Invited Commentary: Radiation Oncologists Should Play a Leading Role with Systemic Targeted Radiation Therapy

By Jeffrey Y. C. Wong, MD

Significant advances in molecular and genetic engineering have made possible the design of immunoconstructs and other small molecules that, when radiolabeled, serve as delivery vehicles for targeted systemic radiation therapy. These efforts have recently led to the U.S. Food and Drug Administration approval of two anti-CD20 radiolabeled antibodies for the treatment of low-grade non-Hodgkin lymphoma, with response rates ranging from 20% to 80%. The indications for use of these approved agents will likely increase. Trials are ongoing evaluating radioimmunotherapy in combination with established chemotherapy regimens. New, even more promising constructs for targeted systemic radiation therapy are on the horizon, able to deliver more dose to the tumor and clear more rapidly from organs, resulting in less dose-limiting toxicity. With now more than two decades of clinical experience, radiation oncologists believe these radioimmunotherapeutics have the ability to deliver at least 20 Gy to a subset of tumors, sufficient as monotherapy to result in significant responses in radiosensitive hematologic malignancies. These same doses are achievable in solid tumors and are likely to have clinically important results when combined with standard chemotherapy and radiation therapy in small volume or micrometastatic disease.

It is imperative that radiation oncologists be involved with this promising new form of radiation therapy as active participants rather than as passive observers. As radiation oncologists, we have embraced enthusiastically each new technologic advance, from linear accelerators to three-dimensional conformal radiation therapy, intensity-modulated radiation therapy, and, most recently, image-guided radiation therapy. However, advances in the new forms of systemic targeted radiation therapy and radioimmunotherapy have been met with seeming disinterest. Only a handful of radiation oncologists are involved in this exciting area of research, and only a minority has incorporated this form of therapy into practice.
Let’s Use IMRT Appropriately
By A. Robert Kagan, MD, FACRO

Whenever I consider a new treatment modality, I first attempt to determine whether it will increase cause-specific survival, whether it is significantly improved over existing modalities, and whether it will carry a cost commensurate with its anticipated gains. To readers of the Bulletin, this may seem like common sense. But, apparently, common sense is in short supply at the U.S. Food and Drug Administration (FDA). As I pointed out in a recent published article I co-authored with Robert J. Schulz, PhD, from the Department of Therapeutic Radiology at Yale University, a manufacturer can obtain a license to sell radiation-therapy equipment (510K) simply by showing the FDA that the equipment meets “various national and international standards for accurate dose delivery, mechanical precision, and reliable and consistent operation.”¹ This is in contrast to chemotherapeutic agents, which must go through phase I, II, and III clinical trials to demonstrate efficacy and safety. Consequently, intensity-modulated radiation therapy (IMRT) has been marketed based on minimal clinical data and the assumption that its use will extend and improve life for cancer patients. Insurance companies reimburse for these complex treatments at least three times the rates they reimburse for brachytherapy or conventional external-beam therapy. These rates cover capital and operating costs with enough left over for profit. As a result, sales of IMRT systems are “drawn as much by economic as by medical considerations.”¹ Once such a system is in place, physicians are under pressure to use the equipment.

Based on current trends, IMRT may soon become the standard for external-beam treatments and used even when the ability to escalate dose and precisely define dose distributions are of little advantage. Additionally, IMRT requires 40 or more treatment days to deliver doses, requiring sometimes debilitating commutes for patients who live far from treatment centers.

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Lack of Familiarity

A major reason for this lack of involvement stems from the radiation oncologist’s lack of familiarity with this therapy. Radiation oncologists currently in practice have little training or experience with the therapeutic use of unsealed radiopharmaceuticals; nor is this training required for board certification. As a result, he or she is not only uncomfortable with these new therapies but is often met with a number of administrative and regulatory hurdles to overcome to obtain the appropriate state and hospital licensures to administer these agents. Recent changes in the Nuclear Regulatory Commission regulations have addressed these issues. Training in radioimmunotherapy and the use of unsealed radiopharmaceuticals for therapy will now be a requirement of new trainees. For the board-certified radiation oncologist already in practice, he or she may become an authorized user by performing a minimum of six proctored cases and demonstrating a minimum of 80 hours of didactic training using unsealed-source radiation therapy (much of which has already been accomplished through residency). These important changes will result in a growing number of radiation oncologists actively involved in this area over the next decade.

Another reason for lack of involvement put forth by some relates to the relative lack of reimbursement for the time and effort needed to deliver radioimmunotherapy compared with other forms of radiation therapy. Although a detailed analysis of this is outside the scope of this commentary, I would guess that this is currently not an overriding reason for why most radiation oncologists remain uninvolved. What has and will continue to drive usage is patient demand and demonstrated efficacy, both of which are associated with current radioimmunotherapy agents. Any reimbursement factors will become secondary once radiation oncologists become familiar with radioimmunotherapy and begin incorporating it into their practices.

Opportunity for a Lead Role

So should the radiation oncologist play a role in radioimmunotherapy and other forms of systemic targeted radiation therapy? Absolutely. In fact, radiation oncologists should not only play a role but, in most centers, will have the opportunity to play the lead role. Radiation oncology focuses on the effective and safe application of ionizing radiation for the treatment of cancer. Our discipline is multi-dimensional and complex, bringing to the clinic advances in cancer biology, radiation biology, physics, computer science, engineering, and cancer medicine. Knowledge of radiation biology, dose-response relationships, low-dose-rate effects, and oncology is a strength we bring to radioimmunotherapy. Nuclear medicine physicians also administer these radiopharmaceuticals but, except for a select minority, are primarily interested in diagnostic imaging, infrequently deliver therapeutic amounts of radiation, and are less familiar with managing the associated risks and side effects of radiation therapy alone or in combination with chemotherapy. This makes the radiation oncologist uniquely positioned to practice this form of therapy compared to physicians in other oncologic or radiologic disciplines.

Over the next several years, practices at each center need to designate and train at least one radiation oncologist to be involved in this area. Continued efforts by professional organizations, such as the American Society for Therapeutic Radiology and Oncology and ACRO, to include systemic targeted therapies in their educational and scientific programs are critical in furthering this effort and stimulating interest in the next generation of radiation oncologists. Sponsorship of multi-institutional radioimmunotherapy trials through RTOG will also help increase radiation oncology’s involvement. This is an area of research and medicine that we can no longer afford to overlook. This form of radiation therapy is here to stay. Its clinical indications as monotherapy or in combination with other therapies will only increase over time, and, in some clinical settings, radioimmunotherapy is being considered as an alternative to external-beam radiation therapy. Continued disinterest in radioimmunotherapy and other forms of systemic radiation therapy will only further erode our active role in the care of the cancer patient.

Dr. Wong is the chair of the Division of Radiation Oncology at the City of Hope Cancer Center in Duarte, CA.

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Be a Part of ACRO 2007 in Sunny San Diego

The 17th Annual Meeting of the American College of Radiation Oncologists will be held from Thursday, February 22, to Saturday, February 24, 2007, at the historic Hotel del Coronado in San Diego. This three-day conference will be a concentrated learning experience dealing with the latest clinical and economic information in radiation oncology presented in a practical manner for the busy clinician. Plenary sessions will feature nationally recognized speakers. From the opening supported breakfast on Thursday morning to the final social event on Saturday evening, this will be the one meeting in 2007 that you cannot afford to miss. Meeting highlights will include:

▲ Clinical applications of some of the newer technologists in image guidance, PET, and radiation-treatment planning,
▲ Clinically useful updates on management of lymphoma, breast cancer, and prostate cancer,
▲ Updates on re-irradiation techniques, hyperthermia, and the truth about vitamins and phytonutrients in breast cancer,
▲ The latest information dealing with high-dose-rate brachytherapy, stereotactic spinal irradiation, and proton therapy,
▲ The emerging role of targeted therapies in breast-cancer management,
▲ A panel discussion dealing with external-beam therapy, brachytherapy, protons, and hormones in prostate-cancer management,
▲ Afternoons free to attend other optional sessions or to visit San Diego attractions,
▲ An intensity-modulated radiation therapy workshop conducted by the University of California, San Diego, Department of Radiation Oncology,
▲ A coding and billing workshop complementing the scientific program,
▲ Washington, NRC, and CMS updates on the state of radiation oncology,
▲ Company-supported meals,
▲ Two days of exhibitions by 50 companies of the latest technology and services, and
▲ A final “blast” on Saturday evening at Sea World, with a performance by Shamu, the killer whale.

A block of rooms at the highly discounted rate of $245 per night, double or single, have been reserved at the Hotel del Coronado. Visit the ACRO website at www.acro.org and link to the hotel’s website for more information about this fabulous hotel and the attractions of San Diego.
AMA Update

AMA Activities Could Impact Radiation Oncologists
By Paul J. Schilling, MD, FACRO

ACRO is represented in the American Medical Association (AMA) by Dennis Galinsky, MD, [delegate]; Mohamed Khan, MD, [alternate delegate and chair of the Council on Science and Public Health]; Greg Cotter, MD, [American College of Radiology delegate], and myself. The following items are of special interest to ACRO members.

Medicare Audits
The AMA voted to oppose demonstration audits mandated by the Medicare Prescription Drug Improvement and Modernization Act of 2003 because of abuses. Currently, recovery audit contractors receive a percentage of any overpayments they discover in a practice. These pilot projects are currently underway in Florida, New York, and California.

EMR
The AMA resolved to advocate for initiatives that minimize physicians’ financial burden due to adopting and maintaining electronic medical records. The policy included support that public and private insurers should not require the use of EMR.

Medicare Part D
The AMA voted to simplify the pre-certification and appeal process of U.S. Food and Drug Administration-approved prescription medication by any Medicare part D prescription drug plan.

Tort Reform
The AMA referred for study the concept of “loser pays court costs” to deter frivolous lawsuits and medical liability claims. This was introduced by the Missouri delegation, based on a Missouri tort reform bill of 2005.

Hospital Self-Referral
Board of Trustees report 38 outlined possible anticompetitive and ethical implications of integrated hospital systems. This hospital system also owns physician practices, which are expected to refer back to the mother hospital system. Although physicians continue to be guided by the best interest of the patients, hospital administrators are under no such obligation.

Opting Out of Medicare
Board of Trustees report 16 described the advantages and disadvantages of opting out of Medicare. Nonparticipating physicians can charge up to 115% of Medicare rates. However, a 5% discount from the payment limits the additional charge effectively to 9.25%. Another disadvantage for opting out: patients receive Medicare checks paid to them instead of to the physician. In 1998, the AMA supported opting out of Medicare on a patient-by-patient basis. This idea was introduced to Congress as a bill called the Medicare Beneficiary Freedom to Contract Act, but the bill never became law. The AMA will continue to work on identifying modifications that will make private contracting a reality.

Uninsured
The Council on Medical Service reported that currently 46 million Americans are uninsured, representing 16% of the population. Eleven per cent of this group makes 500% or more above the poverty level and chooses not to purchase insurance. A typical physician provides care to patients for $2,000 per week.

Tail Coverage
Board of Trustees report 30 supports changes in the Internal Revenue Service code to allow pretax savings accounts whereby physicians can purchase tail insurance for professional liability. Contributions would grow tax free until withdrawn to purchase tail coverage.

Smoking Ban
Resolution 401 calls for the AMA to protect patient access to imaging services by supporting the repeal or delay of section 5102 of the Deficit Reduction Act of 2005, which substantially reduces the technical-component payment for imaging under the outpatient physician schedule as compared to the Medicare payment system for hospital outpatient departments.

Bioterrorism
The ACR produced a book on bioterrorism and radiation exposure, which was well received. Relevant case law is summarized. The AMA encourages physicians who have experienced economic credentialing to contact the litigation center of the AMA for assistance.

JCAHO
Resolution 504 requests that the AMA seek cessation of implementation of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) certification for kidney dialysis provided in a physician’s office. This would be the JCAHO’s first foray into office-based practice and would have wider implications for other specialties.

Access to Imaging
Resolution 208 calls for the AMA to protect patient access to imaging services by supporting the repeal or delay of section 5102 of the Deficit Reduction Act of 2005, which substantially reduces the technical-component payment for imaging under the outpatient physician schedule as compared to the Medicare payment system for hospital outpatient departments.

Hospital Loses
Finally, the AMA litigation center reported an extensive review of their activities. Of interest to Florida physicians was a case in which Hospital Corporation of America, as owners of Lawnwood Medical Center, sought to replace the medical-staff bylaws with its own version. In a protracted legal battle supported by the AMA, the medical staff won. Summary judgment was rendered on March 24, 2006. Details of this case can be found on the AMA website at www.AMA-assn.org.

Dr. Schilling practices at the Community Cancer Center of North Florida in Gainesville.


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ACRO Awards Qualified Residents Annually

Each year several resident scholarships are awarded to radiation oncology residents to support subspecialty electives at any qualified United States institution demonstrating expertise in the desired subspecialty area. (There are no European elective grants.) Eligible applicants are ACRO or Association of Residents in Radiation Oncology members in their second, third, or fourth years of an accredited U.S. institution who have not previously been awarded an ACRO fellowship grant.

Applicants are responsible for arranging their electives with the host institution before the submission of their application. Electives must be arranged for a minimum of four weeks and for a maximum of eight weeks. Subspecialty electives include brachytherapy; conformal and three-dimensional treatment-planning therapy; gynecologic radiation oncology; head and neck radiation oncology; pediatric radiation oncology; radiosurgery; palliative care; and medical informatics. In addition, there are travel awards to attend the ACRO Annual Meeting.

Applications are reviewed by the ACRO Resident Scholarship Committee. Committee members rank the candidates. The committee chair tabulates the rankings and informs committee members of the final selections of the scholarships. Subsequently, the ACRO president sends formal notification letters to each winner. Also, the committee chairman forwards formal regret letters to applicants who were not selected for fellowship awards.

Upon the completion of the elective, the resident is required to obtain a letter from the program director or hosting physician indicating successful completion of the elective and the beginning and ending dates of the elective. In addition, the resident must submit a summary report of the experience specifying how the elective supplemented residency training and how it will benefit the future career as a radiation oncologist. As part of the scholarships, winners are expected to attend the subsequent ACRO Annual Meeting.

For further information about the resident scholarships, contact ACRO at 5272 River Road, Suite 630; Bethesda, MD 20816; telephone (301) 718-6515.

Discount for ACRO Members Attending Oncology Congress

ACRO negotiated a $100 discount for its members to attend the Oncology Congress, October 19–21, 2006, at the New York Marriott Marquis Times Square. This three-day continuing medical education event offered a wide variety of sessions for radiation oncologists and provided American-based practicing oncologists with the latest clinical data, best practices, and new technologies. The multidisciplinary faculty of 140+ oncology leaders from leading U.S. cancer centers presented practical information that can be directly applied to a practice.

Before registering for the Oncology Congress in 2007, be sure to check the ACRO website to determine if discounts are available for ACRO members.
Membership Categories Defined

Many Ways to Enjoy Benefits of Being an ACRO Member

ACRO strives to ensure the highest quality care for radiation-therapy patients and promote success in the practice of radiation oncology through education, responsible socioeconomic advocacy, and integration of science and technology into clinical practice.

Active Membership
Membership in ACRO is open to physicians who limit their practice to radiation oncology, physicians currently enrolled in a fellowship program, and radiation oncology physicists in all types of practices, including universities, hospitals, freestanding clinics, fee-for-service practices, HMOs, government, etc. Membership is by application. Members receive the American Journal of Clinical Oncology (AJCO) and quarterly newsletters that keep them abreast of matters related to the field of radiation oncology, along with information regarding upcoming medical accreditation courses and the ACRO Annual Meeting and special discounts on the ACRO Practice Management Guide. Active Members have the right to vote in ACRO elections, hold elective office, and be appointed to committee positions.

Annual dues are $375. Active members who are employed full-time by the military are granted a dues reduction and pay only $175. A concession is also made for first-year practicing physicians: dues are $275.

Associate Membership
Members are administrators, radiology technologists, and radiation therapists who are engaged in radiation-oncology practice. Membership is by application. Associate Members receive the American Journal of Clinical Oncology (AJCO) and quarterly newsletters, notice of the ACRO Annual Meeting, special discounts on the ACRO Practice Management Guide, and can be appointed to the commissions and committees of ACRO but do not have the right to vote or hold elective office.

Annual dues are $255.

Resident Membership
Resident Members are physicians who have never been Active Members and who occupy an approved oncology residency. Membership is by application. Resident Members can be appointed to the various committees. ACRO devotes significant time and resources to the educational concerns of future radiation oncologists. Quarterly newsletters and annual meeting registration information are sent out automatically. Resident Members can be appointed to the commissions and committees of ACRO but do not have the right to vote or hold elective office.

There are no dues for residents.

Corresponding Membership
Physicians who have been Active or Associate Members of ACRO for more than five years but who are not currently employed more than 10% of the time in fields related to radiation oncology are eligible to be Corresponding Members. Non-physicians who have a major interest in ACRO activities and have proved evidence of involvement in the practice of radiation oncology or have worked for the betterment of the practice are also eligible to be Corresponding Members. A Corresponding Member can be appointed to the commissions and committees of ACRO but does not have the right to vote or hold office.

Annual Dues are $100.

For further information about ACRO or to receive a membership application, please contact ACRO headquarters at 5272 River Road, Suite 630; Bethesda, MD 20816; telephone (301) 718-6515.

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Is Euthanasia, Assisted Suicide Ever Justified? 
(The British Government Doesn’t Think So)

Approximately one year ago, the British publication, *The Economist*, described what is called a “policeman’s dilemma”: A truck driver is trapped in his cab while the vehicle burns out of control after an accident. It is apparent to all on the scene that he cannot be saved before he burns to death. In extreme pain, the driver asks a policeman to shoot him. The policeman does.\(^1\)

*The Economist* writer then asks the reader how anyone would think the policeman was evil. Yet according to many members of Britain’s House of Lords, we, as a society, cannot agree to assist death in extreme circumstances and should not codify it as law. The debate over euthanasia and assisted suicide became big news in England in 2005 when the House of Lords debated a bill that would make helping someone end his life a lawful act, provided the someone is an adult, is terminally ill, is mentally competent, is suffering unbearably, and has made a written request for such assistance.

**A Worldwide Issue**

In fact, euthanasia has been a “hot-button” issue on and off for decades in other parts of Europe and the United States. The Netherlands has allowed voluntary euthanasia and assisted suicides since 2002. The Dutch law is not limited to adults and the terminally ill; however, only a physician can assist and only after two other physicians have examined the individual and agree that the patient’s suffering is unbearable and that death is the best outcome. Of around 10,000 requests for euthanasia each year, more than a third are granted (about 4% of all deaths in The Netherlands). *The Economist* explains that these numbers may seem high, but approximately the same numbers were undergoing voluntary euthanasia before it became legal.

Belgium allows voluntary euthanasia only for adults in a medical condition of constant, unbearable suffering that cannot be treated. The adult must make the request voluntarily and repeatedly, and, as in The Netherlands, two doctors must confirm the patient’s hopeless condition. In 2004, nearly 350 patients underwent voluntary euthanasia in Belgium.

For more than half a century, Switzerland has allowed assisted suicide under three conditions: (1) The patient is near the end of his or her life, (2) The patient is mentally competent, and (3) The patient has considered all alternatives. The 100 or so assisted suicides in Switzerland are handled by “right-to-die” charities.

In the United States, only Oregon permits assisted suicide. The patient must be an adult, mentally competent, and within six months of death. “Unbearable suffering” is not a requirement. The patient, however, must provide two written requests for assistance with at least a two-week period between the requests. The prescribing physician cannot be present when the patient takes the lethal dose of medicine. Since 1997, approximately 200 patients have committed assisted suicide in Oregon.

In contrast, the United Kingdom made suicide legal in 1961 but attempting to assist a person to commit suicide today can lead to 14 years of prison. If the assistance is successful, the assistant faces a murder charge, even if the suicide victim had asked to be killed.

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Guidelines Impossible to Set
The House of Lords argued over this issue once before in 1994 and decided that it could not set guidelines for voluntary euthanasia. Since then, a poll shows that nearly nine out of 10 Brits want the law changed, and medical organizations, seemingly divided over the issue, have not clearly opposed the change, as they did 12 years ago.

Still many believe terminally ill patients may kill themselves too soon if they think in the future they will not be able to. But supporters of a law change say voluntary euthanasia already occurs so it is better to have it regulated.

The British Medical Association claims it has no evidence of any physician in the United Kingdom assisting with euthanasia. Yet other surveys suggest one out of seven physicians have helped at least one patient die.

The Economist succinctly depicts this issue as a debate between those who believe in the primacy of freedom of choice and those who believe the value of human life cannot be determined by law. So far, no compromise seems possible.

Reference

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Don’t get me wrong. I am not advocating that we step away from IMRT. Clinical reports suggest that its adverse side effects are considerably less than those after conventional external-beam irradiation. But let us use this new modality appropriately based on evidence collected through rigorous clinical study.

Reference

Dr Kagan is the Editor of the ACRO Bulletin and past-president of ACRO. Responses to his opinion as published here or to the article he co-authored in the International Journal of Radiation Oncology, Biology, and Physics (reference above) can be sent to his attention at the Department of Radiation Oncology, Southern California Kaiser Permanente Medical Group, 4950 Sunset Blvd., Los Angeles, CA 90027 or E-mail robert.a.kagan@kp.org
Editorial Freedom Compromised in Canada?

Earlier this year, physicians’ belief in the integrity of peer-reviewed medical journals was shaken when John Hoey, MD, Editor of the Canadian Medical Association Journal (CMAJ), was fired from his position by the Canadian Medical Association after a drawn-out dispute over editorial freedom. Also fired was Deputy Editor Anne Marie Todkill, MD.

Weeks after Dr Hoey’s departure, it became clear, despite the gag order by the CMA for those involved, that the CMA objected to Dr Hoey’s publishing of journal articles that criticized constituencies the CMA supported. Additionally, CMA Media, a division of the CMA, was upset with Dr Hoey’s editorial opinion regarding private healthcare.

‘Morning After’ Controversy

The controversy began in early 2005 when the publisher, under the direction of the CMA, deleted major parts of an article about the “morning after” pill. Dr Hoey responded by publishing a self-written opinion article criticizing the CMA’s interference. The firing, however, followed the writing of another article by Dr Hoey criticizing the appointment of Tony Clement, a supporter of private healthcare, as the Canadian health minister. The article never appeared in the CMAJ, but it was later printed by the British Medical Journal. Jerome Kassirer, MD, a former editor of the New England Journal of Medicine (NEJM), said in a Canadian Broadcasting Company (CBC) interview that the CMA most likely supports privatization and did not appreciate Dr Hoey’s editorial stance.

A New Direction

In defense of the CMA, Graham Morris, media publisher of the CMA, denied that Dr Hoey’s opinions led to his ouster. “We feel there are some changes in emphasis that we would like to make in the journal,” he told the CBC. “We felt this is the time to make the change.”

Nevertheless, Morris did not stem an ensuing outcry in articles published by the NEJM and the Journal of the American Medical Association calling the controversy an example of editorial infringement and supporting Dr Hoey’s contention that “readers expect CMAJ editors to select content without interference, and authors expect their work to be judged without regard to the interests of any third party.”

Since that time, the CMA has been characterized as an organization that does not understand the role of its medical journal. This, in turn, has seriously damaged the reputation of the CMAJ.

Dues Notice

If you have not yet paid your 2006 dues for ACRO membership, this will be the last issue of the ACRO Bulletin you will receive. Second dues notices were sent a month ago by regular mail and by email for online renewal. If in doubt about your membership status, contact ACRO at information@acro.org or call 301-718-6529.

For Information on the ACRO Practice Accreditation Program

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Program Administrator
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**Practice Management Guide Available**

The American College of Radiation Oncology Practice Management Guide was a culmination of work by 20 physicians, one attorney, one physicist, and two MBAs. All the authors are intimately involved in radiation oncology and have chosen this field as their career.

With a practical aspect in mind, the ACRO Board of Chancellors met to produce this manual to serve the needs of the specialty. It covers a wide range of useful information, including Stark rules, marketing, peer review, coding and reimbursement for external-beam treatment and clinical brachytherapy, proton radiation oncology, valuation of a practice, group dynamics, and many other areas that will help the practicing radiation oncologist and prepare the new graduate for the complicated business dealings when building a practice.

It is a valuable tool in any radiation oncology department.

Copies can be ordered on-line at www.acro.org. This is a secure site for credit-card payment. Or, if you prefer, you can send a check to ACRO/Guide, 5272 River Road, Suite 630; Bethesda, MD 20816. The price for ACRO members is $83.50; non-members, $133.50 (includes shipping and handling charge).

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**Brief Summaries of Important News for the Radiation Oncologist**

**Radiation Therapy May Lengthen Survival for Lung-Cancer Patients in Advanced Stage of Disease**

A Yale University School of Medicine study, published this past June in the Journal of Clinical Oncology, claims that patients with advanced-stage lung cancer may live longer if radiation therapy follows surgery. The study analyzed records from the Surveillance, Epidemiology, and End Results (SEER) database of 7,465 patients with lung cancer that had spread to the lymph nodes. Twenty-seven per cent of the patients who received surgery and radiation therapy survived for at least five years; only 20% of the patients who received surgery alone were alive after five years. The researchers noted that previous analyses had shown that postoperative radiation therapy was detrimental to the survival of patients with early-stage lung cancer that had no lymph-node involvement.

**Breast-Cancer Patients Use Yoga to Deal with Their Disease**

This summer, psychologist Lorenzo Cohen led a pilot study at the M. D. Anderson Cancer Center to investigate whether yoga made breast-cancer patients feel better after undergoing surgery and six weeks of radiation therapy. The study focused on 61 women. Thirty took yoga classes twice a week; the others did not. After six weeks, all study participants filled out a questionnaire asking them to grade their ability to perform specific physical activities, such as walking and lifting, from zero to 100. The women who had taken yoga classes had a mean score of 82; the other women had a mean score of 69. Additionally, the women who had taken yoga classes reported less fatigue. There were no differences in measurements between the groups for depression, however.

**Fields of Mathematics and Radiation Oncology Combine to Treat Prostate Cancer**

Industrial and systems engineers at the Georgia Institute of Technology joined forces with radiation oncologists at the Emory University School of Medicine to develop a computerized expert system to help radiation oncologists determine the optimal location for radioactive-seed placement for prostate brachytherapy. The system can not only target escalated doses at the tumor but can adapt to changes in the prostate volume during treatment. The system drastically reduces the time needed to develop a treatment plan and to revise it as the therapy continues.
‘Radiophobia’ Added to the English Dictionary

A new word has been added to English dictionaries—“radiophobia,” meaning “the fear of radiation.” Ever since cancers induced by radiation developed in the survivors of the atomic-bomb blasts at Hiroshima and Nagasaki, many people worldwide have feared radiation and its use for medical and for energy-producing purposes. The word was first coined after the accident at the Chernobyl nuclear power plant in what is now the Ukraine in which an explosion caused nuclear fallout to drift over major sections of northern and eastern Europe. Approximately 336,000 people living in the Soviet Union had to be evacuated and resettled. A person who opposes nuclear power or fears the use of radiation for medical imaging or therapy is called “radiophobic.”

A Call for ‘Clinical Pearls’

Good research can be descriptive, but a bias has developed in the healthcare community leading to the exclusion of such work by many peer-reviewed journals in favor of experimental studies with randomization, which many assume to be the only valid design for obtaining new medical knowledge.

Consequently, the ACRO Bulletin is calling for submissions of “Clinical Pearls,” a 250–500-word description of a special clinical case you believe is unique but has not become part of the medical literature due to its exclusion from experimental research.

Unusual case reports not only provide interesting reading but complement quantitative work through a process research methodologists refer to as “triangulation.” Here is your chance to enhance medical knowledge by sharing a clinical case report with others in radiation oncology.

Please send your submissions to:  A Robert Kagan, MD; Editor, ACRO Bulletin
Department of Radiation Oncology; Kaiser Permanente Medical Group
4950 Sunset Blvd; Los Angeles, CA  90027
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All that is left of the Products Exhibition Hall after an atomic bomb was dropped on the Japanese city of Hiroshima

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Technical Basis of Radiation Therapy: Practical Clinical Applications

By S. H. Levitt, J. A. Purdy, C. A. Perez, and S. Vijayakumar
Hardcover, 2006, $259

This book is now in its fourth edition. It is unique in that it details the technologic bases of radiation therapy. All chapters have been rewritten and updated. In addition, new chapters have been added that pertain to the use of imaging in treatment planning, second malignant neoplasms due to irradiation, and quality assurance. The first part of the book covers basic concepts in treatment planning, including essential physics, and explains various approaches to intensity-modulated radiation therapy, tomotherapy, and high- and low-dose-rate brachytherapy. The second part of the book describes practical clinical applications. This is an invaluable guide for all radiation oncologists.

Book reviews should be addressed to the Editor, ACRO Bulletin, Department of Radiation Oncology, Kaiser Permanente Medical Group, 4950 Sunset Blvd, Los Angeles, CA 90027. Reviews may be edited for clarity or to fit available space.

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John E. Antoine, MD

John E. Antoine, MD, has been appointed chief of the Radiation Oncology Service at the James A. Haley VA Medical Center and clinical professor of radiation oncology at the University of South Florida College of Medicine in Tampa. He served as associate director of the National Cancer Institute’s Radiation Research Program (RRP) from 1985 to 1991. A major project of the RRP was the completion of the fast-neutron clinical trials. From 1991 to 1998, he served as professor of radiation medicine, Loma Linda School of Medicine; associate director, senior clinical investigator of the proton-beam project; and associate director of clinical research at the Loma Linda University Cancer Institute. Before accepting his current position, Dr. Antoine served as chief of the radiation oncology service at the Dallas VA Medical Center and clinical professor of radiation oncology at the University of Texas Southwestern Medical Center from 1998 to 2005. Dr. Antoine is active in the clinical research activities of the Radiation Therapy Oncology Group.

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