American Association for Women Radiologists

AWR focus

Summer 2000

Vol. 20 No. 3

From your President

M. Ines Boechat, MD, FACR

Dear AAWR members,

Nancy Hopkins' presentation on gender bias at the Massachusetts Institute of Technology during the AAWR luncheon at the ARRS meeting in May, left us all energized and optimistic about the possibility for change in our working environments. Our Editor, Melissa Rosado de Christenson, has prepared a summary of Dr. Hopkins' talk, which is included in this issue.

The number of women in the workforce continues to increase, and this year women account for half of the enrollment in medical schools. As a consequence, there is no doubt that traditional job descriptions will no longer work, and institutions will have to adapt to this new reality. Over the years, I have spoken to many colleagues from around the country and found common ground among academicians, private practitioners, military members, and physicians-in-training; the challenge of working full-time in two different jobs, as radiologists and caregivers, while trying to protect personal time truly takes a heavy toll on all of us. Moreover, no conscious effort is being made to modify the working conditions and criteria for advancement in most institutions.

The responsibility and challenge to implement change is in our hands. This year alone, we welcomed 671 residents and radiologists in their first year of practice to the AAWR. Childcare in the workplace, flexible working hours, and telecommuting are crucial issues that influence the recruitment of the best candidates in business and should also be taken into account in our field. With the personal and professional mentoring of seasoned and successful members in the senior ranks of our organization, our younger colleagues should feel confident to propose a new paradigm. I have great hope to see it happen in the very near future.

It is with great pride that I inform you of the important role the AAWR played in the recent nomination of several highly qualified candidates for positions in the American College of Radiology, with the support of other organizations and ACR members:

- Sarah Donaldson, MD, was nominated as a candidate for the Board of Chancellors, to serve a three-year term.
- Anne Roberts, MD, was nominated as a candidate for the Council Steering Committee, to serve a two-year term.
- Sara Abramson, MD, and Barbara Schepps, MD, were nominated as candidates for the 2000–01 Nominating Committee, to serve two-year terms.

The final election will take place on September 24, 2000, during the ACR Council meeting in New York City. I urge you to support these candidates and speak in their favor to other ACR councilors.

There is a lot to work to be done before the next AAWR meeting in November. Our Web site continues to be upgraded. Please log in at www.aawr.org and give us your feedback. We continue to work on a new

***President** continued on page 7*

in focus


Nancy Hopkins, PhD

Nancy Hopkins Discusses Gender Bias at MIT

By Melissa L. Rosado de Christenson, Col, USAF, MC, FACR
Editor, AAWR

On May 9, 2000, Professor Nancy Hopkins addressed the AAWR membership during its annual luncheon meeting at the American Roentgen Ray Society in Washington, DC. Dr. Hopkins is the Amgen Professor of Molecular and Developmental Biology at the Massachusetts Institute of Technology (MIT). She obtained her BA degree from Radcliffe College and her PhD from the Department of Molecular Biology and Biochemistry at Harvard University in 1971. Dr. Hopkins joined the faculty of MIT as an assistant professor and worked on the mechanisms of replication and leukemogenesis by RNA tumor viruses for 17 years. She was promoted to associate professor in 1976, was tenured in 1979, and was promoted to professor in 1982. She is a Fellow of the American Academy of Arts and Sciences and a member of the Institute of Medicine of the National Academy of Sciences.

Dr. Hopkins' recently publicized activities began nine years ago when she changed her field of interest and began work in the area of developmental biology. Until then, she did not recognize that she herself had been the object of gender discrimination at MIT. She believed that society, through the civil rights movement, the women's movement, and affirmative action, had already resolved these issues. However, she gradually came to see that other women faculty were discriminated against. Furthermore, her work at MIT had always been inordinately difficult and became increasingly so when she changed her field of research. Obtaining additional laboratory space and equipment was a tremendous struggle, in spite of the fact that she only asked for very moderate resources. She was surprised at the unfairness with which she was treated and admits that had she been older or rich she would have retired. When it finally became clear to her that her treatment was unfair and that no male faculty would be treated in this way, Dr. Hopkins decided to take her case before the MIT administration. She drafted a letter to the President, enumerating the difficulties encountered by women scientists at MIT, but was concerned by its strong tone. She sought the advice of a respected female colleague and recalls feeling humiliated and embarrassed at the idea of voicing her problems before this fellow scientist. To her surprise, her colleague not only validated her complaints, but also related similar experiences and asked to sign the letter as well. However, rather than sending this letter, the two women decided to poll the other tenured women faculty in the six Departments of Science. They were surprised to discover that there were only 15 tenured female faculty members in the School of Science as opposed to 194 tenured male faculty. Together they systematically approached each of the other 13 women and 2 other women with secondary appointments in science and shared their experiences with them. In the end, 16 of the 17 women signed a letter and a proposal, which were presented to the Dean of Science in the summer of 1994. The Dean agreed that there was a problem and directed Dr. Hopkins to form a committee composed of both men and women to define and address these issues. While some of the women were initially concerned about having men on the committee, they found that the men became powerful allies. The men were either department chairs or former chairs and contributed invaluable knowledge and administrative experience to the committee. The committee collected and analyzed data regarding allocation of resources, compensation, awards, and obligations. The committee also interviewed junior women faculty and department chairs. They summarized their findings as follows:

1. The percentage of women faculty in the School of Science had not changed for at least 10 years, probably 20, and was not likely to change in the future.
2. Interviews with junior women faculty showed that:
   - Junior women felt well supported within their departments
   - They did not believe that gender bias would affect their careers
   - They believed that family-work conflicts might impact their careers differently from those of their male counterparts
3. Interviews with tenured women faculty revealed that:
   - Tenured women faculty felt marginalized and excluded in their departments, and such marginalization increased as their careers progressed
   - Marginalization of tenured women faculty manifested itself as exclusion from decision-making roles and in differences in salary, space, awards, and other resources in spite of professional accomplishments similar to those of their male colleagues

4. Thus, while most women entered the School of Science with the belief that gender discrimination had ended long ago, as their careers progressed they experienced a marked divergence from the careers of their male colleagues.
5. Women scientists could succeed, but the price they paid for their success was too high. Many of the tenured women had made the conscious decision to give up family and children. However, in spite of their sacrifice and focus, the higher they ascended in the hierarchy the greater their struggle became. They were excluded from those aspects of academia that made the job easier for their male counterparts.

"The heart of the problem is that equal talent and accomplishment are viewed as unequal when seen through the eyes of prejudice. There is a perception among many women faculty that there may be gender-related inequities in the distribution of space and other resources, salaries and distributions of awards and other forms of recognition. Currently a glass ceiling exists within many departments…"

The findings of the committee were presented to the Dean, first in a preliminary report and finally in a 150-page single-spaced report in the winter of 1996-97. The Dean immediately began to address issues of space, resources, and equipment, thus taking steps to redress former inequities. He made an effort to recruit women at all faculty levels. An article describing the committee's report was published in the MIT Faculty Newsletter, and this article, which came to be known as "the MIT Report," was covered in the *Boston Globe* and the front page of the *New York Times*. The MIT report ultimately received attention from the White House and presidential support. Today, there are equity committees in all five MIT schools. The women at MIT have bonded. Other universities have begun to follow their example. What have they taught us through their efforts and experiences?

Gender bias is with us today. It is subtle but pervasive. It causes marginalization of women. Before institutions can address the problem, they must recognize that there is a problem. Many academic institutions like MIT were likely designed for the success of men that were fully supported at home. Today's men may not have this level of support in view of the ever-increasing numbers of women who work outside the home. Women who work have seldom had this type of support. Change is possible, but it will be up to us women to drive and institute such change and up to the institutions to take responsibility for this problem.

"I was unhappy at MIT for more than a decade. I thought it was the price you paid if you wanted to be a scientist at an elite academic institution. After the Committee formed and the Dean responded, my life began to change. My research blossomed, my funding tripled. Now I love every aspect of my job. It is hard to understand how I survived those years—or why."

The women of the School of Science at MIT succeeded in their endeavors through working together towards their goals and for the benefit of themselves as well as future generations of women scientists. We at the AAWR applaud their efforts and reaffirm our commitment to the provision of a similar forum through our organization and its activities for the benefit of all women radiologists and our specialty as a whole.

Reference

A Study on the Status of Women Faculty in Science at MIT. The MIT Faculty Newsletter March 1999; XI (4).

The opinions and assertions contained herein are the private views of the author and are not to be construed as official or as representing the views of the Departments of the Air Force or Defense.

Mini-Tutorial on the Internet—Part 5

By Katarzyna J. Macura, MD, PhD
Co-Chair, Public Relations Committee

The mini-tutorial on the Internet is intended to provide our members with an overview of the Internet architecture and function. This fifth part of the tutorial explains integration of various multimedia technologies, such as text, image, sound, video, animation, and virtual reality.

Multimedia on the Internet

Multimedia refers to any computer-based presentation or application that integrates two or more of the following elements: text, graphics, animation, audio, video, and virtual reality. The use of a variety of media elements allows the presentation of information in various ways. PowerPoint presentations combining text, graphics, and video clips are examples of multimedia applications. These are non-interactive multimedia presentations in which slides are displayed in a pre-defined linear fashion. Interactive multimedia are applications that accept input from the user by means of a keyboard, voice, or mouse and perform an action in response. An interactive multimedia program allows the user to select the material, define the order in which it is presented, and obtain feedback on his/her actions. The ability of users to interact with a multimedia application is one of its most unique and important features and enhances learning by engaging and challenging users.

Text is a fundamental element used to convey information. It can be enhanced by a variety of textual effects, e.g. font size, color, or style, to emphasize certain words or phrases.

Graphics, such as drawings, charts, or photographs, are digital representations of non-text information. Graphics play a very important role in multimedia because most people are visually oriented; "One good picture is worth a thousand words." Graphics were the first media used to enhance the text-based Internet. The introduction of graphical Web browsers allowed Web page developers to incorporate illustrations, logos, and pictorial navigation into Web pages. The popularity of the graphical interface used on PCs and Macintosh computers, as well as graphical Web browsers demonstrates the importance of graphics when using computers. Graphics files on the Web must be saved in a certain format. The two most common file formats for saving graphics files are **JPEG** (Joint Photographic Experts Group) and **GIF** (Graphics Interchange Format). Files are saved in both JPEG and GIF formats by using compression techniques to reduce their file size for faster downloading from the Web. Because the downloading of graphics files can be time consuming, some Web sites use thumbnails on their pages. A **thumbnail** is a small version of a larger image that users can click on to display the full-sized image. Graphical elements used in computer applications can be obtained from a clip art/image gallery, which is a collection of previously created clip art and photographs grouped by themes. Graphics can also be created by using paint/image editing software. Photographs for multimedia applications can be obtained by using a scanner to digitize photographs, obtaining photographs with a digital camera, or buying a photograph collection on CD-ROM or DVD-ROM. Graphics can also be downloaded from the Web.

Displaying a series of still graphics in rapid sequence creates an **animation**, or graphics that produce the illusion of motion. Animated graphics make Web pages more visually attractive and draw attention to important information or links. There are graphics animation and authoring software packages that allow the creation of animations. A popular type of animation, called an animated GIF, is created using special software to combine several images into a single GIF file. The user may also obtain previously created animations from a CD-ROM or by downloading them from the Web.

Audio refers to music, speech, or any sound. Using audio in a multimedia application to supplement text and graphics enhances understanding. Audio for multimedia can be obtained in several ways. One method is to capture the sound using a microphone, CD-ROM, DVD-ROM, radio, musical device, or any other audio input device that plugs into a port on a sound card. As with graphics and animation, audio clips can be purchased on a CD-ROM, DVD-ROM, or downloaded from the Web. Audio files can be quite large, and therefore they are frequently compressed to reduce their size and increase the downloading speed. MP3 is a popular

technology to compress audio. Files compressed using this format have to be downloaded completely before listening to them. Most currently used browsers contain a program called a **player** that can play the audio contained in MP3 files. Web applications also use streaming audio that allows the user to listen to the sound as it downloads to the computer. Streaming is the process of transferring data in a continuous and even flow, which allows users to access and use a file before it has been transmitted completely. Streaming is important because most users do not have Internet connections that can download a large multimedia file quickly. Web-based audio can be also used for Internet telephone service (Internet telephony). This technology allows users to talk to others over the Internet. Internet telephony uses the Internet instead of a public telephone network, so the cost of the communication is reduced to the cost of the Internet connection. Internet telephone software and the computer's sound card digitize and compress the conversation and transmit the digitized audio over the Internet to the parties participating in the call. Software and equipment on the receiving end reverse the process so the receiving parties can hear what is said.

Video consists of photographic images that are played back at speeds of 15-30 frames per second and provide the appearance of full motion. To use video in a multimedia application, the developer has to capture, digitize, and edit the video segments using special video production hardware and software. Video can also be captured directly in digital format using a digital video camera. Due to the size of video files, incorporating video into a multimedia application is often a challenge. Files require large amounts of storage space; therefore, they are often compressed. Video compression works by recognizing that only a small portion of the video image changes from frame to frame, and after storing the first reference frame, only changes from one frame to the next are stored. The Moving Pictures Experts Group has defined a standard for video and audio compression called **MPEG**. MPEG compression can reduce the size of video files up to 95% while retaining near TV quality. Video compression has allowed video to play a more important role in multimedia applications. Technologies such as streaming video made video a viable part of multimedia on the Web. As with streaming audio, streaming video allows the user to view longer or live video images as they are downloaded to the computer. The standard used for transmitting video data on the Internet is RealVideo, which is a component of RealPlayer supported by most current Web browsers. Streaming video also allows conducting Internet videoconferences that work like Internet telephony. A video camera, videoconferencing software, and video capture card digitize and compress the images and sounds. After they are sent over the Internet, equipment and software at the receiving end assemble and decompress the data presenting the images and sound as video. Live Internet videoconferences can become blurry or fragmented, depending on the speed of the communication link.

Another important application of multimedia is to create **simulations**, which are computer-based models of real-life situations. Multimedia simulations often replace costly and sometimes dangerous demonstrations and training in areas such as chemistry, nuclear physics, aviation, and medicine. **Virtual reality** is the simulation of a real or imagined environment that appears as a three-dimensional (3-D) space. On the Web, virtual reality involves the display of 3-D images that the user can explore and manipulate interactively. Most Web-based virtual reality applications are developed using virtual reality modeling language (VRML), which is a language that describes the geometry of the scene. Using VRML, a developer can create an entire 3-D site called a virtual reality world containing infinite space and depth. Virtual reality has many practical applications in science, education, advertisement, architectural design, and others.

Some of the multimedia on the Web is developed in **Java**, which is a programming language specifically designed for use on the Internet. Developers use Java to create stand-alone applications or programs called **applets** that can be downloaded and run in any browser window. An applet is a short program executed inside of another program that runs on the user's computer.

Most Internet browsers have the capability of displaying basic multimedia elements on a Web page. Sometimes the browser needs an additional program called a plug-in or helper application, which extends the capability of the browser. A **plug-in** runs multimedia elements within the browser window, while a **helper application** runs multimedia elements in a window separate from the browser. Plug-ins and helper applications can be downloaded or copied at no charge from many sites on the Web. Usually Web pages that use multimedia include links to Web sites that contain the required plug-in or helper. Some browsers include commonly used plug-ins, such as Shockwave. To view the virtual world, the user needs a VRML browser or a VRML plug-in to a Web browser.

Combining media for Web applications brings Web pages to life, increasing the types of information available on the Web, expanding the Web's potential uses, and making the Internet a more entertaining place to explore.

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American College of Radiology Fellowship: The Non-Academic Route

By Julie K. Timins, MD, FACR
Treasurer, AAWR

This is the third in a series of articles on negotiating the process of becoming a Fellow of the American College of Radiology. The first article appeared in the Winter 2000 issue of the AAWR Focus.

Fellowship in the American College of Radiology (ACR) is based upon service to the ACR, to organized radiology, or to the medical community at large; excellence in teaching; or excellence in research. The rigor of the standards applied to individual applicants is inversely related to the number of years of membership in the ACR. An applicant who has been an ACR member for less than 10 years will need more impressive credentials than one who has been a member for over 20 years.

Many community-based radiologists are concerned that Fellowship in the ACR is not as available to them as to their academic colleagues. However, non-academic radiologists can demonstrate service to our specialty in a variety of ways.

1. Participation in state radiological societies is regarded highly by the ACR when evaluating Fellowship applications. Thus, participation in your local ACR chapter is the key to involvement in state activities and is a springboard to involvement in the ACR. Offer to serve on committees. Put your name forward to run for election as an ACR officer, councilor, or alternate councilor. Women willing to participate actively are in the minority and are usually welcomed.
2. Volunteer to serve on ACR committees. The support of your local ACR chapter is helpful for selection.
3. Attend the ACR annual meeting so you "know the ropes" and meet key people.
4. Get involved in national and regional subspecialty societies, particularly if you have a subspecialty interest.
5. Be a representative for radiology in your county or state medical society. It is important to represent your specialty among other medical peers and to contribute your unique expertise and knowledge. Other physicians tend to look at medical issues with their own specialties in mind and need to hear the radiologists' concerns and points of view. This often defuses "turf" issues and helps convince other physicians that radiologists are not isolationists.
6. Get involved at the hospital, community, and state levels. If politics appeals to you, become active on your hospital medical staff. When your state Department of Consumer Affairs has a task force to staff or the governor needs names for a state commission, submit your curriculum vitae with an appropriate cover letter. Because women tend to be under-represented on task forces and because many current medical issues deal with illnesses affecting women, it is often "politically correct" to choose a woman over a man. Take advantage of this! If you put your name forward enough times, it will be remembered, and you will be chosen over other candidates.
7. If you like to teach and are not affiliated with a residency program or medical school, volunteer to teach at a nearby facility. Another approach is to set up a mini-rotation for radiology residents or medical students at your facility. Radiology technologist training programs also need radiologists to teach their students.
8. You do not have to practice at a university medical center to do research or to publish in the medical literature. If you have a project worth pursuing or an observation worth studying and documenting, do so. Write articles and submit them for publication in peer-reviewed journals.

If you submit an application for ACR Fellowship and it is rejected or deferred, do not give up. Deferment usually implies that your application has many positive points, but it may be too early in your radiological career to be accepted for Fellowship. You are close but not quite there. This should be a spur. It should give you the impetus to participate even more actively in your state chapter and pursue other leadership activities prior to resubmitting your application.

I joined the ACR as a member-in-training during my radiology residency. At the completion of my residency in June of 1975, I became an active member of the ACR. When I was awarded Fellowship status in September of 1995, I had been a dues-paying member for 20 years. During those years, I sat on the Executive Committee of my state radiological society for approximately 15 years, serving as treasurer, secretary, vice president, president-elect, and president. I was an ACR Councilor, had participated in two ACR Reference Committees, and had been a trustee in a state radiology po-

litical action committee. The strength of my Fellowship application was in service to organized radiology. While employed at a Veterans Administration Hospital I taught dental students on site and medical students at a nearby medical school on my own time. I subsequently worked part time at a university hospital with a radiology residency where my responsibilities included teaching and supervising radiology residents. Over the years, I published several articles in peer-reviewed journals. My long-standing ACR membership and organizational involvement in my state radiological society combined with my teaching activities and very limited publications were instrumental in my qualifying for ACR Fellowship. At the time of my installation as a Fellow, my involvement in my state medical society was just beginning, but has increased substantially over the past 5 years.

In short, the key to fellowship is involvement. Involvement is time consuming, but has many rewards. Getting involved with your medical colleagues and with your community is important, fun, invigorating, and good for medicine and for patients. Always follow through on the responsibilities you take on. Too few women physicians and physicists are active in medical organizations and public endeavors. As a result, there are many opportunities available. Go out, participate, and spread yourself around. Have a good time. Meet people. KEEP TRACK OF ALL YOUR ACTIVITIES. And, when you feel the time is right, document it all on that Fellowship application and submit it to the ACR.

Reference

Rosado de Christenson ML, Morrison JL. Becoming a Fellow of the American College of Radiology: The Process. AAWR Focus 2000; 20 (1): 4-5.

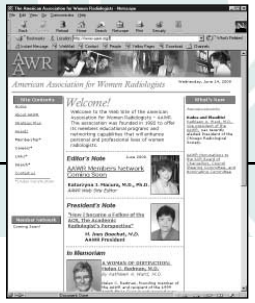
President *continued from page 1*

International AAWR membership category, and will welcome our colleagues from other countries to our activities at the RSNA. One of our goals is to produce the second edition of the AAWR Pocket Mentor, which was so well received by the membership. Dr. B.J. Manaster will again serve as Editor, with a significant group of contributors. The Executive Committee will continue to develop and implement additional benefits to the AAWR membership, so that all of you feel encouraged to participate and recruit other colleagues to join us.

Have a great summer!

From the Editor of the AAWR Web Site

Katarzyna J. Macura, MD, PhD



Dear AAWR Members,

After several months of work on upgrading our Web site to include an on-line membership database, we are ready to launch the **AAWR Members Network**. It will allow access by our dues-paying members only and will be password-protected.

The AAWR Membership Network will contain:

1. **An On-line *AAWR Membership Directory*** searchable by name, geographic location, sub-specialty, and in the future by research interests. AAWR members will be able to update their personal information on-line.
2. **The *AAWR Member Forum Message Board*** will allow members to post messages, questions, announcements, or comments covering any area of medical imaging, radiation oncology, or the related sciences, to include practice issues, health management, research, and education. Notes addressing the professional and private lives of women radiologists will be also welcome.
3. ***AAWR Publications*** will include access to ***Focus On-line*** (a downloadable version), and other publications.

Be sure to visit our Web site when you receive an e-mail note announcing the Member Network activation. As always, we are looking forward to your comments and suggestions.

Visit us at http://www.aawr.org

Radiation Oncology Corner

Biological Imaging in Radiation Oncology

By Ritsuko Komaki, MD, FACR
Gloria Lupton Tennison Professorship in Lung Cancer Research
President–Elect, AAWR

As a radiation oncologist, I want to take this opportunity to appraise all members of the American Association for Women Radiologists of exciting new developments in our field. The emergence of more efficacious radiation therapy based on biological and molecular targeting imaging will impact the future life expectancy of cancer patients and the practice of radiation oncology.

In recent years, more than 80% of patients with localized cancers, including breast, colon, and prostate, survived 10 years, and 50-75% of those with only regional tumor spread when diagnosed were long-term survivors. On the other hand, 10-year survivals were as low as 10% or less if there was distant spread of tumor at the time of diagnosis and initiation of treatment (the majority of patients with lung cancer fall into this category). The two-fold challenge that confronts the radiation therapy profession is the diagnosis and characterization of the disease in a locoregional state coupled with efficacious treatment and verification regimes. To meet this challenge, diagnostic radiologists and radiation oncologists must establish a much closer working relationship for the benefit of all our patients with malignant neoplasia.

Progress in Radiation Therapy

Radiation therapy significantly contributes efficacious treatment regimens for cancers in all stages. About 50% of all cancer patients receive radiation therapy, which controls locoregional cancers in a large number of individuals. Today, high-energy linear accelerators deliver 3-dimensional (3D) conformal radiation fields that are shaped to the tumor's contours, dramatically reducing the amount of irradiated normal tissue. Stereotactic procedures deliver highly focused radiation doses to brain tumors while greatly reducing the exposure of surrounding tissue. Better targeting of the tumor permits radiation oncologists to increase the tumor's dose and increase cancer cure rates. Studies indicate that tumor control rates are higher in these elevated dose levels (up to 90 Gy) as measured by biopsy and biochemical analysis. At the same time, normal tissue complication rates remain at acceptable levels. Intensity Modulated Radiotherapy (IMRT), the latest radiation therapy development, represents a substantive improvement over 3D-conformal radiotherapy (3D-CRT). IMRT involves two steps; treatment planning generally using "inverse" techniques, and treatment delivery using computer-controlled multileaf collimators. Inverse planning uses modern computers and software to improve the conformality of the dose distribution. In effect, the computer divides each radiation beam into individual 'beamlets' and adjusts each beamlet's weight to satisfy the specified dose distribution, resulting in exquisitely conformal treatment plans. Computer-controlled multileaf collimation (CCMLC) is used to deliver the intensity-modulated doses as prescribed by the inverse plans.

Biological Imaging

Just as 3D-CRT and IMRT are emerging as the standard of care in radiation therapy, significant research is underway to further improve the efficacy of these conformal treatments. Biological imaging techniques such as positron emission tomography (PET), spectroscopic (SPECT), and magnetic resonance spectroscopic imaging (MRSI), complemented with genetic information, can influence choice of therapy for locoregional or systemic neoplastic disease. This information may help predict a tumor's responsiveness to therapy, including hypoxic areas in the mass, or its potential to metastasize. It provides the basis for choosing alternative therapies or initiating a more aggressive therapy at an earlier stage of treatment to avoid unnecessary, ineffective procedures.

In summary, the most effective treatment for cancer comes from early diagnosis, accurate staging, and increased therapeutic ratio. The latter refers to the ability to deliver adequate doses to kill cancer cells without killing normal cells. We are approaching the time when imaging is sophisticated enough to tell us which tumor areas should receive higher radiation doses. Radiotherapy delivery systems will allow us to target radiation or protons to destroy cancer cells without damaging normal tissue.

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KUDOS and PLAUDITS

Ritsuko Komaki, MD, FACR

Ritsuko Komaki, MD, FACR, was elected a member of the National Council on Radiation Protection and Measurements for a 6-year term. The National Council on Radiation Protection and Measurements (NCRP) has been active in the areas of radiation protection and measurements since its inception as "The Advisory Committee on X-Ray and Radium Protection" in 1929. It was originally established to represent all the national radiological organizations in the United States on a collective, scientific basis. It serves as the United States national analog of the International X-Ray and Radium Protection Committee which was created in July 1928 under the auspices of the Second International Congress of Radiology and, subsequently, evolved into the International Commission on Radiological Protection. Over 30 major reports were produced during the early NCRP's history including the first recommendations specifying a maximum permissible level of radiation exposure. NCRP was reorganized and chartered by the U.S. Congress in 1964 as the National Council on Radiation Protection and Measurements. Effective dissemination of information about radiation properties and effects requires that the measurement techniques employed and the quantities and units used be comparable throughout the United States and the world. The Council contributes to this goal by formulating and publishing the consensus of scientific opinion on various measurement problems.

Dr. Komaki serves as the 2000 President-Elect of AAWR and is a previous Member-at-Large in Radiation Oncology.

Marilyn Siegel, MD, FACR

Marilyn Siegel, MD, FACR, Professor of Radiology and of Pediatrics at the Mallinckrodt Institute of Radiology, was installed as President of the Society of Computed Body Tomography and Magnetic Resonance (SCBT/MR) at its Twenty-third Annual Course/Meeting in April 2000. She has the distinction of being the first pediatric radiologist as well as the first woman to head the Society. As President, Siegel plans to form the Society's first Strategic Planning Committee in order to assess accomplishments and goals, needs of the practicing physician, and strategies for improving and expanding the summer practicum and the annual meeting.

Siegel has served on SCBT/MR's Research Committee, as chairperson of the Committee on Candidate Membership, and as vice president. As secretary-treasurer, she implemented the organization's first cost-reduction plan. SCBT/MR was established in 1977 to educate practicing radiologists in the use of body computed tomography (CT) but has since changed its education goals (and name) to reflect activities in cross-sectional imaging, including magnetic resonance (MR). Affiliation with the100-member Society is limited to those physicians who are actively involved in body CT and MR clinical practice or research.

Kathleen Ward, MD

Kathleen Ward, MD, was recently elected President of the Chicago Radiological Society. Founded in 1913 and formerly known as the Chicago Roentgen Society, the Chicago Radiological Society is a division of the Illinois Radiological Society, state chapter of the ACR.

Dr. Ward serves as the 2000 Vice-President of AAWR and is a former Editor of Focus.

AAWR Research and Education Foundation Seed Grant for the Academic year 2000–2001

The AAWR Research and Education Foundation (R & E) will review research proposals in preparation to award its 2000 R & E Seed Grant. The deadline for receiving grant applications is August 31, 2000. The grant will consist of $5000 to be awarded to an AAWR member in support of a specific research project. Applications can be obtained from AAWR headquarters and will be reviewed by the Board of Directors of the R & E Foundation. The grant will be awarded during the AAWR Business Meeting that will take place on Monday, November 27, 2000, during the annual meeting of the Radiological Society of North America.

Bylaws Changes Proposed

The following additions to the AAWR bylaws have been proposed. These additions will be voted upon at the next business meeting of the AAWR that will take place on Monday, November 27, 2000, during the annual meeting of the Radiological Society of North America:

ARTICLE III: QUALIFICATION AND ADMISSION OF MEMBERS

2. Membership in the Association shall consist of ***six (6) categories***:

f. Corresponding international members shall be defined as radiologists living outside of the United States or Canada. Corresponding international members may serve on Ad Hoc Committees, but shall not have the right to vote or hold office.

*(**Note:** Additions in bold italics)*

From the Editor

One of our members recently brought to my attention the fact that her last issue of *Focus* contained at least two blank pages. We believe this printing error only affected a few issues of the newsletter. If you received an incomplete newsletter, please e-mail the American Association for Women Radiologists' headquarters at aawr@rsna.org for a new copy.

2000 Calendar of Events

AAWR Luncheon for New Fellows at ACR Annual Meeting
Tuesday, September 26, 2000
New York Hilton & Towers, New York, NY

AAWR Luncheon during ASTRO Meeting
Sunday, October 22, 2000
Hynes Convention Center, Boston, MA

AAWR Executive Committee Meeting
Sunday, November 26, 2000
McCormick Place, Chicago, IL

AAWR Business Luncheon during RSNA
Monday, November 27, 2000
McCormick Place, Chicago, IL

AAWR Sponsored Refresher Course
"Your Professional Life: Myth and Reality of Radiation Exposure"
Tuesday, November 28, 2000
McCormick Place, Chicago, IL

AAWR Residents' Luncheon during RSNA
"Getting Around the Internet"
Wednesday, November 29, 2000
McCormick Place, Chicago, IL

AAWR President's Luncheon
"Sadako's Lasting Influence: From Hiroshima to the World"
Thursday, November 30, 2000
McCormick Place, Chicago, IL

CLASSIFIEDS

POSITIONS AVAILABLE

Atlanta

Partnership positions with expanding 23-physician radiology practice in desirable, rapidly growing Atlanta suburb. This practice provides service to two hospitals and two outpatient imaging centers. Additional imaging centers in the near future. Qualified candidate will have completed fellowship training and be adept in general radiology. No interventional required. Mammography is a particular need but other areas of expertise will be considered.

Please mail CV to Linda Brown, MD, 3360 Bridle Run Trail, Marietta, GA 30064. Fax to (770) 499-7035 or e-mail to jalkblom@mindspring.com.

Breast Imager

The Department of Radiology at the Dartmouth-Hitchcock Medical Center is seeking a faculty member with mammography fellowship training or academic experience in breast imaging. The Breast Imaging Section provides a wide range of breast imaging and interventional services and is an integral component of an institutional Comprehensive Breast Care Program. In addition to clinical responsibilities, the applicant is encouraged to pursue research interests and collaborate with other investigators in established (funded) projects. The Dartmouth-Hitchcock Medical Center provides state of the art healthcare in a serene and collegial environment in Northern New England and offers a competitive compensation package. Appointments to the Dartmouth Medical School will be at the level of an assistant professor or higher based on the applicant's qualifications.

Interested candidates should send a current CV to Steven Poplack, MD, Dept. of Radiology, Dartmouth Hitchcock Medical Center, 1 Medical Center Drive, Lebanon, NH, 03756; (603) 650-5846; e-mail: Steven.P.Poplack@Dartmouth.edu The Dartmouth-Hitchcock Medical Center is an equal opportunity employer and strongly encourages applications from women and members of minority groups.

Breast Imaging Radiologist

The Department of Radiology at the University of Iowa College of Medicine is seeking a full time faculty member with comprehensive experience in breast imaging. This position can be either non-tenure clinical track or tenure track. As one of the largest teaching hospitals in the country, the University of Iowa Hospitals and Clinics has a growing screening and diagnostic breast program, including an active image guided core biopsy facility. Applicants must be board certified by the American Board of Radiology, be MQSA qualified, and have experience in all aspects of breast imaging. Fellowship training in mammography/breast imaging, strong evidence of clinical productivity, and scholarly works are desirable. Salary and rank commensurate with experience. Women and members of minority groups are strongly encouraged to apply.

Send applications to Michael W. Vannier, MD, Professor and Head, 3966 JPP, University of Iowa Hospitals and Clinics, 200 Hawkins Drive, Iowa City, IA, 52242. The University of Iowa is an Affirmative Action/Equal Opportunity Employer.

Employment Opportunity for Physician

Opportunity to help expand a successful Women's Imaging Center. A progressive, flourishing unique solo outpatient breast center in Palo Alto, California, is seeking an additional board-certified diagnostic radiologist with fellowship training and expertise in pelvic ultrasound, women's imaging, and additional expertise in mammography desirable. The Center is offering either a full or part-time position with competitive salaries and benefits.

For further information, please call (650) 617-8655, fax your inquiries to (650) 322-3416, or e-mail us at DGMDMammo@aol.com.

Mammography/Women's Imaging

The Women's Imaging Center is seeking a talented board-certified radiologist with fellowship training or extensive experience in mammography. The Center, located in Denver, Colorado, is a unique outpatient women's radiology clinic specializing in all areas of mammography and breast biopsy techniques. The Center is offering both full and part-time positions with competitive salaries and benefits. There is no night or weekend call. Denver is an exciting and growing city with over 300 days of sunshine per year, and is in close proximity to the beautiful Rocky Mountains.

For further information contact Dr. Kelly McAleese at (303) 321-2273, FAX (303) 321-3641.

American Association for Women Radiologists
820 Jorie Boulevard
Oak Brook, IL 60523

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AAWR has a new address!
You can reach us at

AAWR
820 Jorie Boulevard
Oak Brook, IL 60523
Phone (630) 590-7712
Fax (630) 571-7837
E-mail: aawr@rsna.org

Articles for consideration for publication in the ***Focus*** can be submitted to the address above.

Focus is published four times a year by the American Association for Women Radiologists (AAWR) for its members.

Editor

Melissa L. Rosado de Christenson, Col, USAF, MC, FACR
I invite members to share their ideas and expertise by submitting articles for future publications in the ***Focus***.

Editorial Deadlines

September 15, 2000
December 15, 2000