

Spring 1979

Focal Spot, Spring 1979

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FOCAL SPOT



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ARCHIVES

"One Day At A Time"

"People call me brave and courageous. I am neither. I am just a practical, positive woman." Those are the words of Mrs. Pat Seed as she met with Dr. Ronald Evens on a recent visit to Mallinckrodt Institute of Radiology. A British journalist in Lancashire County, happily married with two grown children, Mrs. Seed has terminal cancer. She discovered this in January, 1977, after five weeks of diagnostic testing including two weeks of exploratory surgery at Manchester's Christie Hospital, an internationally respected cancer treatment center.

While recuperating from surgery Mrs. Seed read in a magazine that a body scanner could have diagnosed her condition in 20 minutes, eliminating the need for exploratory surgery, and enabling her to begin radiation therapy treatments five weeks earlier.

Ever since this discovery, Mrs. Seed has carried on a one-woman campaign, working night and day, to equip Christie Hospital with a CT scanner, its linked computer, a building to house it, and the maintenance cost for ten years.

"I knew the scanner would not help me," continued Mrs. Seed, "but I have enjoyed a very happy marriage and home life and I wanted to give other men and women the opportunity of living longer with their families."

As she travels "the scanner trail", Mrs. Seed attends meetings, speaks at schools, churches, factories, anywhere that will raise cash for her appeal. She replies personally to every letter, every donation — and that's hundreds per week.

The Pat Seed Appeal Fund has now topped 3½ million dollars and in April, 1978, she was awarded the British Empire Medal for her tireless efforts. All

ON THE COVER

Mrs. Pat Seed is pictured with Dr. Ronald G. Evens, Director of Mallinckrodt Institute of Radiology, and on left, Mr. Tom Pedersen, EMI Medical Representative, during her visit to Mallinckrodt.

the money has been raised from private donations and all thanks to the extraordinary drive of Mrs. Seed herself.

On January 22, 1979, groundbreaking ceremonies for the building were held and attended by Godfrey Hounsfield, the inventor of the CAT scanner. Although the scanner is a British invention there are few in use in England and there was no hope of Christie Hospital being given one under the state-run National Health Service which cannot provide the \$585,000 cost. The hospital calculates the equipment will pay for itself in two years by saving inpatient and exploratory surgery costs.

The primary purpose of Mrs. Seed's visit to Mallinckrodt Institute was to see the EMI 7070 CT scanner, the machine which she and her army of helpers have purchased and which is now being clinically tested at the Institute. In addition Mrs. Seed visited the Division of Radiation Oncology to observe the correlation between CAT scan data with the clinical course and prognosis of cancer patients, a procedure which provides valuable information in determining the effects of treatment regimens.

Enthusiastically responding to Mallinckrodt's Cancer Information Center in Barnard Hospital, Mrs. Seed recognized the tremendous need for such a center and chose a sampling of pamphlets and informational material to take home in hopes of establishing a comparable center in her hospital.

"I think cancer is a word that is swept under the carpet far too much," said Mrs. Seed. "Many people are frightened of the word cancer, and if only they would appreciate that the earlier doctors can treat the disease, the greater the chances of a cure and survival."

To our question, "Do you feel that your campaign is keeping you alive?", Mrs. Seed replied, smiling, "I've been so busy I haven't had time to think about my own physical condition. I take the drug therapy and just get on with it. Of course my hope is to see the machine installed and working, but my recipe for living is to take one day at a time and, you know, when you think about it, who can live more than that? No-one."

Mallinckrodt Authors Among Most Cited

The March 26th issue of *Current Comments* by Eugene Garfield of the Institute for Scientific Information reported on the most frequently cited 100 life sciences papers for 1976 and 1977. Published in journals of high impact, the list of articles includes from Mallinckrodt Institute, "Computed Tomography of the Body: Early Trends in Application and Accuracy of the Method", Stanley, R.J., Sagel, S.S., and Levitt, R.G., which appeared in the 127th volume of the *American Journal of Roentgenology*, 1976.

This article reported the results of early CT body scanning at MIR. The authors concluded: "Early experience with extracranial CT has shown this diagnostic method to be highly accurate in evaluating the liver, pancreas, kidneys, retroperitoneum, and

pelvis. . . . Initial results indicate a need for studies comparing CT with radionuclide examinations, ultrasonography, and other conventional radiographic procedures as well as for evaluating its use in radiation therapy planning and follow-up." This article increased in citations from two in 1976 to fifty-nine in 1977.

"Citation studies of this type are important," said Garfield, "because these rapid and early bursts of citations are good indications of future activity in the fields involved." This was certainly the case for CT body scanning, particularly at MIR. Garfield further states that these frequently cited papers will probably be heavily used by life sciences researchers for many years to come.

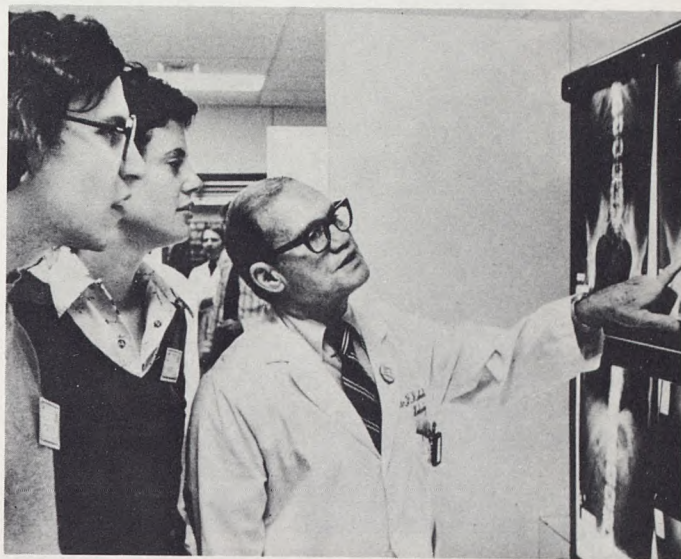
GIFT FROM SENTURIA FAMILY

The family of Dr. Hyman R. Senturia has made a gift of \$5,000 to the Mallinckrodt Institute of Radiology and the Washington University School of Medicine in honor of his birthday. Dr. Senturia, a native St. Louisan, and alumnus of this School of Medicine, has spent his entire career in Radiology at The Jewish Hospital and served as Director of Radiology from 1953 to 1972. Since that time, he has continued in an active clinical and teaching role, and currently is Associate Clinical Professor Emeritus.

The gift will be used to update and improve the teaching material in the Department of Radiology library, thereby keeping it current with the "State of the Art." To commemorate the gift, special book plates will be placed on the Mallinckrodt Institute teaching film library and book library material.

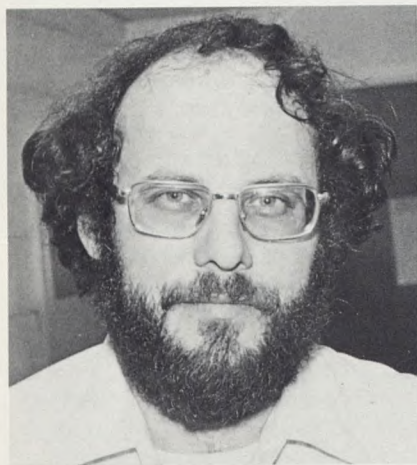
In recognition of his dedication to instructing and guiding many students through the years, Dr. Senturia was named "Teacher of the Year" by the graduating class of 1972, and appointed Alumni Teaching Scholar. A grant from the Washington University Alumni Association, in honor of this recognition by the students, partially funded an ACR Teaching File at Mallinckrodt.

"Our family chose this gift", said Mrs. Senturia, "because of my husband's continuing dedication to the field of radiology and to teaching medical students and radiology residents."



Dr. Hyman R. Senturia exemplifies the highest caliber of teaching and personal instruction.

Inter-Departmental Myeloma Grant Awarded



Dr. Frederick A. Valeriote of tumors of the hematopoietic (blood forming) system of the body.

Entitled "Response of Murine Myeloma to Chemotherapeutic Agents", the grant is one of the largest individual peer-review grants ever given to Washington University for cancer research and brings together for the first time basic scientists and clinicians to investigate this disease which presently is ultimately fatal to humans.

Working with Dr. Valeriote, (Principal Investigator), will be Dr. Richard Lynch of the Washington University Department of Pathology and Dr. Nathan Berger at Jewish Hospital, Department of Medicine.

"'Murine' simply means 'mouse,'" says Dr. Valeriote, "since our model is a mouse tumor and the chemotherapeutic agents which we are studying are those drugs in current medical use as well as many of the new drugs which the National Cancer Institute has put into investigational studies."

The study is divided into three portions, each of which is directed by one of the investigators. Dr. Valeriote has set up an animal myeloma model system to screen the new anticancer agents which are being synthesized and tested by the National Cancer Institute.

"My presumption," explains Dr. Valeriote, "is that the results from this model will be applicable to humans as there is a very close correlation between response of mouse myeloma tumors and those in humans. I am also interested in finding ways to combine the different drugs available to provide more

Dr. Frederick A. Valeriote, Head of the Section of Cancer Biology, Division of Radiation Oncology, has been awarded a five year \$550,000 research grant funded by the National Cancer Institute, NIH, for the study of the biology and therapy of myeloma or B-cell tumors which are one class

effective treatment of myeloma in animals and then translating this information to human trials."

Dr. Lynch's study of the cell biology of myeloma is expected to help in understanding control mechanisms of the normal cell population from which this tumor is derived and also in defining better treatment regimens for this specific malignancy.

Some myeloma models in the mouse system as well as some human tumors are resistant to chemotherapeutic agents. Dr. Berger will address the aspect of drug resistance in myeloma cells, defining why these tumors are "innately" resistant, with the hope of using this knowledge to circumvent such resistance.

Dr. Valeriote says, "We would like through public awareness of this large program dealing with myeloma to be able to provide any information desired to either members of the public or other scientists who are interested in this disease either from a personal or intellectual reason."

DR. PURDY

HEADS DOSIMETRY DATA PROJECT

The Office of Standard Reference Data of the National Bureau of Standards has established a project at the Mallinckrodt Institute of Radiology to provide evaluated compilations of percentage depth-dose data for applications in radiation therapy.

Headed by Dr. James Purdy, Chief, Physics Section, Division of Radiation Oncology, the project will initially concentrate on establishment of bibliographic files, accumulation of depth-dose data from 4-25 MeV medical electron accelerators, and determination of appropriate evaluation techniques concentrating on data for 4 MV X-rays.

At the end of the first year of operation, an evaluated set of 4 MV X-ray percentage depth-dose data will be made available. Plans will also be initiated to evaluate another data set, proposed at this time to be 10 MV X-ray percentage depth-dose data.

It is hoped that this project will evolve into a central information resource for radiation therapy dosimetry data.

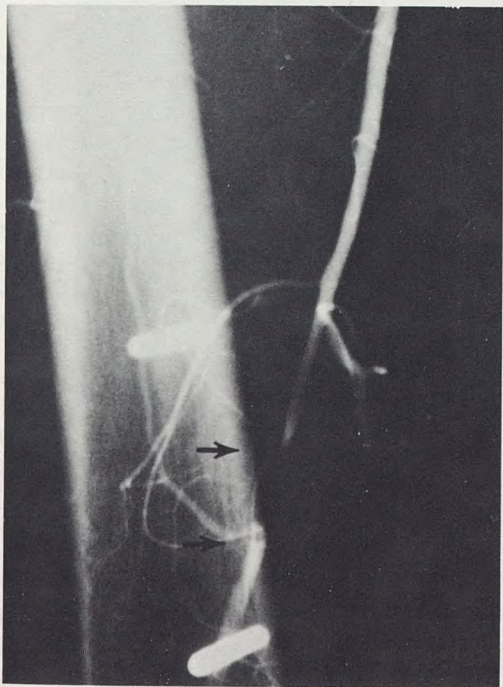
ANGIOPLASTY As a Treatment Modality

Two physicians at Mallinckrodt Institute of Radiology are now able to perform percutaneous transluminal angioplasty utilizing the Gruntzig Balloon Catheter. Drs. Louis Gilula and Bruce McClennan are using this technique to open stenotic or narrowed segments as well as some occlusions of arteries. The major arteries successfully treated by this method are iliac, femoral, and renal arteries. Conceivably other sites of vascular stenoses may be approached, and at some institutions this technique is also performed on coronary arteries.

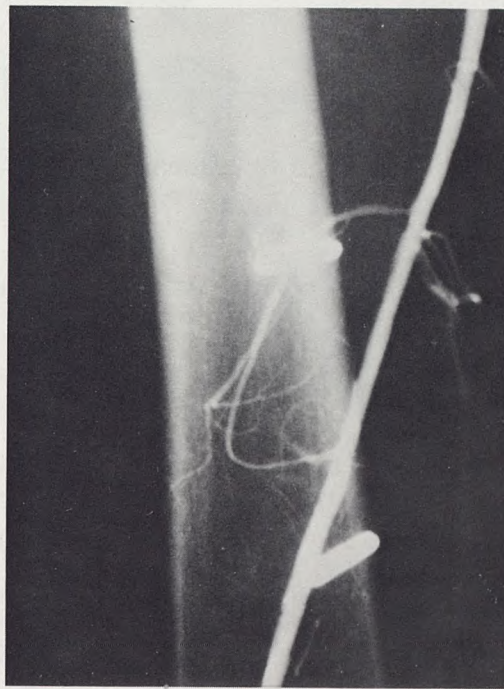
Widely used in Europe and now becoming more common in the United States, the procedure is done in combination with regular arteriography, and the patient has little or no pain. The balloon is expanded in the area of stenoses or occlusion, widening the center of the artery allowing better blood flow through the previously narrowed or blocked artery. The patient may then have a quick resolution of

symptoms with return of normal intra-arterial pressures above and below the affected site. Doppler pressures are used to provide evaluation before and after angioplasty.

According to Dr. Gilula, "Such a procedure does not preclude future surgery and some reported patients have had repeat angioplasties." The general results to date are that if a patient has a successful angioplasty, 80% of these patients have been unchanged at two years. Most of these patients are maintained on long term aspirin therapy for anti-platelet effect and will also be followed closely clinically by Doppler pressures or with repeat angioplasty when indicated. Currently, Drs. Gilula and McClennan have performed over ten iliac, femoral, and popliteal artery angioplasties. Special intra-arterial pressure monitoring equipment has been purchased for the procedure.



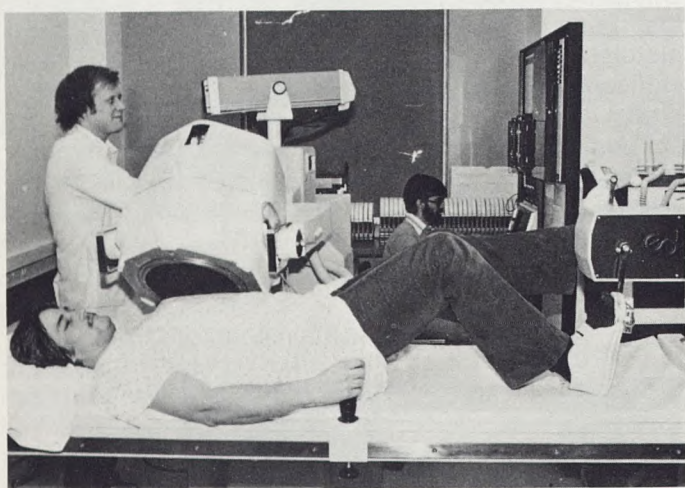
Before: Between arrows is a complete obstruction of superficial femoral artery.



After balloon angioplasty the artery is patent (opened). This patient's symptoms resolved and he left the hospital with no further treatment except for long-term use of aspirin.

New Dynamic Cardiac Study

An extraordinary step forward at Mallinckrodt Institute is a dynamic nuclear medicine study whereby the beating heart can be displayed in a flicker-free movie format. This new noninvasive technique, termed gated cardiac blood pool imaging, can be performed as a rest study or with exercise. It measures cardiac function and detects regional ventricular wall motion abnormalities and aneurysms with high accuracy.



A comfortable procedure for the patient, the test is carefully monitored for cardiac emergencies. During the exercise test, the patient lies on a table and is injected with radiopharmaceuticals. He then proceeds to exercise with a bicycle ergometer. Data is collected by a gamma camera and digitized and gated by a computer, i.e., the data collection is synchronized with heart motion, producing a continuous cinematic display of the cardiac cycle. The visual beauty of the technique is in the movies of the beating heart. Each view requires 3-6 minutes to collect and 3 or 4 views are usually required. The total time for the procedure is 45 minutes.

In a recent study from the National Institutes of Health, the left ventricular ejection fraction at rest calculated from gated cardiac blood pool images correlated well with those obtained by invasive contrast angiography.

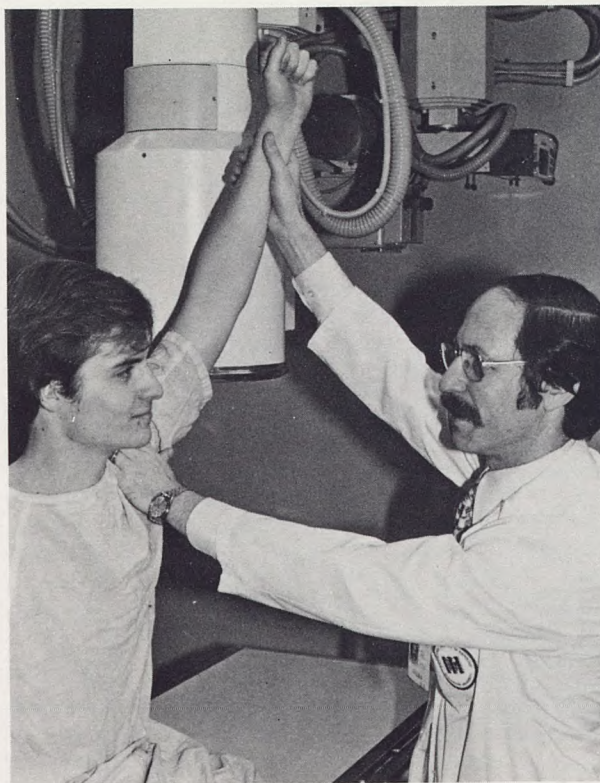
According to Dr. Daniel Biello, Chief of Nuclear Cardiology, "This test with exercise enables us to determine the effect of exercise training and to detect the presence or absence of coronary disease and

hopefully will allow us to make a better selection of patients for coronary angiography, thus becoming a helpful screening test. We also use this technique to monitor the effect of drugs on ventricular performance."

Primarily applied to the detection and characterization of ventricular performance in coronary heart disease, the cardiac blood pool imaging is also useful in pulmonary diseases, atrial septal defects, and cardiomyopathies to determine cardiac function.

The Division of Nuclear Medicine is performing four or five gated blood pool studies a day. Patients range in age from elderly to as young as four years old.

Treating A Frozen Sh



Dr. Louis A. Gilula rotates patient's arm gently after injecting anesthetic and contrast.

Adhesive capsulitis or frozen shoulder is a condition seen in adults where shoulder motion becomes limited and sometimes "frozen". Characterized by pain and stiffness, the milder or earlier form of adhesive capsulitis, if untreated, can end up in severe frozen shoulder.

Dr. Louis A. Gilula, associate professor of radiology at Mallinckrodt Institute, has found that a single arthrographic procedure can sometimes return the stiff and painful shoulder with limited motion to normal function. Shoulder arthrography, which involves injecting contrast material into the joint has been traditionally performed as a diagnostic tool at the Institute. The procedure may become therapeutic, Dr. Gilula reports, by combining a local anesthetic with the contrast solution. According to Dr. Gilula, patients with "early frozen shoulder syndrome" respond more favorably to therapeutic arthrography than chronic long standing frozen shoulder.

Shoulder With ARTHROGRAPHY

"If we catch a shoulder before it is frozen," says Dr. Gilula, "then we can sometimes get it back to normal quickly and without an operation." After injecting contrast media and anesthetic, which eases the pain of moving the shoulder, Dr. Gilula raises the patient's arm overhead and rotates it gently through as full and painless a range of motion as possible. As a result, any small adhesions are broken up. Such adhesions, if present, are usually not seen during arthrography.

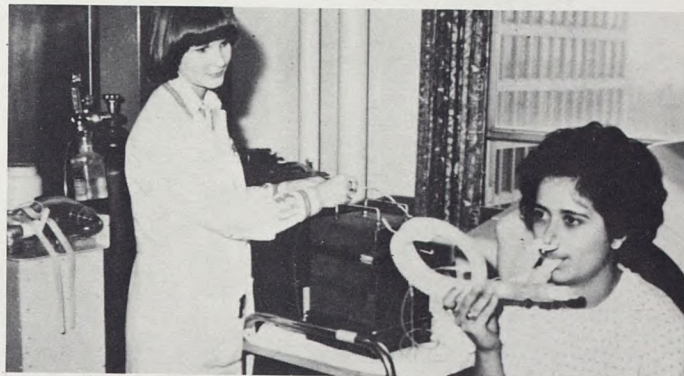
One case example reported in a study conducted by Drs. Gilula, Perry L. Schoenecker and William A. Murphy of 160 patients undergoing arthrography during the past four years was of a 50-year old male patient who was seen one year after he had suffered a stretch injury to his shoulder by falling from a ladder. The shoulder was constantly painful and stiff. By the end of a therapeutic arthrogram the patient was able to move his shoulder and at follow-up two years later, he had minimal pain, improved motion dating from the time of arthrography and no functional limitation.

"Improved range of motion will occur immediately if arthrography works," says Dr. Gilula, "but patients must continue exercising afterwards to maintain improvement."

Ventilation-Perfusion Studies

For the past six years, the Division of Nuclear Medicine has performed routine imaging of pulmonary ventilation with xenon-133 on all patients undergoing lung scanning. Recently the Division has turned to the use of a rubidium-81/krypton 81m generator for the ventilation studies. The generator is produced daily, Monday through Friday, on the Washington University main campus cyclotron.

"We hope with these ventilation studies," said Dr. Harmon H. Davis, II, of Pulmonary Medicine and an Instructor in Nuclear Medicine, "to improve the accuracy of lung scans for the diagnosis of pulmonary emboli (blood clots on the lung). These are characterized by shortness of breath, coughing, and sharp pleuritic chest pains. The important difference in this method compared to xenon ventilation studies is that we can perform both the ventilation and perfusion studies in the same position so that they can be absolutely compared for mismatch." Dr. Davis said, "For years we have been able to perform only perfusion studies which have less diagnostic specificity than combined ventilation-perfusion lung scans."



Additional advantages of krypton are that it is easier to administer and takes no more time than xenon studies, does not require patient cooperation, and does not have to be ventilated to the atmosphere.

"The use of krypton allows us to perform ventilation-perfusion lung scans anywhere in the hospital and image a patient in many different positions," said Dr. Davis.

In July, 1977, Drs. Michael Welch, Gary Ehrhardt and Mr. John Hood began to investigate the potential of generating the cyclotron-produced radionuclide at the bedside. Today, two years later, three or four of these studies are performed each week at the bedside.

Mallinckrodt Welcomes.....

Sir John and Lady Read of London, England, made a brief but eventful visit to Mallinckrodt Institute of Radiology on March 21. Sir John is Chairman of the Board of EMI limited and the visit provided him with an opportunity to see the EMI's most advanced CT scanner in operation and also to obtain a better understanding of medical activities in the United States. A carefully organized agenda arranged by Dr. Ronald Evens, Director of the Institute, highlighted the unique scope of activities conducted at the Institute — medical diagnosis, research, treatment, and teaching — and all involving the most modern and sophisticated technology equipment available today.

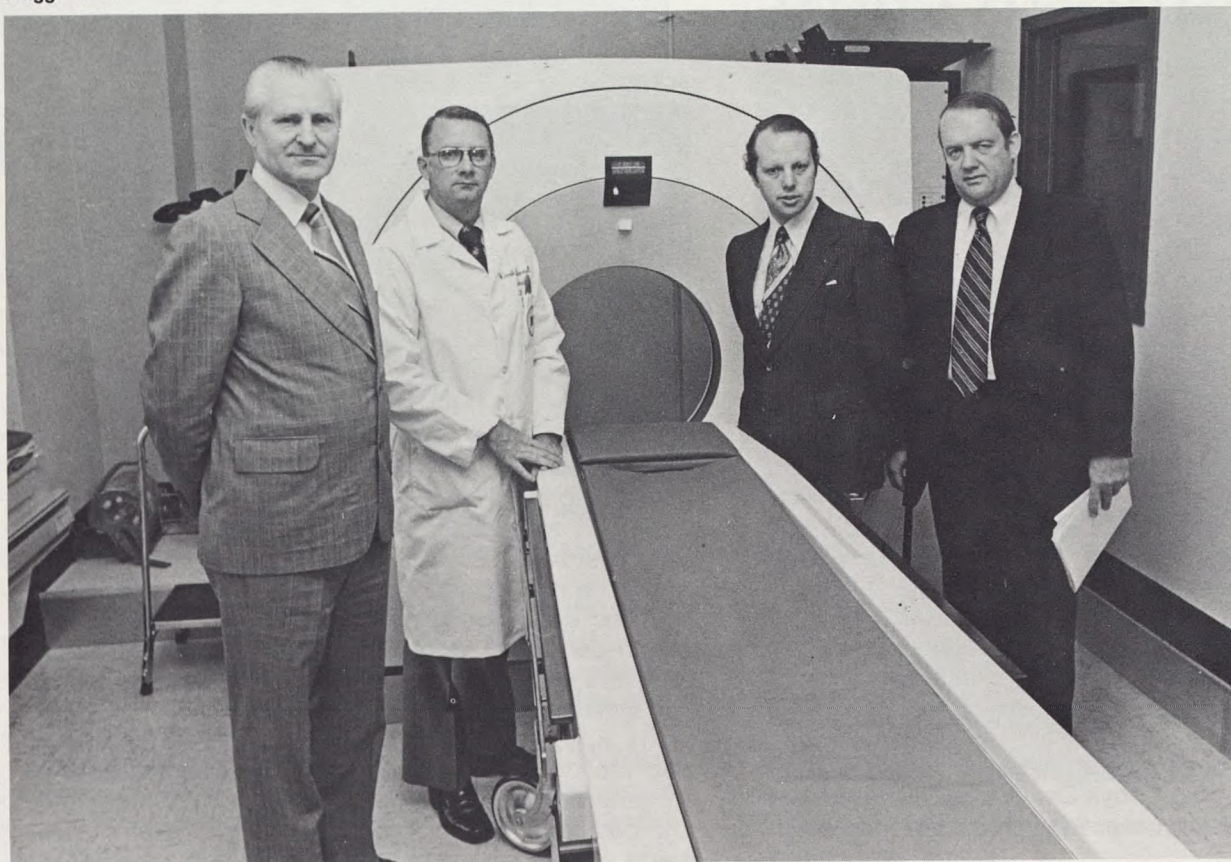
This framework has provided a natural setting for the clinical testing of the EMI-Scanner 7070, which EMI terms "the CT scanner industry's most advanced machine in operation."

Dr. Evens told Sir John, "We are seeing a level of definition and clarity in the 7070 scans we have not experienced before." Mallinckrodt had the first CT machine and now has two head and two whole body scanners in full operation."

"The carefully planned clinical test program at the Institute," said Sir John, "is helping us refine the 7070 system to achieve optimum performance of this machine."

Accompanying the Reads on their visit to Mallinck-

Pictured at the EMI-Scanner 7070 are, left, Sir John Read, Dr. Ronald G. Evens, Mr. David Steadman, and Mr. Robert A. Hagglund.



rodt Institute were David Steadman, Director of Medical Activities for EMI Worldwide, and Robert A. Hagglund, President of the EMI Medical, Inc.-USA. Dr. Evens hosted a luncheon in Queeny Tower for these distinguished guests, other representatives of EMI-USA, and several members of the Mallinckrodt Institute staff. Although primarily a social event, the luncheon provided an opportunity for an excellent exchange of ideas on the role of CT in the United States and Great Britain.

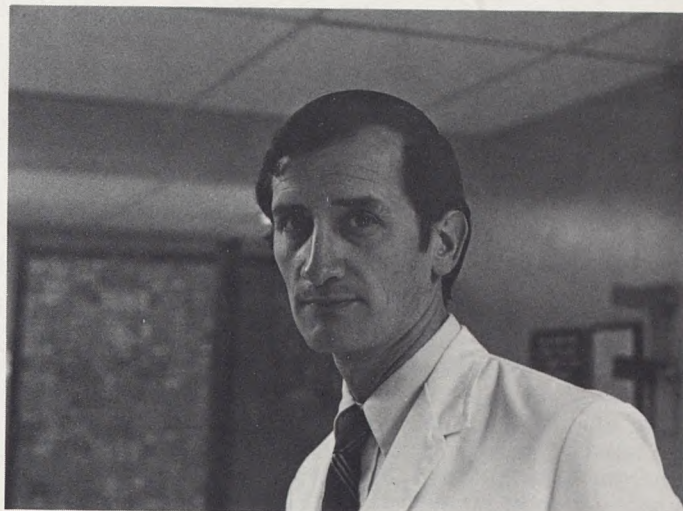


Mrs. Ronald G. Evens, right, greets Lady Read of London, England.

In another carefully planned agenda for their day's visit, Mrs. Ronald Evens showed Lady Read some of the highlights of St. Louis. Beginning with a visit to the Gateway Arch, the nation's tallest and most elegant memorial, the ladies then traveled by limousine to the Missouri Botanical Gardens, where Mrs. Evens had arranged a special tour for Lady Read. Founded by the Englishman, Henry Shaw, in 1859, the gardens offered many displays of special interest to the British visitor. Wisely choosing her walking shoes for the day's activities, Lady Read delighted in the serenity and peacefulness of the 14 acre, royal-type Japanese Garden, and the great high view from its picturesque Drum Bridge leading to the Teahouse Island. After a pleasant chat with Mr. John Elsley, curator of hardy plants and also British, in the English garden, Lady Read was hosted to a relaxing luncheon by Mrs. Evens aboard the Robert E. Lee restaurant. Amidst the hospitality and charm of the riverfront with its cobblestone levee and steamboats, the two ladies enjoyed their own exchange of ideas and even a photo of Lady Read's beautiful grandchildren.

"It was such a marvelous day," said Lady Read, of her memorable first visit to St. Louis.

DR. WILLIAM MILL ACCEPTS NEW POSITION



Dr. William B. Mill has accepted the position of Chairman of the Department of Radiation Oncology at St. Louis University School of Medicine and will officially assume his new responsibilities on July 1, 1979.

Dr. Mill has been affiliated with MIR in a variety of roles. From 1963-66, he was an Assistant Resident in Radiology and spent the next two years at MIR as an NCI Trainee in Radiation Therapy. After two more years on the senior staff, Dr. Mill went into private practice in Springfield, Missouri. He returned to MIR in 1972 as an Assistant Professor of Radiology.

The Department of Radiation Oncology was established at St. Louis University School of Medicine two and a half years ago and is also responsible for radiation therapy at the John Cochran VA Hospital. In addition to his new administrative responsibilities, Dr. Mill expects to continue to pursue the interests which received much of his attention at MIR, these include the treatment of lymphoma, leukemia and myeloma. However, he anticipates spending an increased amount of time on broader areas within the field of radiation oncology.

Expressing positive feelings about his experiences at MIR, Dr. Mill hopes that the St. Louis University staff and the radiation oncologists at MIR will be able to work together on many projects and believes that such a cooperative approach could be especially beneficial in the treatment of some of the rarer tumors which require special equipment or diagnostic facilities.

Foreign Lectures

During the first two weeks in July, **Dr. Robert Stanley** has been invited as a visiting professor to the University Hospital in Adelaide, Australia, by Dr. Geoffrey Benness, Chairman of the Department. Mrs. Stanley has also been invited. Dr. Stanley will present a series of lectures and workshops in CT during their first week and travel between Adelaide and Sydney during the second week of the visit.

Dr. Mokhtar Gado recently returned from a two month trip to Cairo, Egypt where he was a visiting professor of radiology in the Cairo University Medical School from which he graduated in 1953. During this visit, he helped the Medical School in setting up a new Radiology section. He also studied the logistic problems of introducing modern technology in a developing community.

Dr. Louis A. Gilula presented two refresher courses and two exhibits at the American Roentgen Ray Society meeting in Toronto, Canada, March 24-30. He spoke on "Radiographic Interpretation of the Wrist" and "Ligamentous Instabilities of the Wrist" and the exhibits included "Ligamentous Instabilities", Louis Gilula, M.D., Thomas Herman, M.D., and Paul Weeks and "Brodie's Abscess: Reappraisal", William A. Murphy, M.D., William B. Miller, M.D., and Louis A. Gilula, M.D.

Dr. Carleton Stewart was recently invited to give a lecture for the National Cancer Institute of Germany at the University of Heidelberg on "The Role of the Macrophage in the Host Defense of Cancer." Dr. Stewart also presented this lecture in Sutton, England at the Chester Beatty Institute.

An instruction course entitled "Comparison of Radio-nuclide, Ultrasound, and CT Imaging of the Abdomen", by **Barry A. Siegel, M.D., Robert Koehler, M.D., and G. Leland Melson, M.D.**, was presented at the American Roentgen Ray Society meeting, March 24-30, in Toronto, Canada.

Zoo Consultant

Dr. Louis A. Gilula serves as radiology consultant for the St. Louis Zoo and is regularly called upon to lend his expertise to the zoo's own extensive veterinary hospital. Recently, Dr. Gilula assisted with treatment by performing a sinus tract injection on a Spekes gazelle's leg to determine the extent of an infection.

"Many ailments are common to humans and animals and the same X-ray techniques work well to diagnose them," said Dr. Gilula.

NEWS

Lectures

Dr. Carlos A. Perez spoke on "Immune Modulation in Lung Cancer" at a conference on Cancer of the Lung in Los Angeles Jan. 16-17.

Dr. Carlos A. Perez spoke on "Sarcoma of Soft Tissue and Bone in Children" at a CCIRC Symposium on Ewing's Sarcoma in Orlando, Florida, Jan. 26-28.

Dr. Gilbert Jost presented "The Limitations of CT Scanning" at the American College of Radiology Equipment Seminar in New Orleans, Feb. 8-10.

Dr. Daniel R. Biello, Assistant Professor of Radiology, spoke on "The Inter-relationship of Ultrasonography, Radiology, and Nuclear Medicine in Diagnostic Evaluation" at the 4th District MSRT meeting, February 15. Special guests were members of the 11th District, Illinois Society of Radiologic Technologists.

Dr. G. Lee Melson participated in the Cole County Annual Cancer Workshop, "Diagnosis and Treatment of Cancer - Update" on February 17, in Jefferson City, Missouri. The titles of his two presentations were "Basic Principles of Diagnostic Ultrasound and Computed Tomography" and "The Role of Ultrasound and Computed Tomography in the Diagnosis and Evaluation of Neoplasms".

Dr. Carlos A. Perez presented the abstract, "CT Scanning in Radiotherapy Treatment Planning" at the Gilbert H. Fletcher Society Meeting in Houston, Feb. 23-24. Dr. Hywel Madoc-Jones was Program Chairman for the meeting.

Dr. Robert Stanley and **Stuart Sagel**, as members of the course faculty, were in San Diego for the meeting of the Society of Computed Body Tomography, Feb. 26-March 1.

Dr. Carlos A. Perez presented the abstract, "Analysis of Failures and Morbidity in a Randomized Prospective Study Comparing Radiation Therapy Alone with Preoperative Radiation and a Radical Hysterectomy in Stage 1B and IIA Carcinoma of the Uterine Cervix" to the American Radium Society in Los Angeles, March 7-9.

Dr. Louis A. Gilula lectured on "Arthrography of the Knee" and "Musculoskeletal CT" at the Midwest Clinical Conference on Skeletal Trauma and Musculoskeletal Disorders sponsored by the Chicago Medical Society, March 11-12, and in addition was a Visiting Lecturer at the Northwestern University Department of Radiology. He spoke on "P.A. Approach to the Wrist."

Dr. Robert Stanley was a member of the faculty of a course given by the Louisiana State University Medical School in New Orleans, March 15-17.

Dr. Barry A. Siegel participated in a refresher course, "Clinical Nuclear Imaging-1979", in Dallas, March 30-April 1. He presented the following lectures: "Myocardial Imaging with

UPDATE

Positron Emitting Radionuclides", "Diagnosis of Deep Vein Disease", "Introduction to Genitourinary Studies" and "Radionuclide Brain Imaging."

Dr. Robert Stanley has been invited to present interesting teaching cases at the annual meeting of the American Association of Academic Chief Residents in Radiology to be held in conjunction with the AUR meeting in Rochester, New York, May 6-10.

Dr. Bruce McClennan will be a guest lecturer for a course in Abdominal Radiology at Harvard University, May 14-18.

Dr. Barry A. Siegel spoke on "Brain Imaging: Radionuclide and CT Evaluation" on April 6 at the Third Annual Postgraduate Course entitled Clinical Nuclear Medicine, 1979, given by the Departments of Radiology and Continuing Education of Harvard Medical School in Boston. Dr. Siegel delivered a second lecture at Harvard on "Radionuclide, Ultrasound, and CT Studies of the Hepatobiliary Tree."

The following presentations were made by the physics staff of Radiation Oncology at the Missouri River Valley Chapter meeting of the American Association of Physicists in Medicine in Kansas City, Feb. 17.

An Evaluated Dosimetry Data Set for 4 MV Accelerators, **J. A. Purdy**.

Preliminary Dosimetry for the Varian Clinac 20 Linear Accelerator, **J. A. Purdy** and **P. A. Parrino**.

Dose, Time, Area, and Fractionation Factors in Radiation Therapy, **S. C. Prasad**.

A Quality Assurance Program for Linear Accelerators, **J. A. Purdy**.

The Radiation Oncology Physics Center in St. Louis, **J. A. Purdy** and **D. J. Keys**.

The Effect of Spacing and Irregular Surface on Thermal Patterns, **W. J. Kopecky**.

Study of the Effect of Hyperthermia on Human Neoplasm - Preliminary Findings, **C. A. Perez**, and **W. J. Kopecky**.

Visiting Professor

Dr. Barry A. Siegel was a visiting professor in the Department of Radiology, Yale University School of Medicine on April 19. He spoke on "Indium-111 Labeled Platelets" and "Ventilation-Perfusion Lung Scans for the Diagnosis of Pulmonary Embolism".

Off Staff

Dr. Adel G. Mattar, Assistant Professor of Radiology, has accepted the position of Director of the Department of Nuclear Medicine at General Hospital, St. John's, Newfoundland, Canada, and will be affiliated with Memorial University of Newfoundland, effective July 1, 1979.

Don P. Ragan, Ph.D., former Director of Mallinckrodt's Oncology Data Center, assumed the position of Associate Professor of Radiation Oncology and Director of Data Processing for the Central Radiation Therapy Facility, at Wayne State University. His responsibilities are to provide administrative services for the Radiation Oncology Department including computer services equivalent to the systems and operations developed at Mallinckrodt. In addition, Dr. Ragan will be responsible for the data processing activities of the Michigan Cancer Foundation.

Dr. Gary J. Ehrhardt has accepted a position as a senior research scientist in the radioisotopes application department of the Missouri University Research Reactor (MURR).

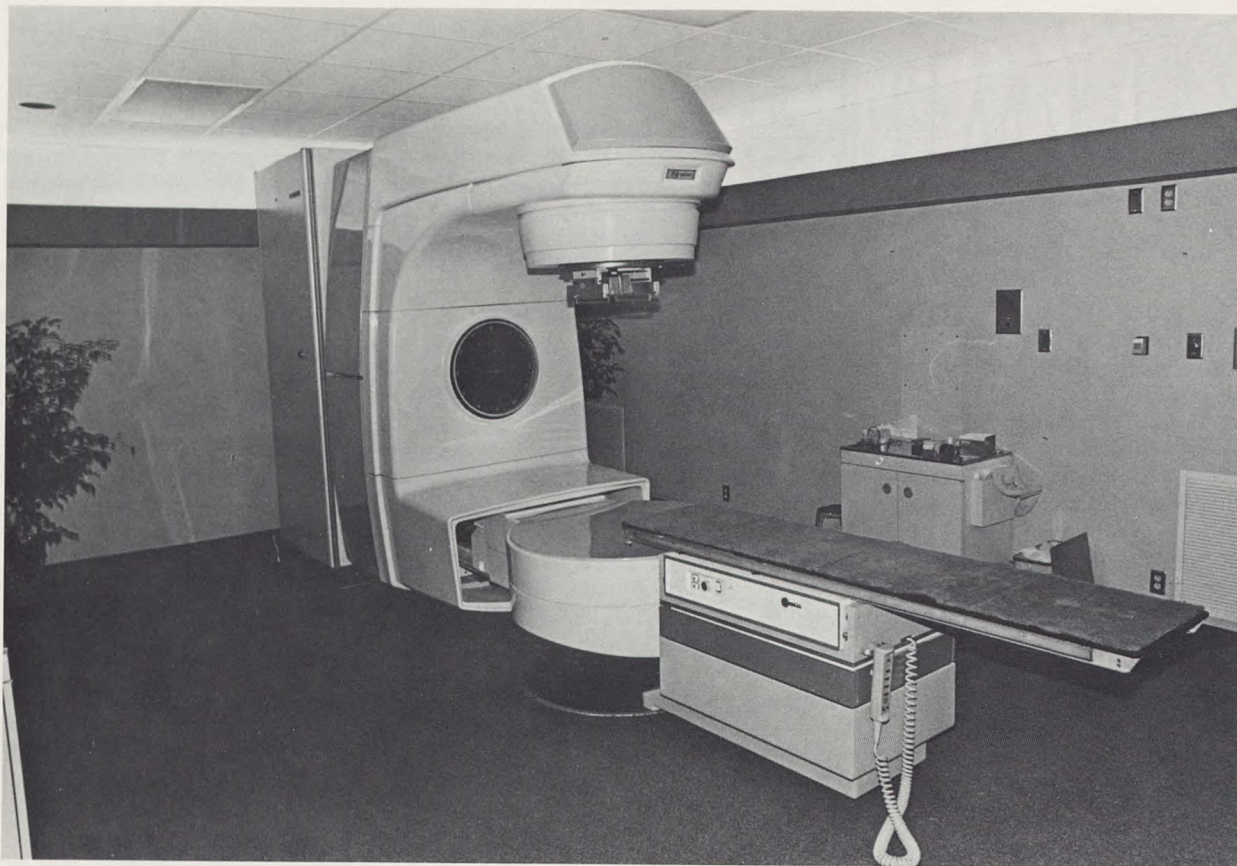
Chief Residents

Dr. Richard Baron has been appointed Chief Resident for 1979-80 and **Dr. Fred Oakley** Co-Chief Resident. Drs. Baron and Oakley will be working closely with Dr. Ronald Evens and Dr. Lee Melson in the operation of the MIR residency training program.

Awards

The recipient of the 1979 Hugh M. Wilson Award for Meritorious Work in Radiology is Kendall H. Barker, Washington University medical student, in recognition of his excellent performance during a Diagnostic Radiology Elective at MIR. A check for \$300 and a commemorative scroll will be presented to Mr. Barker at the Annual Senior Awards Ceremony on May 18.

Previous recipients of the award are: 1969, Dr. Barry A. Siegel; 1970, Dr. William V. Glenn; 1971, Dr. Thomas C. Hill; 1972, Dr. John Anthony Parker; 1973, Dr. James P. Wilhelm; 1974, Dr. Barry R. Paull; 1975, Dr. Mark Binder Edelstein; 1976, Dr. Henry J. Votava; 1977, Dr. John J. Frost; 1978, Dr. Bruce Jay Thaler.



CLINAC 20 in Clinical Use in Radiation Oncology

A Varian Associates CLINAC 20 linear accelerator is the newest addition to the Division of Radiation Oncology's treatment capabilities and, after several weeks of acceptance tests, is now in clinical use.

Versatility and efficiency are the CLINAC 20's most prominent characteristics. The accelerator is capable of producing electron beam energies ranging from 6 to 20 MeV, in addition to an 18 MV photon beam. Thus, this one machine can be used to treat superficial as well as deep-seated lesions. The CLINAC 20 is also able to rotate around the patient, so that radiation can be administered from any angle. In addition, it has a detachable treatment chair, making it possible to treat patients in a sitting position.

One feature which renders the new linear accelerator far superior to the betatron is its treatment speed. While the betatron's dose rate was approximately 40 rad/min., the CLINAC 20 is capable of

dose rates as high as 500 rad/min. Since a typical treatment involves the delivery of 180 rad, actual treatment time has decreased from about 5 minutes to approximately one-half minute. The time required for patient positioning has also improved, as the CLINAC 20's couch is fully automated. These design characteristics enable the CLINAC 20 to handle nearly double the patient load of the betatron.

The CLINAC 20 is installed in the space formerly occupied by the betatron. Physics staff members, James Purdy, Ph.D., and Peter Parrino, M.S., directed the installation of both the machine itself and the additional room shielding which the accelerator requires because of its rotational capabilities which allows one to angle the beam in a number of directions, instead of just straight down. Besides contributing to the clinical capacity of the Division, the accelerator will serve as a tool for research.

Advanced Audiovisual Equipment

A closed circuit television system for Scarpellino Auditorium has recently been installed at the Mallinckrodt Institute, adding a new dimension of teaching flexibility to all conferences held in the 137 seat auditorium. Offering capabilities which have not been feasible with the previous audiovisual equipment, the system is applicable to both X-rays and dynamic studies such as cardiac catheterizations, general fluoroscopy, and nuclear heart studies. Previously the only other method of showing a dynamic study was to use a 16mm movie. The individual monitors enable the entire audience to have greater exposure to the dynamic studies, and see close-ups of areas of interest.

The system also decreases preparation time for each conference. By eliminating the need for producing slides the radiologist can present X-rays from an interesting case at the noon conference which he may have completed as recently as that same morning.

Another capability of the system is that by utilizing the camera within the video studio, motion pictures can be transferred to video tapes and displayed on the facility. Individual frames are matched so as to get almost perfect reproduction. For example, Dr. Hywel Madoc-Jones utilized time-lapse movies in his lecture, "Introduction to Radiation Oncology", for the sophomore medical students. "By transferring time-lapse movies of Dr. Leonard J. Tolmach's studies of cultured cancer cells to video tape," said Dr. Madoc-Jones, "I was able to isolate some of the events on separate frames and show in detail how the cancer cells die after irradiation. It was a very dramatic presentation for the students to see motion pictures simultaneously with still pictures of a patient being treated for the same type of cancer as in the studies.

According to Dr. Robert Levitt, "The television system allows the entire audience at the weekly Chest Conferences to view special procedures such as bronchograms and laminograms. It clearly defines the important details of the procedures which is the reason for performing these studies. The same viewing clarity is true of CT scans."

One of the first uses of the closed circuit T.V. system was by Dr. Fred Oakley, during his final resident talk, on "Myocardial Imaging." The purpose of myocardial imaging is to obtain dynamic images of a beating heart at rest and at exercise.

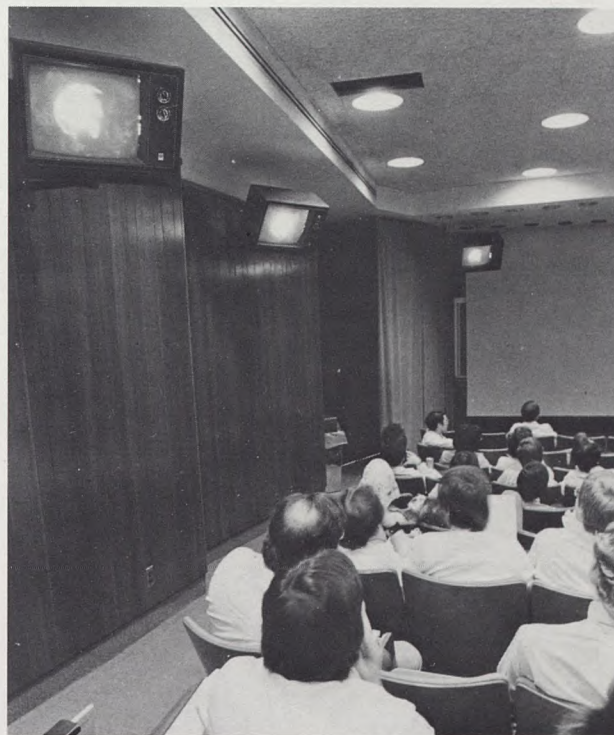
"Without the video tape capability," said Dr.

Oakley, "I could not have demonstrated the beating heart." His lecture included the history of the procedure, an explanation of how the studies are performed and when they should be used, and a display of the finished study on the screen.

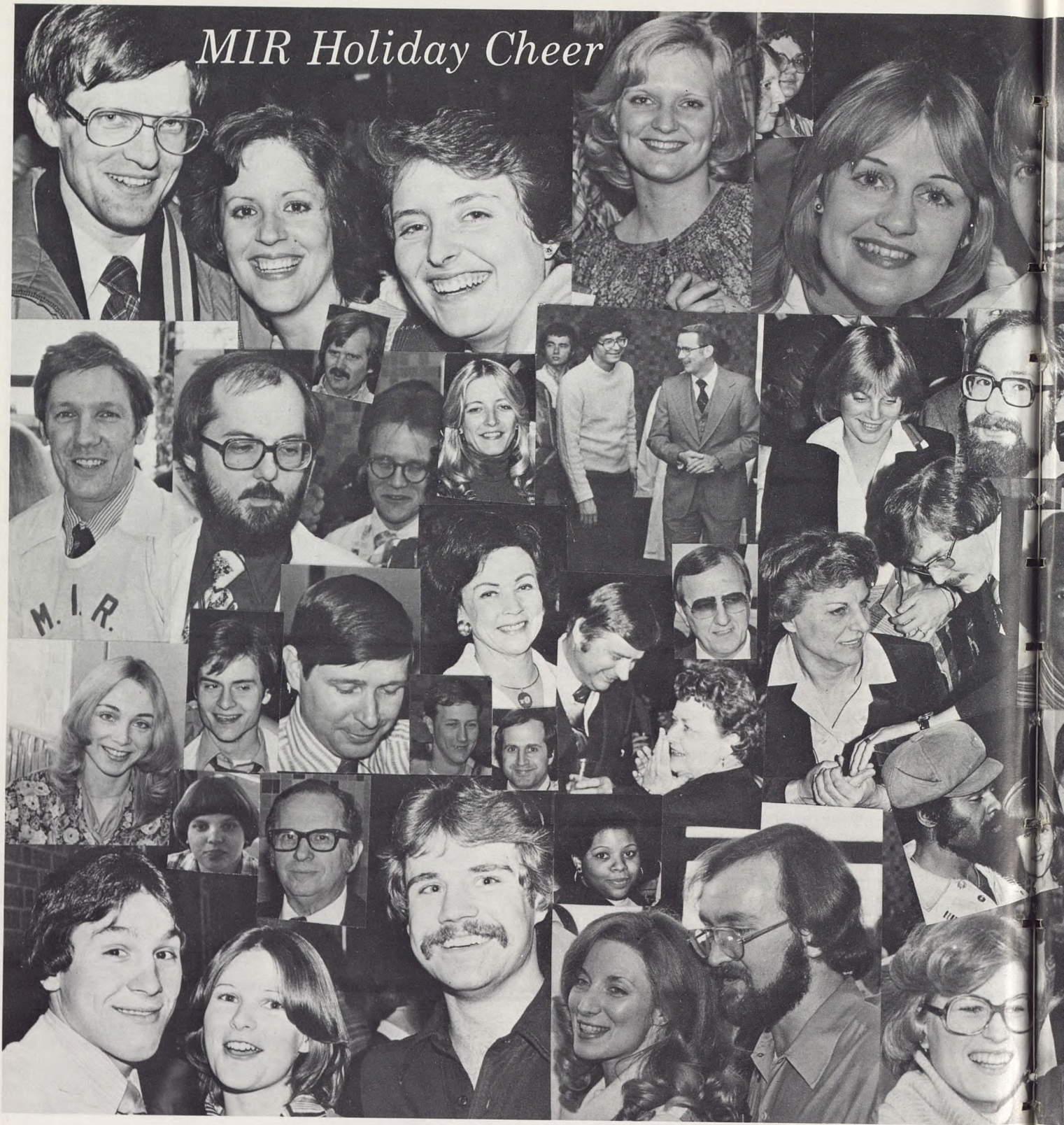
On March 28, Dr. Michael W. Vannier, first year diagnostic radiology resident, presented a lecture which was enhanced by the television system. Entitled "Computer Graphics: Potential Radiological Applications", the talk involved demonstrations of calligraphic (line drawing) and raster-type computer graphics with examples drawn from engineering, the space program, electron microscopy, and the entertainment industry. Two films were shown during the presentation.

A general analysis of the closed circuit television system at Mallinckrodt Institute is that it is proving a dynamic and versatile communications medium and is being utilized by health professionals in a new effort to facilitate education for all.

Norman Hente and Tom Murry of the Mallinckrodt Photo Laboratory have been responsible for demonstrating the use of the equipment during the learning period.



MIR Holiday Cheer



MEDICAL LIBRARY



The Challenge of Change

The traditional role of the technologist has been to exercise his X-ray skills within the clinical activities of a radiology department. As a result technology education and training have been oriented in that direction.

But now as a result of such trends as governmental intervention and federal scrutiny over hospital procedures, a more demanding patient community, and cost containment, a demand has grown for individuals with business and management skills to provide sound radiology departmental administration. Realizing the potential need in this area, as early as 1969, Armand Diaz, Technical Administrator and Director of Education at Mallinckrodt Institute, in conjunction with Gary Brink, Chief Technologist and Assistant Director of Education, initiated an informal business administration training program for technical supervisors at the Institute. By 1971, twenty sessions of formal lectures in management had become a regular part of the continuing education curriculum for supervisory personnel.

"Obviously management skills are of key importance in the performance role of supervisors and a necessary addition to their training and development," said Brink. As administrative duties for

radiology departments have become more and more demanding in recent years, a further need has evolved. Radiologists have sought to free themselves of these cumbersome business responsibilities by finding qualified administrators so that they could concentrate on clinical areas. The position of technical administrator has evolved.

"The candidate for this position needs three areas of knowledge," said Gary Brink in a guest editorial in the March-April, 1973 issue of "Applied Radiology." "He must have a thorough knowledge of radiologic technology and its role in health care delivery — he must be fully aware, through his own personal experiences, of what patient care is all about — and he must be trained in management and administration so that he can effectively deal with problems in these areas."

In 1972 the Mallinckrodt Institute School of Radiologic Technology began student training in business administration and personnel management. As a result, the program is developing student interest and enthusiasm for business management as a science and preparing students for supervisory or administrative positions in the future. For those students who do not aspire to management positions, it teaches

MIR technical supervisors are taught management techniques.



them the rationale behind decisions affecting their professional roles.

By 1977, business administration had become an established feature of the technical training at Mallinckrodt. The program initiated by Diaz and Brink involves a three-pronged approach encompassing students, supervisory personnel, and assistant supervisors. Most of the formal subject matter is based on major portions of business courses taught at Washington University Evening College, and is related to a radiology setting.

"Our belief," said Diaz, "is that institutions of higher education must provide curriculums which can be tailored to a student's particular needs and provide him with career mobility. Of course the ultimate success or failure of the student depends on the individual." Today, the educational credentials of the Institute's technical staff reflect increased motivation and management orientation. The majority of technologists have completed associate degree programs and twelve technologists hold a baccalaureate degree with several having completed either a second B.S. degree or M.A. degree. More and more of the technical staff and student technologists are continuing their education through day and evening college classes.

Radiologic technology is one of the first allied-health fields moving in a firm direction toward management. Mallinckrodt is playing a major role in this movement by providing training in management techniques that can be applied not only within its own confines, but other institutional settings as well. Because of this added dimension in technology education and training, many technologists are in positions today that they would never have dreamed of a decade ago.

Gary Brink to be Named ASRT Fellow

Gary Brink, Chief Technologist and Assistant Director of Education will be cited for distinguished technology achievements by being named a Fellow of the American Society of Radiologic Technologists.

The Society, a professional technical society with a membership of 19,000 technologists will award Mr. Brink a certificate of fellowship during its 51st annual meeting in Houston, Texas in July, 1979.

Mr. Brink, who earned his rank through publications in the field of technology, committee memberships, and educational lectures, is the second person from the Institute to achieve this award. Armand Diaz was named a Fellow in 1971.

TECHNO INFO

Radiation Safety Presentation



A nine-member panel of technology students from Mallinckrodt Institute spoke on "Radiation Safety" at the March 15 4th District MSRT meeting held at Christian Hospital Northeast. A slide presentation and mini-quiz in which the audience participated were included in the program covering radiation protection for technologists and patients. Student participants included, front row from left, Renee Oberle, Cindy Gillardi, Lesa Morris, Susan Johnson, and Sally Stranguist. Back row with Michael Ward, R.T., who organized and directed the presentation are, from left, Vicki Sloan, Karen Strong, JoAnn Wilke, and Margie Wolter.

Joe Di Croce, technical supervisor of 4th X-ray and his wife, Helen Rose, are an academically-minded couple. Mrs. Di Croce is assistant professor of nursing at St. Louis University. In addition to being a registered technologist, Joe holds a B.S. degree in business administration from Washington University Evening School. "To make an individual more perceptive and better able to contribute to a profession, a person should never cease to learn," said Joe.

Emilee Murray, R.T., B.B.A., recently rejoined the Mallinckrodt technology staff on 4th floor after working the past 2½ years as assistant technical supervisor in the G.I. department of Peter Bent Brigham Hospital in Boston and holding the position of technology clinical instructor for G.I. procedures.

Quality Control Center

In order to help develop new methods of treatment in Radiation Oncology many patients volunteer to take part in research studies called protocols. The patients are assigned to one of several types of treatment modalities, each of which is felt to be about equally effective. If a patient does not respond well to the one to which he is originally assigned, he is switched to another.

A protocol exists to collect data on a group of patients with the same disease from different hospitals and determine the most effective method of treatment for these patients, who will get identical or very similar treatment. The protocol then details the method of treatment and the participating hospitals agree to treat patients according to instructions in the protocol. The Southeastern Cancer Study Group sponsors several protocols. When a patient consents to go on a study, in this group, the information is registered with the Statistical Office of the Southeastern Cancer Study Group in Birmingham. This office then notifies the Quality Control Center at Mallinckrodt Institute indicating the patient's name, study number, protocol, and treatment option.

In an effort to guarantee that the participating physicians from the various hospitals follow through

on the prescribed treatment, they are asked to send the patient's chart, dose prescription, and initial localization films to the Quality Control Center for verification that all the information supplied is correct and in compliance with the protocol.

Dr. Carlos Perez, Chairman of the Radiation Oncology Committee, or members of the Division review all the films and the methodology of treatment. Dr. Glenn Glasgow determines whether or not the technical information and dose calculations on each patient are correct. Completed cases are also verified by the Quality Control Center.



Ms. Diane England, administrative assistant to Dr. Perez, organizes and coordinates all activities of the Quality Control Center and with Dr. Perez, is responsible for establishing this new procedure for handling the records and films of radiation patients in the intergroup study.

Diane England

Visiting Professors



Dr. P. Ruben Koehler, Professor of Radiology and Chief of Diagnosis at the University of Utah, pictured with Dr. Ronald G. Evens, was a visiting professor at Mallinckrodt Institute on January 8 and spoke on "Ultrasound in Obstetrics and Gynecology" at the City-Wide Radiology Conference.



Dr. E. James Potchen, Chairman of Radiology at Michigan State University, was a visiting professor on March 12 and spoke on "Efficacy Studies in Radiology - The Barium Enema."

Help Keep FOCAL SPOT Informed of Your Activities

Dear Alumni:

To help us keep your former house officers or faculty and friends apprised of your achievements, we would appreciate your taking a few minutes to fill out the following questionnaire.

Name

Class

Address

Recent activities (publications, promotions, etc.)

Honors, fellowships, medals, honorary degrees

Major field of research or study

Special interests

Please fold, staple and mail.

We also appreciate receiving photographs and press clippings

Return Address:

fold

**Place 15¢
Stamp
Here**

**Ronald G. Evens, M.D.
Director
Mallinckrodt Institute of Radiology
510 S. Kingshighway
St. Louis, Missouri 63110**

fold



Mike Wagner scores for Kirkwood High.

Mike Wagner's Goals

Anyone who follows high school basketball knows about Mike Wagner, the 6'2" guard from Kirkwood High. Mike's field goals and high point scoring helped his team reach the semi-finals round of the Missouri Class 4A tournament.

The 17-year-old junior is the son of Mr. and Mrs. Robert L. Wagner. In addition to his athletic prowess in basketball he is a baseball letterman and an achiever in many other areas. Realizing that there is more to stardom than passing and shooting, Mike maintains a 3.6 grade point average in school and his favorite subject is math. He has attained scouting's highest recognition, the Eagle Award, and is a Brotherhood Member of the Order of the Arrow. He is president of his youth group at Webster Hills Methodist Church, enjoys music, and is a member of the Kirkwood High acappella choir and his church youth choir.

Keeping pace with Mike's busy schedule and supportive of his activities are his parents and 15-year-old brother, Todd, also an outstanding athlete, and sister, Beth, age 11.

"We have some pretty lively discussions in the evening around the family dinner table," says his father, Business Administrator of Mallinckrodt Institute, and who believes that the family is still the primary trainer of a young person's values.

"Right now Mike is facing a major decision concerning his summer plans," says Wagner. Each year the Young Life Christian Organization organizes a basketball team of outstanding Christian athletes from all over the country. Mike is one of two youths selected from the St. Louis area and if he chooses this activity he will go to San Francisco where Mr. Richard Powell organizes the team and then on to the Philippines to compete against other youth teams in an international competition.

"Sports play a big part in my life," says Mike, "and they are very important to me. I want to continue my basketball career for as long as possible, but I realize that it can't last forever. My major goal right now is to do well my last year in high school and go on to a good college."

PROFILES: Sally Hermann, Volunteer

It was May, 1977, and the Cancer Information Center had been provided a room in Barnard Hospital, thanks to the support of the Barnard Hospital Board of Directors, and was ready for staffing. The sponsor, Mallinckrodt Institute's Division of Radiation Oncology, turned to volunteer staffing after the American Cancer Society rejected a grant to support the CIC.



In the meantime, Mr. Fred Hermann, a member of the Board of Directors of Barnard Hospital, had mentioned to his wife, Sally, that CIC was in the works. Accustomed to doing hospital volunteer work since she was fourteen years old, (Sally's father is Dr. E. Lawrence Keyes), she was interested in the concept and asked Mr. Joseph Greco, Associate Director of Barnes Hospital, to arrange a meeting for her with Dr. Carlos Perez, Director of the Division of Radiation Oncology.

Further meetings took place in which Mrs. Hermann, Dr. Perez, Mr. Greco, and Mary Jo Tillman, the Division's Communications Associate, discussed general goals and worked out the details of collecting and organizing material for the CIC. Sally worked with the Barnes Volunteer Office to obtain volunteer coverage for about half-time. The rest was to be provided by the secretarial staff of the Division of Radiation Oncology.

July 18, 1977, was the date of the CIC opening which was widely publicized by the local news media. The public enthusiastically responded.

In Sept., 1977, the CIC went through a difficult time as school started and some of the volunteers went back to teaching positions and secretarial coverage was gradually withdrawn. Also, Sally herself was forced to give up her active involvement for several weeks due to major surgery. Even during her absence, she was frequently on the phone, helping to ensure smooth operations.

Sally came back to work with her characteristic zeal, working extra hours to keep the CIC open as much as possible. Her many volunteer hours are spent working with the American Cancer Society to review and order pamphlets and videotapes for public and professional use, clipping cancer-related news items, recruiting and training new volunteers, planning publicity campaigns, and most important, working as

receptionist. The Center continued to experience ups and downs as volunteers came and went, one Division employee involved in the project resigned, and another took a six-month leave of absence. At one point, CIC receptionist coverage was limited to Mrs. Jane Bartlett, volunteer, Monday mornings, and Sally's regular Wednesday-Thursday schedule. To some people, these obstacles looked insurmountable, but Sally refused to allow the Center to be closed. Working extra hours, she managed to keep it open through a difficult period of 2½ months.

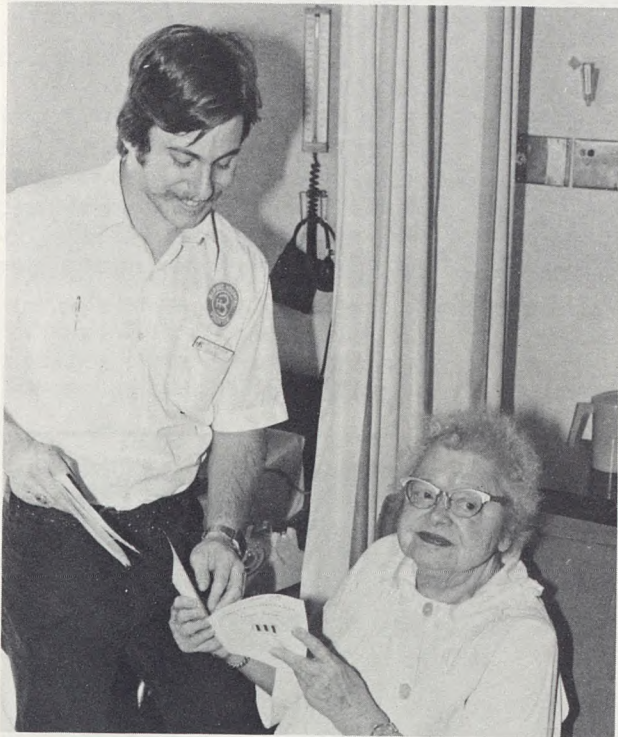
Throughout this time, Sally has shown an extreme sensitivity to visitors' needs, both informational and emotional. She has the special and invaluable ability to communicate with visitors to the Center about what is often a painful and emotional subject: cancer in themselves or members of their family.

Once again, the CIC's future is bright. Volunteer participation is up and the Center is open full-time. More volunteers are still needed to provide necessary coverage and future innovations. A Radiation Oncology administrative assistant, Mrs. Diane England, is now in charge of the overall coordination although Sally remains the driving force and inspiration behind the Center.



Sally Herman explains resources provided in the Cancer Information Center to members of the Ladies Auxiliary to the Veterans of Foreign Wars during their tour of Mallinckrodt and Barnes. Escorted by Joseph Greco, associate director of Barnes Hospital, at right is the national president, Arlene McDermott of Concord, N.H., Emilia Droege, state president, center, and Ann Siscel.

VOLUNTEERS AT MIR



Joel Berenbeim has a friendly visit with Opal Lotof as he explains the X-ray procedure pamphlet.

Joel Berenbeim, 23, graduated from Washington University in May, 1978, with a B.A. in Biology/Psychology. Erica Uppstrom, 21, will receive her B.A. in Biology in May, 1979. Both Joel and Erica want to be physicians and have applied to medical schools where hopefully they will be accepted. In the meantime, their volunteer experience at Mallinckrodt Institute and Barnes Hospital has strengthened their determination to fulfill this goal.

Joel is from Denver, Colorado, and has wanted to be a doctor since he was ten years old. Joel's mother, a bio-chemist, works on the Kidney and Liver Transplants team at the Veterans Administration Hospital in Denver. His father attended dental school and is now an insurance executive. One of Joel's sisters is a social worker in Public Health in Boston and another is an occupational therapist in Denver. Joel's decision to attend Washington University was influenced by its reputation of medical school acceptance statistics. Joel says, "I am enjoying my volunteer work in the medical center and the practical experience it offers in patient care. I like helping people. Even though my work in each department is interesting, I still hope to be a surgeon."

Erica Uppstrom was born in Massachusetts and her family now lives in Dayton, Ohio, where her father, Col. Richard Uppstrom, is the director of the Air Force Museum. Erica has always wanted to be a nurse like her mother until 1972 when her father was transferred to Thailand and Erica worked as a volunteer in the Abandoned Babies' Ward of the Children's Hospital in Bangkok. "This volunteer experience was the turning point," said Erica. "When I saw the inadequate care the sick children were receiving in almost primitive surroundings, I knew then I wanted to be a surgeon or pediatrician." Erica worked in the hospital medical lab during high school and as a student at Washington University she has taken all science related subjects and was named to the Dean's List in 1976-77. One summer Erica was medical manuscripts typist in the National Institutes of Health and last summer she worked with patients in La Clinique de L'Esperance (The Clinic of Hope) in Hyeres, France. Erica's volunteer work at Mallinckrodt Institute of Radiology during her last semester of college is an extension of the need she has to help people in medical ways. Erica says, "I know it is difficult to get into medical school but I feel that although my qualifications are not perfect, they are still very good and I am hoping for a successful career in medicine."



Erica Uppstrom delivers a radiology pamphlet with a smile to Margaret Goodwin.

"Our Patients"

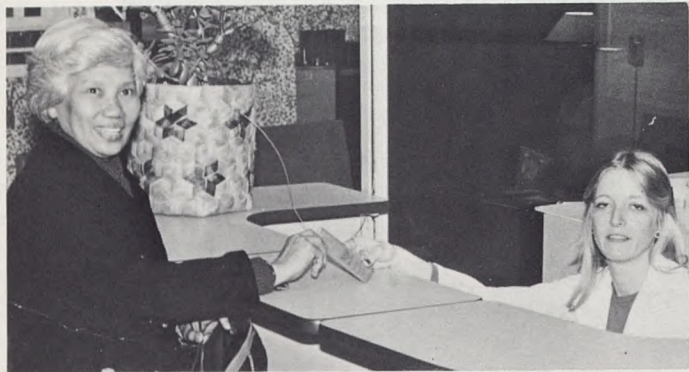
From the Philippines

Miss Lourdes Meneses arrived at the airport in St. Louis, Missouri, at 6 a.m. on November 26, 1978, from the Philippines. At the airport to meet her were her brother, Dr. Orlando Meneses and his wife. The purpose of her coming to St. Louis was to undergo medical treatment for a malignant tumor.

"All my life I have lived in the Philippines," said Miss Meneses, "I have taught mathematics at the University of St. Thomas High School for 26 years but recently had accepted the principalship of a new school. Naturally I was very occupied and busy with this new challenge and when I noticed a lump on my left breast last April, I didn't think too much about it and told no one."

By November 10, the pain had greatly increased and swelling developed to such an extent that Miss Meneses decided to see a surgeon. Four days later she underwent an incisional biopsy which revealed a malignant tumor.

"My family was very worried and wanted me to come to St. Louis and the Mallinckrodt Institute of Radiology where they knew I would receive more advanced medical treatment, said Miss Meneses. I also remembered Barnes Hospital from a visit to the U.S. eleven years ago when I was a healthy person."



Miss Meneses is greeted by Tarry Lebo, receptionist, when she arrives in Radiation Oncology for treatment.

Miss Meneses began her program of chemotherapy with Dr. Gary Ratkin on December 13 and her first radiation therapy treatment on January 25 with Dr. William Mill. During her first few weeks of combined

treatment the tumor was reduced from a 10x10 cm. tumor to 5½x6 cm.

"I do feel that my condition has improved from the treatment," said Miss Meneses. "I have received volumes of letters from my friends and my students, offering their prayers and begging me to return home.

I am looking forward to the time when I can return to the Philippines hopefully, in good health."

"I am very grateful to Dr. Ratkin and Dr. Mill for attending to my treatments," said Miss Meneses. "Dot Gross, Donetta Dodwell, Sally Palazzolo, and other members of the Radiation Oncology staff were also very kind to me and the friendliness of the co-patients made me feel that I was not among strangers but among friends."

A Word of Comfort



Technical supervisor, Phil Sotir, reads Roy Silkwood's poem about pediatric X-ray.

Thirteen-year-old Roy Silkwood came to pediatric radiology on Valentine's Day for an Upper Gastrointestinal examination. He had experienced severe abdominal pains for two days. The X-rays revealed a malrotation of the intestines and a foreign object lodged in the intestines which the doctors thought Roy might have swallowed at an early age. Corrective surgery followed the next day at St. Louis Children's Hospital and the object was removed. Roy is now recuperated from the surgery and back at his studies in the seventh grade at Stix School.

Volunteers Provide Quality of Care



Katheryn Bowen, having retired from teaching English the last 28 years in Kirkwood schools, finds her volunteer work rewarding. Here she offers a magazine to patient, Norma Walton, in the second floor waiting room.

This would be the end of the story except that after his visit to pediatric radiology Roy left with Phil Sotir, the technical supervisor, a gift by which to remember him.

As Roy sat waiting for his X-rays to be processed, he wrote a poem about his experiences in the radiology department. While other young people in the waiting room might have been reading magazines, drawing pictures, watching colored television or the fish in the aquarium, Roy wrote this poem which now hangs on the wall over Phil Sotir's desk:

A word of comfort for those who will follow me
if you're terribly afraid, please don't be

It's just a simple little thing
and they'll treat you like a king

First there's a large table
you just hop on, that's if you're able

Then with a big machine, they take your X-rays
then just hope they say go home you're okay

When you're waiting in the waiting room, and the
nurse says you may go

Then you'll know she's your friend and not your foe.

Phil has been technical supervisor of pediatric radiology for 21 years. During that time he has enjoyed many heartwarming experiences with the young patients, but this was his first occasion to have a poem written "to commemorate the occasion".

"I express myself better by writing poems than by talking," said Roy. "I like to write about day to day happenings and this day in X-ray was a pretty important day in my life."



Mary Ann Fritschle, began as our "pilot" volunteer in 1972 and has assisted with patients in every area of MIR. She now devotes her weekly hours to Radiation Oncology patients.



Adele Kilgore has delivered radiology pamphlets to numerous patients during the five years she has volunteered in MIR.



Barbara Butler divides her volunteer activities between helping patients at Mallinckrodt and visiting lupus patients in the medical center.



Always friendly and smiling, Doris Smith transports David Rapp back to his room after a visit to second X-ray.

Memories

of Foreign Shores

Mallinckrodt Institute staff members are often led to foreign countries through scientific lectures and meetings. Several have shared their travels through these photographs: 1) Dr. Ronald Evens commemorates MIR on a lava flow on the big island of Hawaii during a Washington University Medical Center Alumni meeting in Kono. 2) Enjoying the farewell banquet are Dr. Harold Rapp, Ms. Claire MacConnell, Mrs. Rapp, and Mrs. Ronald Evens. Dr. Rapp is an alumnus of Washington University, radiologist in Cape Girardeau, and president-elect of the Missouri Radiological Society. 3) After delivering a lecture series in San Juan, Puerto Rico, Dr. G. Leland Melson visited the famous El Moro Castle in old San Juan. 4) Dr. Carleton Stewart in the Hague, Netherlands, captured the tradition and pageantry of the procession to open Parliament by the Royal Coach passed by. 5) Dr. and Mrs. B. Ramanath Rao relax among the ancient ruins of Machu Picchu in Peru after Dr. Rao's lectures in Argentina, Venezuela and Chile. 6) Dr. Robert Stanley, right, and Mrs. Stanley, far left, traveled with Drs. Roy Filly and Henry Goldberg and their wives on a lecture-tour of Israel. Here they visit the ruins of a Crusader Castle on the Golan Heights. 7) Dr. Stanley gives us a view of the Western Wall in Old Jerusalem. 8) Dr. Thomas P. Naidich and his wife, Dr. Rochelle M. Pudlowski enjoy the view from the Great Wall in Peking, the capital of the People's Republic of China. 9) Dr. and Mrs. Bruce L. McClennan arrive in Peking, the Forbidden City, in the People's Republic of China after attending the "Asian-Pacific Medical Imaging Conference" in Hong Kong. 10) Dr. Emily Smith sailed the clear crystal waters of the Caribbean, aboard the M/S Southward, the ship on which a musculoskeletal radiology and orthopedics symposium will be conducted in early May.





MIR CALENDAR OF EVENTS

May 6-10, 1979

SCARD - AUR - A³CR²
Rochester, New York

May 14, 1979

CITY WIDE RADIOLOGY CONFERENCE
Scarpellino Auditorium, Mallinckrodt Institute, 5:30 P.M.

May 17, 1979

4th DISTRICT M.S.R.T. MEETING

May 20-23, 1979

RADIOLOGISTS' BUSINESS MANAGERS ASSN. (RBMA)
Hollywood, Florida

July 6-12, 1979

51st ASRT ANNUAL MEETING
Houston, Texas

July 29-August 4, 1979

XII INTERAMERICAN CONGRESS OF RADIOLOGY
Quito, Ecuador

September 16-20, 1979

AMERICAN COLLEGE OF RADIOLOGY
Chicago, Illinois

November 25-30, 1979

R.S.N.A.
Georgia World Congress Center
Atlanta, Georgia

FOCAL SPOT



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