The Member Newsletter of the Society of Breast Imaging

SBI News

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SBI *News*

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President's Message

D. David Dershaw, M.D.

Qualifications for Expert Witnesses in Breast Imaging

In response to the desires of the membership, the Executive Committee of the Society has recently announced qualifications for expert witnesses in litigation involving breast imaging. I would like to take this opportunity to share with the membership the considerations of the Executive Committee in deciding on these qualifications.

Above all other considerations, the Committee believes that those who testify as experts in breast imaging should meet the requirements of the Food and Drug Administration under MQSA regulations to provide mammography services. Those who do not meet these criteria are felt by the Committee to not have the training and experience that are a sine qua non for giving expert testimony. Such persons were felt not to be to be able to reliably assess standard of care, quality of film interpretation and other breast imaging services provided by the radiologist.

It was also felt that expert testimony should be given by an "expert". Therefore, the qualifications of the expert witness should exceed those outlined in "usual" practice criteria. For this reason, the Committee felt that the "expert" should spend much of their practice time in breast imaging, specifically mammography, and read a larger number of studies than that required of the general radiologist reading mammograms. This criterion was not meant to imply that those who read only 480 mammograms annually are not skilled, qualified physicians providing this service.

Because the expert witness is often asked to evaluate quality of care that was delivered several years before his/her testimony, the Committee also believes that the expert should have been in practice in breast imaging at the time of the alleged malpractice. If this is not the case, the Executive Committee feels it is difficult, if not impossible, for the expert witness to assess whether or not

***President's Message,** continued on page 2*

President's Message, *continued from page 1*

the care given by the accused radiologist violated the standard of care that was in place at that time. Additionally, it is often necessary for the expert witness to differentiate practice standards at the time testimony is given from those at the time the event occurred. For this reason, the Committee feels that if the witness is not currently in active practice, he or she should have been in active practice at least within two years of the time that he or she agrees to participate in the case.

Obviously, if testimony is required in areas of breast imaging outside of mammography, such as sonography or biopsy, the expert witness should at least be able to demonstrate that he or she has met professionally accepted criteria for expertise in these areas. The Executive Committee adopted those criteria which are specified for physicians in practices accredited by the American College of Radiology (ACR) in breast biopsy and breast sonography as the minimum that should be met by anyone who offers expert testimony regarding imaging-guided breast biopsy and breast sonography. These criteria are not meant to imply that only physicians participating in ACR- accredited practices should be considered expert in these areas. However, initial training, continuing medical education, and initial and continuing performance of procedures should be adequate to match those requirements outlined in the physician criteria of the ACR accreditation programs for these procedures.

It is hoped that these criteria will be helpful to plaintiffs, defendants and attorneys in selecting appropriate individuals to participate as experts in medical malpractice litigation involving issues of breast imaging. It is the belief of the Society of Breast Imaging that persons who do not meet the qualifications outlined by the SBI may not have the experience and knowledge to accurately assess the quality of care that is being questioned, to accurately represent to a jury the standard of care that existed at the time of the alleged malpractice, and thereby to serve the interests of the general community and of justice.

SBI Recommendations for Expert Witness Qualifications

The Society of Breast Imaging considers expert witnesses to be those who are familiar with and experienced in the custom and practice of breast imaging as indicated by their substantial participation in the field during no less than five years, including the time at which the alleged malpractice occurred. This expert experience is met by the following:

1. The expert has met the criteria of the United States Food and Drug Administration for interpreting mamograms for at least five years and has been part of an FDA-certified practice during that time.
2. The expert has read at least 1,000 mammograms each six months for the past two years.
3. If testimony on breast sonography, sonographically – guided breast biopsy or stereotactic breast biopsy is given, the expert should have training and experience in those areas in which testimony is given. This training and experience should be adequate to meet the criteria of the American College of Radiology accreditation programs for a physician participating in those procedures.
4. The expert was involved in breast imaging at the time of the alleged malpractice.
5. If no longer in clinical practice, the expert has met the above criteria within two years of initially participating in the case. ■

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From the Editor:

Murray Rebner, M.D.

This issue of the SBI News comes after the recent RSNA meeting held in Chicago in December 2003. As usual, there were many outstanding papers presented, posters displayed and new equipment from the manufacturers to examine. I thought it might be interesting to present a brief smorgasbord of some of the breast imaging papers presented at the past meeting. I chose these with no specific criteria other than to try to offer some variety in the areas of clinical practice which we are all familiar with. I have also temporarily donned my old hat as former breast imaging section editor for the Yearbook of Diagnostic Radiology. I have picked five articles. The abstracts of the articles which were presented at the RSNA meeting will be provided with brief commentaries on my part to follow each article.

2004 will be both a challenging and interesting one for our subspecialty. Technologic advances continue in areas such as digital mammography, breast ultrasound and even now, lo and behold, there is computer-aided detection for breast MR studies. Cost containment and suboptimal reimbursement will continue to play havoc with our bottom lines. The labor shortage with respect to breast imaging fellows and, ultimately, full fledged breast imagers is not going to go away quickly. It is at least comforting to know that the demand for our services still exists and likely will continue to grow in the near future. Despite some of the gloom and doom surrounding our specialty, I still find it a very rewarding and satisfying occupation. I try to impress on our residents that there are very few other areas of radiology where you can "have it all" – high technology equipment, interventional procedures, satisfaction of one-on-one patient interaction, and the ability to escape to one's fortress of screening solitude when the need arises. I want to wish a belated happy and healthy 2004 to all our readers and their families. I hope you find the abstracts and commentary interesting. ■

Is Excisional Biopsy Necessary if Percutaneous Core Biopsy Shows LCIS or Atypical Lobular Hyperplasia?

Foster M, Helvie M, Gregory N, Rebner M, Nees A, Paramagul C

Purpose: To determine the frequency of invasive cancer or ductal carcinoma in situ at excisional biopsy in women with lobular carcinoma in situ (LCIS) or atypical lobular hyperplasia (ALH) diagnosed by core needle biopsy (CNB).

Materials and Methods: Institutional Review Board approval was obtained. A review of 6292 consecutive core biopsies performed between 1997 and 2002 at two large hospitals was performed. Thirty-five cases, 15 with LCIS and 20 with ALH were identified. The study population included only those patients with LCIS or ALH as their "highest risk" histologic diagnosis. 26/35 (74%) underwent surgical biopsy, 9/35 (26%) had mammographic follow-up of greater than 2 years. A pathologic "upgrade" was noted when a diagnosis of invasive cancer (IVC) or ductal carcinoma in situ (DCIS) occurred at the site of core biopsy on subsequent surgical excision. The histologic results of patients diagnosed with atypical ductal hyperplasia (ADH) on CNB who underwent surgical excision were reviewed. Statistical comparison between the frequency of upgrade between LCIS/ALH and ADH was performed.

Results: Six of 35 (17%) [95% CI = 4.7-29.6%] cases were upgraded to DCIS (4) or IVC (2). LCIS was diagnosed at percutaneous biopsy in 15 (0.2%) of 6292 lesions. Four of 15 lesions (27%) were upgraded to either DCIS or IVC. ALH was diagnosed at percutaneous biopsy in 20 (0.3%) of 6292 lesions. Two of 20 lesions (10%) were upgraded to DCIS. All 9 patients undergoing mammographic follow-up were stable. Calcifications were noted in 30/35 (86%) cases. No mammographic or technical findings distinguished upgraded patients from non-upgraded patients. One patient with no residual

Excisional Biopsy, *continued on page 4*

Excisional Biopsy, *continued from page 3*

calcifications post core biopsy was upgraded to DCIS at surgical biopsy. The frequency of ADH upgrade was 12/75 (16%) [CI = 7.7-24.3%]. There was no significant difference between LCIS/ALH upgrade with that of ADH.

Conclusion: 17% of patients with LCIS or ALH on CNB were upgraded to IVC or DCIS, not significantly different from ADH. Excisional biopsy is supported when LCIS, ALH or ADH is diagnosed by CNB. ■

Comments from The Editor:

This paper attempts to determine the frequency of invasive cancer or noninvasive cancer at excisional biopsy in women with lobular carcinoma in situ (LCIS) or atypical lobular hyperplasia (ALH) diagnosed by core needle biopsy. The multi-institutional study reviewed more than 6,000 consecutive core biopsies performed during a five year period. Thirty five cases, 15 with LCIS and 20 with ALH, were noted. 17% of patients with either LCIS or ALH on core needle biopsy were upgraded to invasive cancer or ductal carcinoma in situ. These results are not significantly different from those for ADH. The authors conclude that excisional biopsy is supported when LCIS, ALH or ADH is diagnosed by core needle biopsy.

To paraphrase Groucho Marx, I would never join a club that would have me as a member. As one of the co-authors of this study, I was at first reluctant to choose it for commentary in the Newsletter. However, upon reflection, I realize that this is not an uncommon problem in day to day practice and many radiologists struggle with the decision whether or not to biopsy a lesion with "atypia". Thanks to the BI-RADS™ lexicon for mammography, we have determined that probably benign lesions (Category 3) have a probability of 2% or less of being malignant. The same criteria should apply in determining management for patients who have undergone core needle biopsy. If you can say with near certainty that a lesion diagnosed at core biopsy has a less than 2% chance of being malignant, then it is not unreasonable to call it benign or probably benign. However 17% is not 2%. The breast imagers should also pay special attention to the terminology used by the pathologist. They need to make sure that when the word "atypia" is used, it means abnormal cells with abnormal nuclei that border on malignancy. The word should not be a substitute for "atypical," which can mean something which is not expected. This is occasionally a problem in our practice, but as more pathologists adhere to a strict lexicon of their own I believe this problem will diminish. For now, to this author, atypical lobular hyperplasia or atypical ductal hyperplasia or lobular carcinoma in situ cases diagnosed at core biopsy warrant excisional biopsy.

How Reliable Are Time Signal Intensity Curves in Breast MR Interpretation?

Gabriel H, Miller L, Roberson S, Burnside E, Wolfman J, Hendrick E

Purpose: Time signal intensity curves, in conjunction with lesion morphology, are an important part of breast MRI interpretation. The purpose of this study is to evaluate the performance consistency of these curves.

Methods and Materials:

In an IRB-approved retrospective review of breast MRI examinations, 42 pathologically proven lesions were evaluated. These lesions were a mixture of both benign and malignant pathologies. Two independent reviewers with instructions to plot the most enhancing and, thus, suspicious focus of each lesion performed time signal intensity curves. Each curve was classified into 1 of 5 categories: 1. Continuously enhancing 2. Late plateau 3. Early plateau 4. Wash out 5. Atypical (not conforming to previously described plots). The initial contrast uptake was also analyzed. The curves for each lesion were then compared.

Results:

Of the 42 lesions, 21 (50%) were benign and 21 (50%) were malignant. 31 (74%) were masses and 11 (26%) were non-mass lesions. The average maximum size of the lesions was 14 mm for masses and 13 mm for non-masses. 30 lesions (71%) had curves that were in agreement with respect to category (concordant) and 12 lesions (29%) differed in their classification (discordant). Of lesions with discordant curves, 5 (42%) were non-mass

Time Signal Intensity Curves, *continued on page 5*

Time Signal Intensity Curves, *continued from page 4*
lesions and 7 (58%) were masses compared to 6 (20%) non-mass lesions and 24 (80%) mass lesions in the concordant group. Of the 7 discordant mass lesions, the average maximum size was 9 mm compared to 15 mm in the concordant mass group. Of non-mass lesions, the average size was 15 mm in the concordant group and 17 mm in the discordant group. Of lesions with discordant curves, 8 (67%) were benign, and 4 (33%) were malignant compared to 16 (53%) malignant and 14 (47%) benign in the concordant group. Thus, factors associated with lesions more likely to have inconsistent curves included small mass size, non-mass like morphology, and benign pathology.

Conclusion:

There can be variability in the performance of time signal intensity curves occurring in 29% of our lesions. Variability occurs more often in smaller, benign lesions with non-mass like morphology. These potential pitfalls need to be considered in the interpretation of breast MRI. ■

Comments from The Editor:

This paper examines the performance consistency of time signal intensity curves for breast MR interpretation. The authors examined 42 pathologically proven breast lesions and attempted to correlate the imaging kinetics with the lesion morphology. Half of the 42 lesions were benign and the other half were malignant. 30 lesions had curves that were in agreement with respect to category and 12 lesions differed in their classification. The authors noted that factors associated with lesions likely to have inconsistent curves were small lesion size, non-masslike morphology and benign pathology. They describe these potential pitfalls and warn breast MRI readers to be aware of them when they interpret breast MR studies.

Many things in life are a trade off. So is it with breast MR interpretation. If one wishes to optimize morphology and spatial resolution, then time intensity curves and kinetics may not be adequately presented for interpretation. Similarly, the same holds true where optimization of kinetic data may impact on lesion morphology. Breast MR studies are increasing from year to year. More emphasis is currently being placed on establishing a breast MR lexicon similar to that used in mammography, attempting to standardize the breast MRI report itself with an assessment and recommendation being offered, also similar to the mammography report. In the past, many centers have breast MR studies interpreted by body imagers who had little or not experience in breast imaging. This is also gradually changing and now more facilities have breast imagers read MR studies of the breast either alone or in conjunction with the body imagers. Optimizing protocols, learning how to manipulate the images in order to decrease reading time, as well as correlate the breast imaging findings seen on mammography and/or sonography with the breast MR findings is vital if the breast MR practice is going to flourish. As one who has just begun to interpret breast MR studies, I can truly say that this is not a simple chore. It would be nice if one could place a ROI box over a potential abnormality, examine the morphology of the lesion and then press a button and have the time intensity curve show up right next to it on the monitor. With newer 3D viewing stations and new software the companies are offering, this may not be that far away. In the meantime, it is nice to know that authors such as Dr. Miller and her colleagues have warned us about the potential pitfalls that can be associated with time signal intensity curves.

New Flexible Policy for Accrediting Mobile Mammography Units

The ACR has recently received approval from the Food and Drug Administration to allow more flexibility for facilities accrediting mobile mammography units. Hospitals and clinics with a mobile unit in addition to their fixed units may now accredit their mobile units under their fixed facility's accreditation and MQSA certificate number. Prior to this, they were required to accredit and certify the mobile unit as an entirely separate facility. In addition to other benefits, this will allow the facility to combine medical audits from patients examined on both their fixed and mobile mammography units. The ACR's Mobile Mammography Accreditation Policy below has complete information on this and other changes. ■

http://www.acr.org/departments/stand_accred/accreditation/mammo/mobile_policy.pdf

False Positive Marks on Screening Mammography with Computer-aided Detection

Mahoney M, Hoffmeister J

Purpose: To evaluate the impact of false positive marks from Computer-aided Detection (CAD) in screening mammography.

Materials and Methods:

The computer records of a dedicated breast center were retrospectively reviewed for patients who underwent a screening mammogram in 2000, with a final assessment of BI-RADS™ 1 or 2, and had subsequent normal follow-up studies in 2001 and 2002 at the same center. 100 studies were randomly chosen. The 2000 mammographic studies were digitized and evaluated with a CAD system (Second Look version 5.0, CADx Systems, Inc., Beavercreek, Ohio). False positive was defined as any CAD mark not at the location of cancer; all marks in these 100 cases were considered false positives. A dedicated breast radiologist reviewed all mammographic films. Age of the patient, number of films per study, breast density, number, type and location of the marks, and ease of dismissing the marks were recorded (easy, semi-difficult, difficult).

Results:

The mean patient age was 59 years (range 33-85). The mean number of films per case was 4.5 (range 4-9). The mean number of CAD marks per case was 2.4 (range 0-10) and per film was 0.5. 25% of cases demonstrated no marks (25/100). 70% of the marks denoted a mass (165/237). Of these, 139/165 (84%) were due to areas of benign fibroglandular tissue. 30% of the marks denoted calcifications (72/237). Of these, 22% (16/72) were due to vascular calcifications, 24% (17/72) were due to benign punctate calcifications, and 24% (17/72) were due to true clustered calcifications. The reviewing radiologist easily dismissed 90% (211/237) of all CAD marks. The remaining marks were due to stable nodules and clustered microcalcifications, and were dismissed based on stability of the mammographic findings.

Discussion:

The false positive marks from CAD should not cause an increase in the recall rate. The importance of the CAD system in directing the radiologist's attention to an area of potential abnormality should not be significantly affected by false positive marks, in that these marks can be easily dismissed in most cases. ■

Comments from The Editor:

The purpose of this paper was to evaluate the impact of the false positive marks from CAD in screening mammography. 100 screening exams were chosen at random and false positive marks were identified. A dedicated breast radiologist reviewed all the mammography films. The mean number of CAD marks per case was 2.4 with a range of 0-10. 90% (211/237) of all the CAD marks were easily dismissed by the radiologist. The remaining marks were due to stable masses and clustered classifications and were also dismissed based on stability. The author concludes that the false positive marks from CAD should not cause an increase in the recall rate. He notes that false positive marks generated by CAD should not be a deterrent to the radiologist in using it as an aid in cancer detection.

For those who use computer aided detection (CAD) in their practice, all are aware of the false positive marks generated by the CAD system. This retrospective study found that the false positive marks from CAD should not cause an increase in the recall rate. This study is important in order to show that there is no significant added cost to utilizing a CAD system in one's practice. The other issues relating to CAD include whether or not to keep a paper trail of prior CAD results. This has medical/legal implications. Also a recent article suggested that CAD may be helpful in turning probably benign lesions into Category 2 benign lesions if the CAD results are negative. There still may be some debate whether CAD increases cancer detection. Nevertheless, for this reviewer who occasionally reads more than 100 screening mammograms in a given day, it is reassuring to know that these cases were looked at by a second set of "electronic eyes".

Evaluating the Need for Six-Month Follow-Up Imaging in Patients with Benign Biopsy Results

Miller AJ, Poller WR

Purpose: To determine whether patients who have had benign biopsy results should have six-month follow-up mammography or ultrasound, or should resume yearly standard mammographic examination

Method And Materials:

An electronic database search was used to identify all patients who had undergone stereotactic or ultrasound-guided procedures within a one-year period. The records of patients who had benign biopsy results were reviewed to determine their follow-up imaging results at six months and at the subsequent interval.

Results:

641 patients underwent stereotactic or ultrasound-guided procedures during the period of January 1, 1999 through December 31, 2000. Of these patients, 91 had benign biopsy results and returned for six-month and subsequent interval imaging. Patients must have had the six-month follow-up imaging performed between 3.0 and 9.0 months after the biopsy in order to be included in the study. Ten patients (11.0%) had BI-RADS™ Category 3 (Probably Benign) results on the six-month follow-up imaging, and were advised to have repeat imaging in six months. Nine of these patients had either BI-RADS™ Category 1 (Negative) or Category 2 (Benign) results on the subsequent imaging. One patient with a Category 2 result underwent additional ultrasound-guided biopsy at six months. The results of this biopsy were again benign, and the next six-month imaging results were Category 2. Of the 91 patients with benign biopsy results, one (1.1%) had a Category 4 (Suspicious) lesion on the six-month imaging and underwent excisional biopsy for carcinoma. One patient (1.1%) had an ultrasound-guided fine needle aspiration of a cyst seen on the six-month follow-up. The subsequent six-month mammogram had a Category 2 result.

Conclusions:

Although routine at this time in our institution, the six-month follow-up after a benign biopsy changed management in only 2 cases (2.2%) out of 91, requiring excisional biopsy in one case, and cyst aspiration in the other. Thus, one-year follow-up imaging after a benign biopsy is adequate. ■

Comments from The Editor

The authors attempt to determine which patients should undergo six-month follow-up mammography or ultrasound exams versus yearly standard mammographic screening examination. This was a retrospective study which examined patients who had undergone either stereotactic or ultrasound-guided biopsy procedures within a one year period. The records of patients who had benign biopsy results were reviewed to determine their follow up imaging results at the six-month and twelve-month intervals. They found that during a two-year period 91 patients had benign biopsy results and returned for six-month and subsequent interval imaging. One patient of the 91 with benign biopsy results had a suspicious lesion on the six- month imaging follow up and underwent excisional biopsy, which revealed a carcinoma. A second patient had an ultrasound-guided fine needle aspiration of a cyst seen on the six-month follow up study. Thus, the six-month follow up altered management in only 2 out of 91 cases. The authors conclude that one-year follow up imaging after a benign biopsy is adequate.

As core biopsy has become the mainstay procedure of choice for nonpalpable breast lesions, the importance of radiologic pathologic correlation and subsequent management recommendations has also increased. When

***Evaluating the Need,** continued on page 8*

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Evaluating the Need, *continued from page 6*

the pathology results come back for correlation with the imaging findings, the radiologist needs to ask himself/herself the following questions: Have I adequately sampled the lesion? Do the pathology results fully explain the imaging findings? What is the appropriate management for the patient?

In our practice we also rarely recommend six-month follow up imaging studies for benign results. The exception to the rule would be a biopsy performed either under ultrasound or stereo guidance for an asymmetric density with isodense or hyperdense surrounding tissue. If the pathology results were to come back as fibrocystic change or stromal fibrosis, the possibility exists that a sample error might have occurred and this would be more difficult to detect with such a dense tissue background. Similarly, lesions which appear isoechoic to surrounding tissue on ultrasound pose the same problems. In these days of cost containment and reimbursement problems it is important to gather more data on the subject in order to properly formulate management strategies for patients with benign results on breast biopsies.

Impact of Training on Softcopy Reading of Full Field Digital Mammograms: A Study from the European SCREEN-TRIAL Project

Wedekind N, Roelofs T, van Woudenberg S, Beck C, Rosselli Del Turco M, Evertsz C

Purpose: The purpose of this study is to investigate, if an appropriate training can improve the performance of radiologists in softcopy reading of FFDM.

Methods and Materials:

12 radiologists (from 5 different European screening sites) participate in an ongoing 3-phase study started in March 2003. All are experienced in screening mammography, but novel to softcopy reading. In phase 1, participants received an initial operation- and reading-skill training followed by an operation-skill test. 150 FFDM cases (120 normals, 30 cancers) were read both in hardcopy and in softcopy. Sensitivity, specificity and reading speed were calculated to allow for a quantitative comparison of reading performance of softcopy and hardcopy before and after an appropriate self-training period. During phase 2 of the study, all participants read at least 1000 FFDM cases (approx. 5% cancers) in softcopy over a period of 6 months. Finally, in phase 3 of the study the 150 cases of phase 1 are read again in softcopy.

Results:

The results of phase 1 of the study indicate no significant differences in sensitivity and specificity with a lower score regarding microcalcifications for softcopy. The reading speed was lower for softcopy, however, all radiologists were able to read their cases in softcopy in a predefined time of 2 hours per 75 cases after a very short operation-skill training.

Conclusion:

First results indicate an impact of training on softcopy reading. We expect a significantly higher reading speed after the self-training period. Digital mammography offers a variety of new diagnostic tools (e.g. workflow optimization, enhancement, CAD) which after an appropriate training can be exploited by the radiologists to further improve their reading performance. ■

Comments from The Editor:

This study examined the benefit of appropriate training for radiologists who were undergoing a conversion from film screen mammography to full-field digital mammography. There were three phases in the study. In phase one, participants received training and were then given an operational skill test where 150 digital cases (120 normals, 30 cancers) were read both in hard copy and in soft copy. Sensitivity, specificity and reading speed were calculated for the readers. The results showed that there was no significant difference in sensitivity and specificity. There was a lower score regarding microcalcifications for soft copy reading. The reading speed was also slightly lower for soft copy compared to hard copy. However,

Impact of Training, *continued on page 9*

Impact of Training, *continued from page 8*

all the radiologists were able to complete their cases in the predefined time period.

Major change is never easy. Different institutions use different conversion tactics when switching from film screen to digital mammography. At our institution we decided to go "cold turkey". Within a two-month period all of our radiologists were comfortable reading in the soft copy format. Reading speeds also vary but all of us were also able to complete our work in a satisfactory time period. I believe that CAD has significantly impacted on our group's reading speed for digital mammography. I tell potential buyers of full-field digital mammography equipment that CAD is a must. It helps not only in lesion detection, but significantly will improve their reading speed. It will be interesting to see how these authors report phase two and phase three of the study.

SBI Job Postings

Educational and job opportunities for posting can be submitted to jobs@sbi-online.org. Information suggested for posting includes name, e-mail address, telephone, mailing address, and fax number of contact individual and a two or three sentence description of the opportunity. Individuals seeking breast imaging related positions should submit their name, address, phone, e-mail address, date of availability and a short description of the type of position desired to seeks@sbi-online.org.

When submitting information, please be specific about how you would like to be contacted (i.e. using your phone, address or e-mail). Listings will remain active for three months. Keep visiting us since updates and expansion are ongoing. We welcome input, suggestions and feedback.

It is the policy of the Society of Breast Imaging to list positions without regard to race, color, religion, sex, national origin, age, handicap, or veteran status. Unless otherwise required by l aw, discriminatory preferences, limitations or specifications with regard to race, color, religion, sex, national origin, age, handicap, or verteran status are prohibited in SBI listings.

Interpretive Skills Assessment CD-ROM

Mammography ISA CD-ROM Series

The Mammography Interpretive Skills Assessment (ISA) is a self-evaluation program in Windows CD-ROM format that enables radiologists to test their level of knowledge and understanding in mammography and learn through instant feedback and immediate scoring. The program was developed by the ACR Committee on Mammography Interpretive Skills Assessment (COMISA), chaired by Edward A. Sickles, M.D.

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A Friend Remembered
Carl J. Vyborny, M.D., Ph.D., SBI Fellow

Arthur G. Haus

Carl J. Vyborny M.D., Ph.D. died of lung cancer on March 20, 2004 at his home in Riverside, Illinois. Dr. Vyborny was born in Oak Park Illinois and attended St. Turibius Grade School and Brother Rice High School in Chicago. He received bachelor and masters degrees in physics from the University of Illinois. He received a Ph.D. in medical physics from the University of Chicago in 1976 and an M.D. with honors from the University of Chicago Pritzker School of Medicine in 1980. He became a diplomate of the American Board of Radiology in 1984.

Dr. Vyborny was a radiologist for seventeen years at LaGrange Memorial Hospital and Clinical Professor of Radiology at the University of Chicago. He established the first clinical trial of mammographic computer-aided diagnosis in the Chicago area at Grant Square Imaging in Hinsdale. He also made LaGrange one of the two Chicago sites of the Digital Mammography Imaging Trial of the American College of Radiology Imaging Network (ACRIN).

Dr. Vyborny actively participated in the University of Chicago Graduate Programs in Medical Physics by co-advising graduate students in their Ph.D. dissertation research. He helped in the training of radiology residents in the Department of Radiology through his lectures on the physics of image quality in radiographic imaging.

Dr. Vyborny and colleagues helped establish the criteria for evaluating the quality of clinical mammograms for the American College of Radiology Mammography Accreditation Program. He was often asked to resolve questions regarding physics, image quality and clinical care. “Because he had this unique combination of being an outstanding scientist, educator and clinician, he was able to see the big picture and was a visionary in connecting the academic research to ultimate use in private practice”, said Maryellen Giger, Ph.D., Professor of Radiology at the University of Chicago. He was also one of the first to advocate the use of computers to assist radiologists that are now used in more than one thousand mammography centers and that will soon be adapted to chest imaging and other examinations.

Dr. Vyborny was president of the Chicago Radiological Society in 2000-2001. He was an original member of the Academy of Radiology Research and participated in the Academy’s successful lobbying campaign to establish the National Institute of Biomedical Imaging and Bioengineering. Every member of the Chicago congressional delegation was a co-sponsor of the bill due in part to his effort.

Dr. Vyborny was interested in genealogy and traced his family line back to the 1600’s in what is now the Czech Republic. He organized delegations of American experts on two occasions to visit Prague and to advocate screening mammography. I was privileged to be part of these delegations. Today women are screened for breast cancer in the Czech Republic and there are accreditation and quality control programs.

Dr. Vyborny was selected by the International Commission on Radiation Units and Measurements to be the lead author on the first comprehensive report on chest radiography. The report was published in 2003. He was author or co-author of more than 100 scientific papers. He received the Fellowship Award of the Andrew W. Mellon Foundation in 1985. He was elected a Fellow of the Society of Breast Imaging in 1992, Fellow of the American College of Radiology in 1994, and Fellow of the American Association of Physics in Medicine in 1999. He received the Distinguished Service Award Gold Metal from the Chicago Radiological Society in 2003. “Carl was a truly unique individual” said Stephen A. Feig, M.D., Professor of Radiology at Mount Sinai School of Medicine in New York. “His amazing talent at physics, mathematics, and computers intersected with his motivation to find ways to reduce deaths from breast cancer. He possessed the equally scarce qualities of intellectual brilliance, modesty, and altruism.”

Carl Vyborny was a scholar, family man, and great friend. He is survived by his wife Terrieann, his daughter Margaret, his mother Prakseda, his sisters Kathleen and Susan as well as by numerous cousins, nieces and nephews. ■