected chromosomal rearrangements. Given the crucial role genomic events are assumed to play in determining the phenotypic manifestations of disease, molecular analysis may take on increased importance as a diagnostic tool.

A patient with Ph-negative CML survived for more than 12 years after treatment.

Finally, because *bcr* rearrangement seems to have such a profound influence on the clinical course of Ph-negative CML, molecular studies may lead to more accurate determination of prognosis for these patients and perhaps result in a new classification for some patients with Ph-negative CML.

Physicians who desire additional information may write Razelle Kurzrock, M.D., Department of Clinical Immunology and Biological Therapy, Box 41, The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston, 1515 Holcombe Boulevard, Houston, Texas 77030.

1987 Spring Conferences

April 12-15

Twelfth National Nutrient Databank Conference: Designs for Application

Cosponsored by The UT M. D. Anderson Hospital and Tumor Institute at Houston, Department of Cancer Prevention and Control; The University of Texas Health Science Center at Houston, School of Public Health; and St. Luke's Episcopal Hospital, Texas Children's Hospital, Texas Heart Institute; Westin Galleria Hotel, Houston, Texas

April 22-25

First Biennial Symposium on Minorities and Cancer: The Realities of Cancer in Minority Communities

Cosponsored by The UT M. D. Anderson Hospital and Tumor Institute at Houston, American Cancer Society, National Office, and American Cancer Society, Texas Division; Westin Oaks Hotel, Houston, Texas

April 30-May 2

Cancer Update '87: New Perspectives in Cancer Biology; Controversies in Management; Board Review

Sponsored by The UT M. D. Anderson Hospital and Tumor Institute at Houston, Committee of Medical Oncology Fellows; M. D. Anderson Hospital Auditorium, Houston, Texas

For more information, write Office of Conference Services, HMB Box 131, The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston, 1515 Holcombe Boulevard, Houston, Texas 77030. Phone (713) 792-2222.

OncoLog
A Report to Physicians

___ General Practice
___ General Surgery
___ Geriatrics
___ Gynecologic Oncology
___ Hematology
___ Head and Neck Surgery
___ Infectious Diseases
___ Immunology
___ Internal Medicine
___ Neurology
___ Neoplastic Diseases
___ Nuclear Medicine
___ Neurological Surgery
___ Obstetrics and Gynecology
___ Oncology
___ Medical Oncology
___ Neurologic Oncology
___ Radiation Oncology
___ Surgical Oncology
___ Ophthalmology
___ Orthopedic Surgery
___ Otology
___ Otorhinolaryngology
___ Pathology
___ Pediatrics
___ Pediatric Hematology-Oncology
___ Pediatric Surgery
___ Physical Medicine and Rehabilitation
___ Plastic Surgery
___ Psychiatry
___ Pulmonary Diseases
___ Radiology
___ Rheumatology
___ Therapeutic Radiology
___ Thoracic Surgery
___ Urological Surgery
___ Other specialty _____

What is your primary work?
___ private practice
___ teaching
___ research
___ administration
___ other _____

Do you treat cancer patients?
___ yes no ___

If yes, about what percentage of patients do you treat for cancer?
___ 10% ___ 20% ___ 30% ___ 40% ___ 50%
___ 60% ___ 70% ___ 80% ___ 90% ___ 100%

How would you characterize the area you work in?
___ rural ___ urban ___ major metropolitan

If the address we have for you is incorrect, or if you are not on our mailing list but would like to be, please complete the section below.

Name _____
Address _____
_____
City, State, Zip _____
Country _____

Department of Scientific Publications
HMB Box 234
The University of Texas
M. D. Anderson Hospital and Tumor Institute at Houston
1515 Holcombe Boulevard
Houston, Texas 77030

A Report to Physicians
OncoLog

READER SURVEY

To our readers:

Four times a year, we mail **OncoLog** to Texas physicians, to M.D. Anderson staff members, and to many other readers throughout the world. Now we would like to know something about you—the sort of work you do, where you work and live, and whether or not the information in this newsletter is of value to you. Please help us collect this information by completing this survey and returning it to:

OncoLog Editor
Department of Scientific Publications
The University of Texas
M. D. Anderson Hospital and Tumor Institute
1515 Holcombe Boulevard
Houston, Texas 77030

Thank you. We look forward to your answers.

Do you read **OncoLog**?
___ yes ___ no

If not, why not? _____

If yes, how often do you read it?
___ every issue (4/year)
___ 2-3/year
___ 1/year
___ less than 1/year

How much of the newsletter do you read?
___ cover to cover
___ specific articles

Can you name some articles you liked?

_____
_____
_____
_____
_____

Do you pass the newsletter on to your associates?
___ yes ___ no

If yes, to whom?
___ other physicians (how many? ___)
___ nurses (how many? ___)
___ students (how many? ___)
___ others _____

What do you like about **OncoLog**?
___ articles on treatment
___ articles on research
___ news articles
___ book reviews
___ information on conferences
___ other _____
_____

What do you dislike?

_____
_____
_____
_____

What else would you like to see in **OncoLog**?

_____
_____
_____
_____

How is **OncoLog** useful to you?
___ source of information in my work
___ interesting stories on new developments in cancer research and treatment
___ source of referral or consultation information
___ other _____
_____
_____
_____

Are you working in medicine? If so, complete the questions below; if not, go to the last question.

Please check the degree(s) you hold:
___ MD ___ PhD ___ DO ___ DDS
___ RN ___ Other _____

What are your major practice areas? (Check all that apply.)
___ Allergy
___ Allergy and Immunology
___ Anesthesiology
___ Cardiovascular Diseases
___ Cardiovascular Surgery
___ Clinical Pharmacology
___ Colon and Rectal Surgery
___ Dentistry
___ Dermatology
___ Diagnostic Radiology
___ Endocrinology
___ Family Practice
___ Gastroenterology

continued

Oncolog
A Report to Physicians

Address correction requested

Department of Scientific Publications
HMB Box 234
The University of Texas
M. D. Anderson Hospital and Tumor Institute at Houston
1515 Holcombe Boulevard
Houston, Texas 77030

Nonprofit Org.
U. S. Postage
PAID
Permit No. 614
Austin, Texas

Limited Chemotherapy...

continued from page 3

At UT MDAH, the disease-free survival rate for patients staged as I or II after laparotomy who had mediastinal masses 7.5 cm to 10 cm in diameter, hilar disease, or B symptoms has been satisfactory when the treatment contained two cycles of MOPP in addition to definitive mantle irradiation with or without low-dose lung irradiation. Other centers have employed more chemotherapy or more irradiation.

Future analyses of large series of patients after longer follow-up intervals will determine the effectiveness of more limited therapy for such patients. For patients with clinically staged disease, two cycles of MOPP and upper-torso irradiation may not offer sufficient protection against abdominal relapses. In our program, such patients also receive upper-abdominal irradiation, as do patients with stage III disease. Whether or not the disease is staged by laparotomy, it may be possible to substitute a limited number of cycles of an Adriamycin-based combination chemotherapy, such as ABVD (Adriamycin, bleomycin, vincarbazine, and dacarbazine) for two cycles of MOPP, to be used in conjunction with definitive radiotherapy. Neither treatment-related leukemia nor sterility has been associated with this regimen. In the future our treatment programs will investigate the possible advantages of substituting an Adriamycin-based regimen for MOPP.

For patients with high-risk features for relapse, those with mediastinal masses larger than 10 cm in diameter, we anticipate that staging laparotomy will be omitted, treatment will emphasize combination chemotherapy, and radiotherapy will be adjunctive. These patients will receive primarily single combination chemotherapy regimens or alternating regimens such as MOPP/ABVD, administered to a response plateau before radiotherapy is begun. Whether alternating regimens are better than single regimens is uncertain and will be determined by future studies.

(This information is based on Dr. Fuller's book, *Hodgkin's Disease and the Non-Hodgkin's Lymphomas in Adults and Children*, which she is editing with Drs. F. B. Hagemeister, M. P. Sullivan, and W. S. Velasquez, to be published by Raven Press.)

Physicians who desire additional information may write Lillian M. Fuller, M.D., Division of Radiotherapy, Box 97, The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston, 1515 Holcombe Boulevard, Houston, Texas 77030.

Change of Mailing Address

The mailing address of UT M. D. Anderson Hospital has changed from 6723 Bertner Avenue to 1515 Holcombe Boulevard, with the same 77030 zip code. Neither the hospital nor departments in the Houston Main Building have moved—the change was made to make the hospital easier to find.