

Winter 1974

Focal Spot, Winter 1974

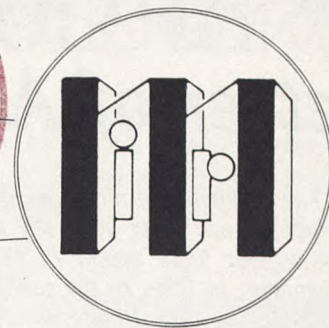
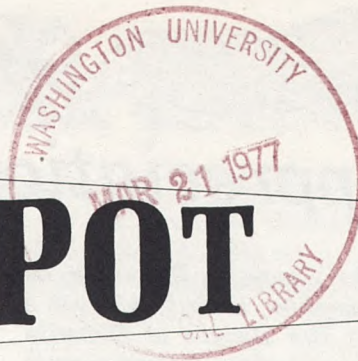
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FOCAL SPOT

A NEWSLETTER OF MALLINCKRODT INSTITUTE OF RADIOLOGY

VOLUME IV

WINTER 1974

NUMBER 11

RECENT IMPROVEMENT IN MAMMOGRAPHY

The recent surgeries for breast cancer of Mrs. Gerald Ford and Mrs. Nelson Rockefeller focus new attention on the importance of self-examination and early diagnosis. In view of this resurgence of interest, the following article on mammography presents the methods for tumor detection which are available at Mallinckrodt.

Under the direction of Dr. Tom W. Staple improvements in mammographic equipment and techniques have been instituted in the past year. The Institute utilizes a CGR Senographic mammography unit and Dupont Lo-dose screen-film vacuum cassette system to produce mammograms of exceedingly high detail. Radiation dosage is less than 2 Rads per exposure, approximately one-half that of Xeroradiography.

Xeroradiographic processing equipment has been acquired in the past month and a Xeroradiographic technique utilizing the Senographic unit is being developed. These two systems provide the Institute with the widest range of versatility to produce the best studies possible.

Six occult carcinomas, one centimeter or less in diameter, have been discovered in the past six months. The role of the radiologist in the treatment of breast cancer has significantly increased. Occult lesions are localized preoperatively by accurately placing a hypodermic or spinal needle into the breast within one centimeter of the tumor. The surgeon excises the needle with a surrounding core of approximately 3cm. of tissue. This specimen is radiographed

on the mammography unit to ascertain that the lesion has been excised. The correct area for biopsy is selected by the radiologist and indicated to the pathologist. Such radiographic guidance means that much less tissue need be removed, causing less disfigurement in biopsy of benign lesions.

The resected breast also has been on one occasion radiographed to localize for the pathologist separate cancers in a single breast. The radiographic technique added considerably in attaining an accurate histologic diagnosis. We believe that it is the responsibility of the radiologist to assure that the tumor bearing tissue has been excised and that the proper area of the specimen has been utilized for histologic diagnosis.



Dr. Tom Staple



Letter of Appreciation

The following letter from Mrs. Charles M. Obermeyer, on behalf of her eight year old daughter, Lindsay, who was a patient for eight weeks in the MIR Division of Radiation Oncology, testifies to the caliber of patient care and concern we are constantly striving toward in every area of Mallinckrodt Institute. This letter carries our own appreciation for Mrs. Obermeyer's gracious approval for it to be published in Focal Spot.

Dear Sirs:

I would like to bring to your attention the excellent service that my child (and I) have received in the Radiation Therapy Dept., From Dr. Perez and Dr. Razek to the staff itself I have had the privilege of seeing excellent people work to help my child. While the type of cancer my child has will require a long road I feel that because of Barnes and Children's Hospitals we will win the battle.

No one has ever been too busy to explain something to me, and they have Lindsay to the point where she's an absolute terror to them — pitching her clothes when she goes into the Clinac 4, etc. For a bright 8 year old to feel that secure in a very strange atmosphere is indeed a credit to the department and the entire Medical Center.

I hope that in some way this note can be added to the personal record of all those we have dealt with. They show a compassion that money cannot buy. To me the most encouraging (and exciting) aspect is that everyone downstairs (Radiation Therapy) finds cancer so offensive medically speaking that they work and study to find out the best possible approach to treat all individual patients. In Lindsay's case they found a way to direct the Rads to minimize the danger to her vital organs. While the road is long, and I wish it were me rather than she, I do feel very fortunate to live in St. Louis and have access to such a fabulous Medical Center.

Should you ever need a very biased spokesman in favor of the Radiation Therapy Dept. I hope you will give me the privilege of doing it.

Sincerely,
Louise T. Obermeyer
(Mrs. Charles M.)

SECOND ANNUAL DIAZ PROFESSIONAL EDUCATION LECTURE



Pictured at the second annual Diaz Professional Education Lecture are left to right, Ray Horner, R.T., F.A.S.R.T., Guest Lecturer and President-Elect of the American Society of Radiologic Technologists, Norman Hente, President, 4th District, M.S.R.T., and Armand Diaz, R.N., R.T., F.A.S.R.T., Technical Administrator of Mallinckrodt Institute.

JOINS MIR STAFF

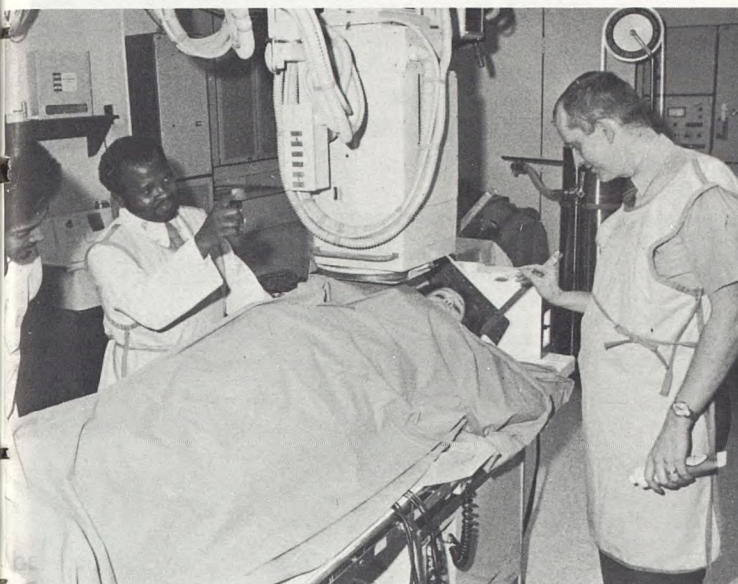
Donald V. Huebener, D.D.S., M.S., was appointed to the staff of the Mallinckrodt Institute as an Assistant Professor of Radiology (pediatric dental radiology), effective November 1, 1974. Dr. Huebener is an Associate Professor of Pedodontics in the School of Dental Medicine at Washington University, and also has an appointment at St. Louis Children's Hospital as Assistant Surgeon in Pediatric Dentistry.



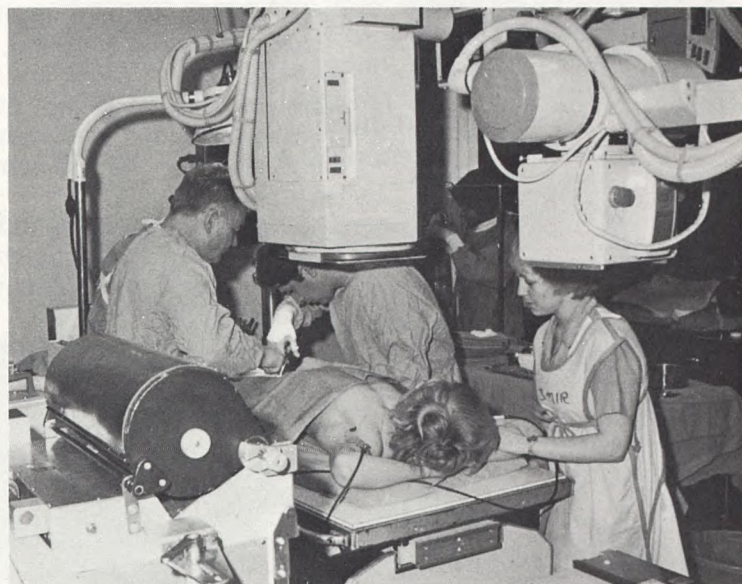
Dr. Donald V. Huebener

CARDIOVASCULAR RADIOLOGY

The MIR Cardiovascular Section, under the direction of Dr. Robert C. McKnight performs cardiac and pulmonary angiography for the detection of valvular and coronary arterial disease, congenital heart disease, and pulmonary embolism. Through the use of a catheter, the heart, valves or lung are projected on a television monitor so that the physician can determine whether treatment is indicated by medication or surgery.



Dr. Robert C. McKnight prepares patient for cardiac flouroscopy for diagnosis of valvular heart disease and assessment of ventricular function. Assisting with the procedure are, left, Wilfred Anderson, senior medical student, and Dr. Bob Davis.



Dr. Alexis F. Hartmann, Pediatric Cardiologist, performs a cardiac catheterization on a child with congenital heart disease.



"Magazines, Please" PROMOTIONS

Effective October 1, 1974

John V. Forrest, M.D., to Associate Professor of Radiology.

Stuart S. Sagel, M.D., to Associate Professor of Radiology.

Effective January 1, 1975

R. Edward Coleman, M.D., to Assistant Professor of Radiology.



RADIATION ONCOLOGY

FOLLOW UP CLINIC ESTABLISHED

In an effort to improve and expedite patient care in Radiation Oncology, patients who are not presently under treatment but who are returning to MIR for a checkup are now seen by one of the Radiation Oncology physicians in the second floor of Wohl Clinic. Mrs. Judy Parham, R.N., Supervisor of Nursing and Physicians Assistant in Radiation Oncology, is in charge of the nursing service for the follow up clinic, which will have morning and afternoon hours weekdays except Mondays when it will be open only in the afternoon.

WIVES TOUR MIR

An informative evening was enjoyed by the wives of MIR residents, fellows, and staff members as they toured the Institute on October 29.

The evening began with an assembly in Scarpellino Auditorium where Director Dr. Ronald Evens welcomed the ladies and presented a short slide lecture in which he traced the history of Mallinckrodt from its birth in 1931 to the present.

After the introduction, the wives were escorted through the Institute by the Technical Supervisory staff who displayed and described some of the x-ray pictures obtained in certain clinical examinations and demonstrated the equipment used to obtain the pictures.

The most successful tour, which was initiated this year by Mrs. Ronald Evens, concluded with refreshments and general discussion in the eighth floor conference room.



PATTERNS PATTERNS PATTERNS

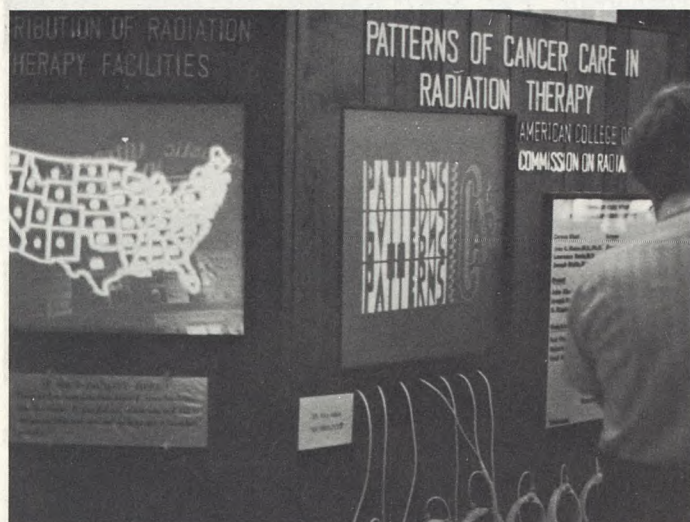
OF

CARE

"Patterns of Care in Radiation Therapy" is an in-depth study funded through a grant from the Cancer Control Program under the auspices of the American College of Radiology with an objective to define and improve the quality and accessibility of radiation therapy care in the United States.

Resulting from this study and contributing to the effectiveness of the over-all program is an audio-visual exhibit "Patterns of Care" which is being displayed at major scientific meetings and conferences throughout the United States.

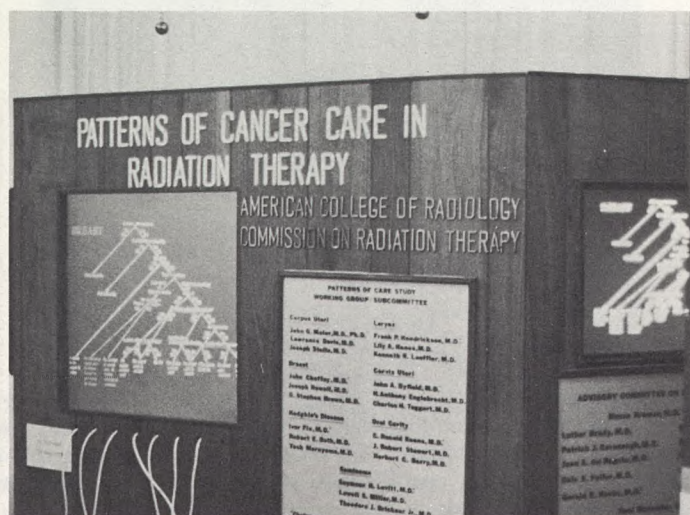
The exhibit includes an informative map indicating the major radiation facilities in each state in the U.S. (to be continuously updated) and provides a flow of information on the current concepts and skills in cancer diagnosis and treatment. It also involves and illustrates a decision tree for breast cancer. In order to make decisions, a radiation therapist must have pretreatment information. Each decision he makes leads to another decision point and these decision points can then be joined together and depicted as a tree which leads to defined treatment systems.



Designed by Helen Pares, Audio-Visual Assistant in Radiation Oncology, "Patterns of Care" is constructed of attractive wood paneling and is foldable for shipping. It includes two view boxes with large transparencies, a nine-minute colored slide presentation incorporating forty super slides, six sets of earphones for a taped audio presentation provided by Dr. William E. Powers.

Through the cooperative efforts of MIR's Norm Hente, photographer and film processor, Roy Ragan, builder of the view boxes, Clarence Emerick, who installed the view boxes, and Helen Pares, who provided drawings, charts and graphs as well as coordinated the over-all project, the exhibit required over three months for completion.

"Patterns of Care" is scheduled for display at the following meetings: American Roentgen Ray Society, American Society of Therapeutic Radiologists, Radiological Society of North America, Midwinter Radiological Conference, American College of Radiology, American Radium Society and American Medical Association.

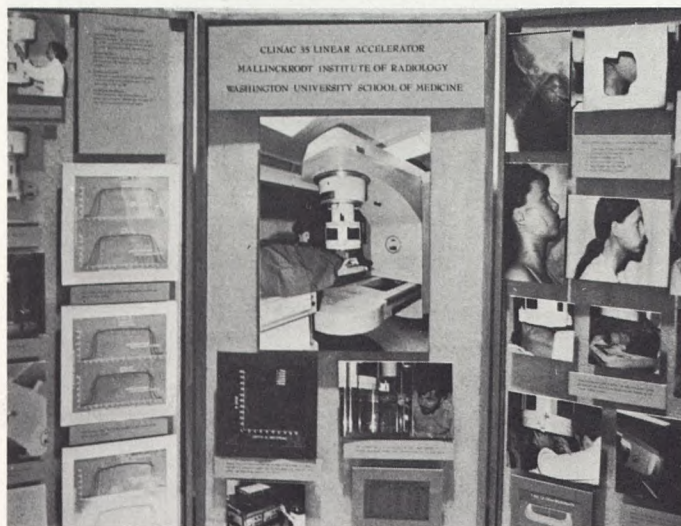


ASTR IN FLORIDA

The American Society of Therapeutic Radiologists (ASTR) recently held their annual meeting in sunny Key Biscayne, Florida. In addition to the usual format of the formal presentation of papers, a series of workshops and demonstrations was held, with participation of hospitals and universities throughout the country. Dr. Carlos A. Perez, Chief of the Clinical Section in the Division of Radiation Oncology at MIR, coordinated these sessions.

The Division of Radiation Oncology participated in several of the workshops. One such display was the "Patterns of Care" exhibit, which was set up by Dr. William E. Powers and his staff.

The Physics Section of the Division of Radiation Oncology presented two Technical Workshops: "Toshiba Simulator and Transaxial Tomograph," Glenn P. Glasgow, Ph.D., George D. Oliver, Jr., Ph.D., James A. Purdy, Ph.D., William E. Powers, M.D., and James E. Marks, M.D.; and "Beam Characteristics of the Varian Clinac 35 Linear Accelerator," James A. Purdy, Ph.D., William E. Powers, M.D., Carlos A. Perez, M.D., George D. Oliver, Jr., Ph.D., Donald E. Velkley, Ph.D., and Fred Zivnuska, M.D.



Dr. Carlos Perez presented a paper entitled "Incidence and Prognostic Significance of Endometrial Extension from Primary Epidermoid Carcinoma of the Uterine Cervix."

Dr. Carleton Stewart, from the Cancer Biology Section, presented a paper entitled "Initiation and Evolution of Antitumor Immunity to a Transplanted Murine Lymphosarcoma." The paper was co-authored by Dr. Carlos Perez and Barbara Wagner, B.S.

MIR Employee Relations Committee

Recently formed at MIR is a committee constituted of qualified representatives from various areas of Mallinckrodt Institute with a charge to develop a Grievance Procedure for all MIR employees, so that if a grievance cannot be settled or resolved with the immediate supervisor involved, the employee may appeal directly to any member of the Employee Relations Committee and request a hearing. Copies of the Procedure will be attached to the December 31st monthly checks and to the bi-weekly checks on January 3, 1975.

The committee consists of Nancy Craig, Chairman, Diagnostic, Ext. 2717; James Patterson, Assistant Chairman, Cancer Biology, Ext. 3214; Gary Brink, Diagnostic, Ext. 3587; Kathleen McClenton, Nuclear Medicine, Ext. 3566; Barbara McGull, Film Sorter, Ext. 2295, and Bettye Joe James, Radiation Therapy, Ext. 3481.

HONORED

Rosemarie Smith and her neice, Susan Wallach, traveled to Mason City, Iowa, in October to attend the 18th International Pony of America Sale. (Susan received several awards at the awards banquet.)

RADIATION ONCOLOGY REPORTS ...

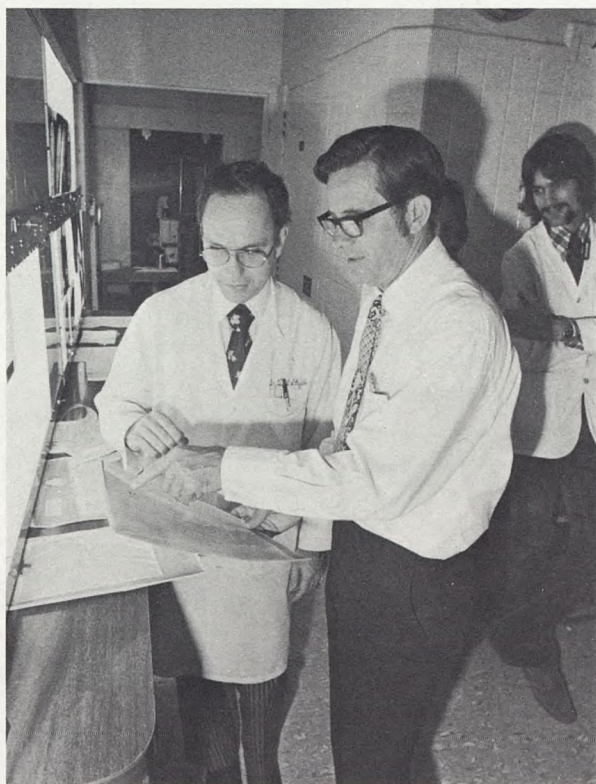


Pictured in the Radiation Oncology Computer Section are Dr. Don Ragan, standing right, Professor of Radiology, and computer programmers, Steve Jones, standing left, Mike Pitnak, seated left, and Kenton Juhlin. Not pictured: Fred Curry and Eric Seliak.

MIR POSTGRADUATE FELLOWSHIP PROGRAM

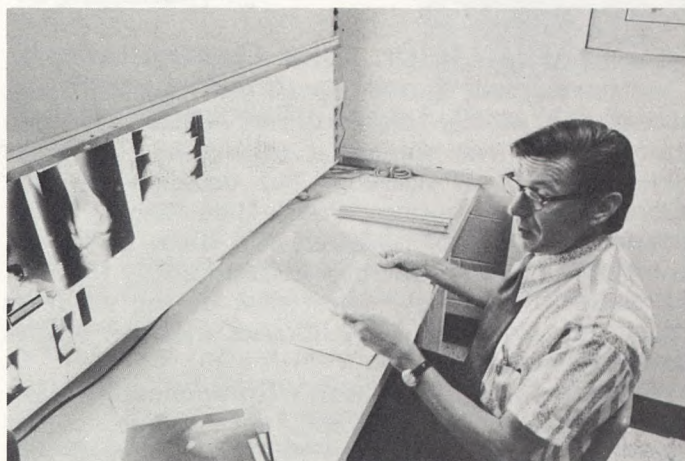
Recently established at Mallinckrodt Institute is a Postgraduate Visiting Fellowship Program. Organized and directed by Dr. Tom W. Staple, Professor of Radiology, the program offers courses in diagnostic techniques, arthrography, nuclear medicine, and radiation oncology, and is a part of the ACR Postgraduate Medical Education Program.

Designed to afford practicing radiologists an opportunity to gain information about new techniques or improvements in old techniques by personally interacting with our staff radiologists, the program concentrates on personal instruction of each of the Fellows by a system of appointments with staff radiologists familiar with the areas in which the Fellow needs information. Each Visiting Fellow is provided with a desk and viewing box space so that he may partake fully and in an undisturbed fashion in any intellectual pursuits he desires. Programs are arranged in length from one to five days.



Dr. Tom W. Staple, left, and Dr. William A. Dunnagan discuss an arthrogram as part of the personal instruction afforded in the fellowship program.

Our first participant was Dr. Gerald Wells, a radiologist in private practice in Denver, Colorado. Dr. Wells studied arthrographic techniques during his two days of training October 14 and 15. The second Visiting Fellow was Dr. William A. Dunnagan, Professor and Chairman, Dept. of Radiology, Texas Tech. University School of Medicine, Lubbock, Texas.



Dr. Gerald Wells reviews arthrogram examinations at a study station.

MIR Christmas

Party - December 20

4 - 7 pm

**Eighth
Floor**

MIR

**music
refreshments**



POLISH DATE NIGHT "STRIKES OUT"



Dr. John Ciepley reports:

In the farthest, darkest corner of Tropicana Lanes recently a motley crew of individuals was seen performing a rite somewhat resembling the Polish national sport of bowling. The occasion was the sporadic resident outing, "Polish Date Night", which consists of teams of husbands and wives, or singles, competing for pizza and beer prizes. Luckily the level of competition is low since most of the residents spent their youth in dusty libraries and their efforts on the lanes show it.

Organized by John Ciepley, ((pronounced "Yaah shek Chep weh" in Polish), as a tribute to his ancestry, the night has become both popular and interesting for the participants. The varying styles of "Gutterball" Graviss, "El Supremo" Davis, and the original "Mohat-zen-zen" (an exploding zephyr), Bob Scheible produced multiple snide comments if few strikes. Gil Jost provided the class of the evening with 206 and 196 in his first two games before his Bacchanalian celebrating turned the ice water in his veins into a slightly different mixture and he almost dropped the ball on his foot by the third game. The most interesting style belonged to Sue Scheible whose ball was generally clocked at about fifteen seconds before striking the pins, but whose score was high enough to top her team. Suzette Ciepley, however, did get a strike while sitting on the foul line, but this was considered extraordinary form even for "date night". The only complaint came from Dan Biello who insisted that he could lick anyone at duckpin bowling, but nobody could figure that out.

The winning team was a combination of the Hausers and two ringers, Sharon Baudo and Rosanne Westholt, who are real live bowlers and came to show the chauvinistic docs that Billie Jean King is not the only attractive athlete around. Only Jost topped Sharon's 480 plus series. So while striking out in baseball is bad, striking out on Polish Date Night is good, and may some day win someone a kielbasa.

MIR STAFF SPARKS R.S.N.A.





RSNA, 1974

Chicago, Illinois December 1-6



The program agenda of the Sixtieth Annual Meeting of the Radiological Society of North America included the following contributions from the MIR faculty and residents.

PAPERS:

Diagnosis

"Roentgenographic Recognition of Characteristic Bronchial Patterns". Robert Levitt, M.D., John V. Forrest, M.D., and Stuart Sagel, M.D.

"Fluoroscopic Controlled Trephine Bone Biopsy by the Radiologist". James W. Debnam, M.D., and Tom W. Staple, M.D.

"The Efficacy of Routine Screening and Lateral Chest Radiographs in a Hospital-Based Population". Stuart S. Sagel, M.D., Ronald G. Evens, M.D., John V. Forrest, M.D. and Robert T. Bramson, M.D.

"Venous Angiography of Renal Dialysis Fistulae. Experience with 45 Examinations". Louis Gilula, M.D., and Tom W. Staple, M.D.

Nuclear Medicine

"The Efficacy of the Brain Scan in Diagnosis of Brain-Stem Gliomas". David S. Feigin, M.D., Dennis M. Welch, M.D., Barry A. Siegel, M.D., and A. Everette James, Jr., M.Sc., M.D.

Cardiovascular Radiology

"Selective Intra-Arterial Infusion of Vasopressin for Gastrointestinal Bleeding: Experience with 32 Cases". G. Leland Melson, M.D., and Robert J. Stanley, M.D.

Neuroradiology

"The Radiological Visualization of the Vestibular Aqueduct: Technique and Morphologic Features". Mokhtar H. Gado, M.D., I. Kaufman Arenberg, M.D., and Galdino Valvassori, M.D.

"The Prognostic Significance of the Vascular Supply in Juvenile Angiofibroma". Mokhtar H. Gado, M.D., Anthony Merlis, M.D., and Donald Sessions, M.D.

Radiation Sciences

"A Computerized Transaxial Tomograph for Radionuclide Imaging". E. J. Hoffman, Ph.D., M. E. Phelps, Ph.D., N. A. Mullani, B.S., and M. M. Ter-Pogossian, Ph.D.

Radiobiology

"Radiation Effects on the Immune Response". Carleton Stewart, Ph.D., Carlos A. Perez, M.D.

EXHIBITS:

"Spectrum of Radiographic Findings in Antibiotic Related Pseudomembranous Colitis". Robert J. Stanley, M.D., G. Leland Melson, M.D., and Francis J. Tedesco, M.D.

"Selective Intra-Arterial Infusion of Vasopressin for Control of Gastrointestinal Bleeding: Experience with 32 Cases". G. Leland Melson, M.D., Guillermo Geisse, M.D., and Robert J. Stanley, M.D. Dr. Melson presented a paper at the meeting on this exhibit.

"Patterns of Care in Radiation Therapy", American College of Radiology.

REFRESHER COURSE:

"Radiology of Total Joint Replacement". Tom W. Staple, M.D.

Dr. Robert J. Stanley presented a paper at the meeting of the Society of Uroradiology prior to the RSNA Meeting dealing with a comparison of survival rates in patients with solid versus necrotic renal cell cancers.

SYMPOSIUM:

Dr. Carleton Stewart was guest speaker at the symposium on *"Interaction of Radiation, Tumor, and Host Immune Defense Mechanism."*

The R.S.N.A. social agenda included a Washington University Medical Center Alumni Reception which was held at the Palmer House on December 2.

RANDOM GLIMPSES OF NEW PERSONNEL



Ann Cook has joined the Audio-Visual Department of Radiation Oncology. A native of Ogden, Utah, and a graduate of the University of Utah, Ann especially enjoys snow skiing and her creative exhibit of wild flowers and nature pictures is now on display at MIR.



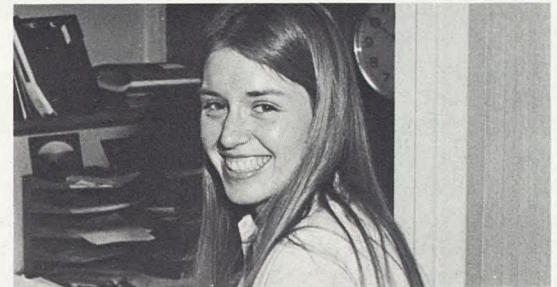
Diane Zoltsman, Secretary in Radiation Sciences, formerly worked in the Russian Department of Washington University and lives in University City with her two daughters and two cats.



Ed Brockelmeyer, electrical technician in maintenance, enjoys constructing radio sets for amateur radio broadcasting. He has built and experimented with hundreds of different circuits since high school days and, for six years, has been a licensed conditional class operator.



Dolores Hicks has joined the Film Librarians as a Floater. An LPN, Dolores comes to us from City Hospital where she was on the nursing staff for ten years.



Janet Katz, Billings and Collections Supervisor in Radiation Oncology, previously worked as the supervisor of the financial billing department at Peter Bent Brigham Hospital, Boston, Massachusetts, and recently was a part-time counselor in the Lindbergh School District. Mrs. Katz also works as a voluntary counselor for ACID RESCUE.



Nancy Fumagalli, Scheduling Clerk, who lives in Riverview, was formerly a teller and bookkeeper at Pine Lawn Bank. Nancy coaches an intermediate girl's softball team and is catcher for a women's softball team.

MALLINCKRODT IS PEOPLE



Laurie Allen and Linda Hogue are new faces among MIR's receptionists. Laurie is a floater and Linda is assigned to second floor.



Sheila Doerhoff Reports:

Mrs. Susan Ratliff, second floor medical transcriptionist, who is First Vice-President of the Sherman School PTA, recently attended the Missouri State PTA Convention in Jefferson City, Missouri, November 11-13 at the Ramada Inn.

NEW TO MIR

"Welcome to MIR" to medical transcriptionists, Helen Howard, (Days), Margaret Mangan and Beatrice Selvey, (Weekends).

SCHEDULING

Rochelle Cason, Full Time, Evenings
Antoinette Lawless, Weekends
Kathy Mattix, Weekends
Bonnie Walkingshaw, Supervisor (Film Library & Scheduling), Weekends

FILM LIBRARIANS

Jim Cross, Full Time, Evenings
Jim Hansen, Weekends
Nancy Haynes, Weekends
Greg Kibby, Evenings

RADIATION ONCOLOGY COMPUTER SECTION

Eric Seliak



From Dianne Van Doren:

BACK IN SCHOOL

The Accounting office is full of surprises. Despite the hustle and bustle of daily activity, there are some girls who still find time to further their education. Carolyn Potter is an old pro at moonlighting. She is currently working towards a bachelor's degree in sociology at Washington University. By averaging nine hours a semester, she is taking it slow but not always easy. According to Carolyn "retaining my sanity is work enough".

Peggy Hinderer, who is both new to our department and night school, finds her course in shorthand a challenge. Peggy hopes to take more business classes in the future at Meramec Community College. She also finds these courses valuable in her daily job at Mallinckrodt.

Linda Addleman was a little apprehensive about returning to school as it had been five years since she graduated from high school. She was soon caught up in the swing of things, and enjoying it, too. Linda plans to become a legal secretary someday.

All of the girls agree that it is hard to adjust schedules to accommodate night school, but knowing that you are increasing your knowledge makes it all worth while.

Sharon's a grandmother and it's a boy!

Sharon Baudo's daughter, Laura, and husband Al Renshaw, are the happy parents of a new baby. John Duane Renshaw, born on November 8, 1974, weighed 8 lbs., 13 oz. John has an older brother and sister, Steven, age three, and Christine, age six.



Sharon, Dr. Staple's secretary, is doubly proud. In addition to her new grandson, her husband, Dom Baudo, bowled high scores of 657 and 267, leading the Globe-Democrat to a 2-1 victory over Automotive Messenger in the Press-Radio-TV League held at Tropicana Lanes.



Happy

New

MIR GAMUT

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 10¢
Stamp
Here

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

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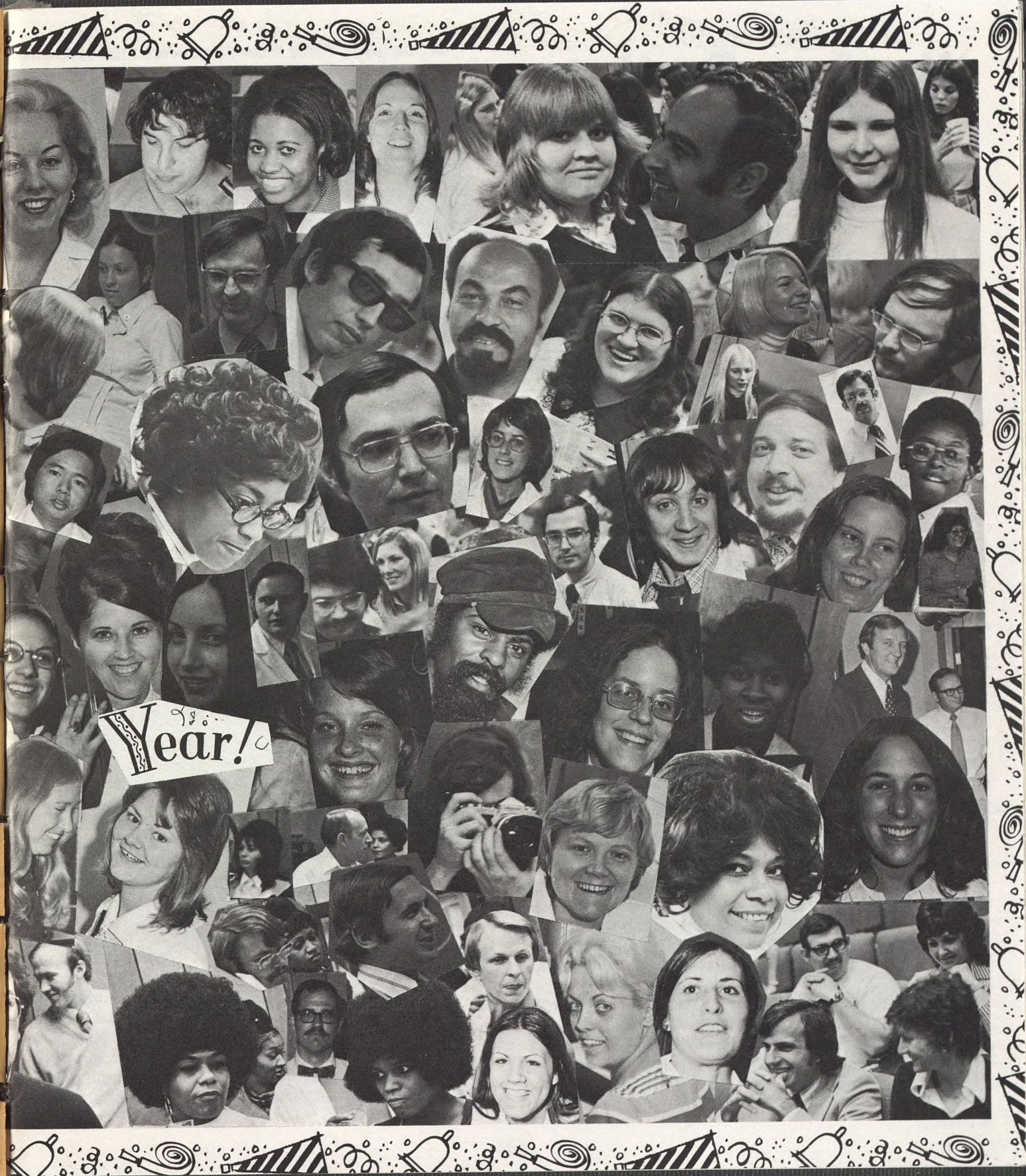
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Year!



WHAT'S UP, DOC?



Dr. Mokhtar H. Gado will be attending "Computed Cranial Tomography: International Symposium and Course", on March 9-14, 1975, at the Princess Hotel, Hamilton, Bermuda. Dr. Gado will be a member of the faculty of the symposium and will be giving a series of lectures.

Dr. Tom W. Staple was a guest lecturer at a Symposium on Special Procedures at the Baylor University Hospital in Dallas, Texas.

James A. Purdy, Ph.D., and George D. Oliver, Jr., Ph.D., presented a paper entitled, "Accelerator Characteristics as Applied to Radiation Therapy," at the Third Conference on Application of Small Accelerators in Denton, Texas, on October 21-23, 1974. Dr. Oliver was Chairman of the Medicine and Biology Session at the meeting.

Dr. Michel E. Phelps presented an invited paper in the plenary session of the 21st Annual Meeting of the Society of Nuclear Medicine in San Diego. The title of the paper was "Fundamental Aspects of Transmission and Emission Transaxial Reconstruction Tomography" by M. E. Phelps, Ph.D., E. J. Hoffman, Ph.D., N. A. Mullani, B.S., and M. M. Ter-Pogossian, Ph.D.

Dr. Tom W. Staple is the guest editor of the April 1975 issue of Radiologic Clinics of North America, dealing with the subject of Orthopedic Radiology.

Carleton Stewart, Ph.D., presented time-lapse movies of macrophages interacting with foreign cells at the December meeting of the Reticuloendothelial Society.

Dr. Carlos A. Perez recently delivered the following lectures to the Harvard Medical School Department of Radiation Therapy, Boston, Massachusetts:

"Experimental Observations in Tumor Immunology and Interrelationship With Irradiation."

"Radical Irradiation in Carcinoma of the Prostate."

Dr. Tom W. Staple was recently elected to Associate Membership — Allied Specialties in the American Academy of Orthopaedic Surgeons.

SPORTS INJURIES PANEL



Dr. Tom W. Staple, center, readies an answer for medical writers from newspapers, magazines, and television stations at an X-ray forum in New York City on "Sports Medicine on the View Box." Dr. Jack W. Bowerman, left, and Dr. Byron G. Brogdon, right, are the other radiologists — panelists.

MIR ALUMNI ACTIVITIES

70's

Mary Poncel Bricker, M.D., Albuquerque, New Mexico, has announced the birth of their daughter, Amanda Elizabeth, born October 16, 1974. The Brickers also have a son, Timothy Joseph, who was born in February 1973 while Dr. Poncel was on staff at the Mallinckrodt Institute.

Daniel J. Leary, Jr., M.D., joined the radiology staff of St. John's Mercy Medical Center in St. Louis on July 1, 1974.

Jeannie Kinzie, M.D., Assistant Professor of Radiology at the Medical College of Wisconsin, has been named to the Subcommittee on Radiation Safety and Protection for the Veterans Administration. She has also been selected to be included in the 1974 Edition of "Outstanding Professionals in the Human Services."

All Dressed Up For Halloween



The children in Pediatric Radiology were delighted to see the technology staff had dressed in costume to help celebrate Halloween. Pictured in the in-patient waiting room are, left to right, Stanley Niemann, student technologist, Edward Graviss, M.D., Carol Hippard, R.T., Mary Evans, technologist assistant, Lynn Schaller, R.T., Katha Hirstein, student technologist, Nancy Hirstein, R.T., and Phil Sotir, R.T., Technical Supervisor.

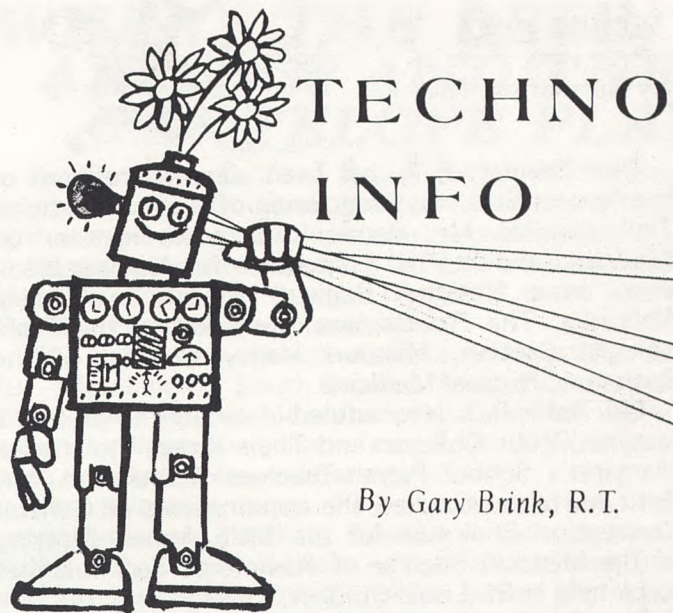


Pictured in front of a papier-mâché bird are Dr. Edward Graviss, who joined in the fun with his "Snoopy" coat, and Nancy Hirstein, R.T., dressed as Little Bo Peep.



Thank Heaven for Little Girls

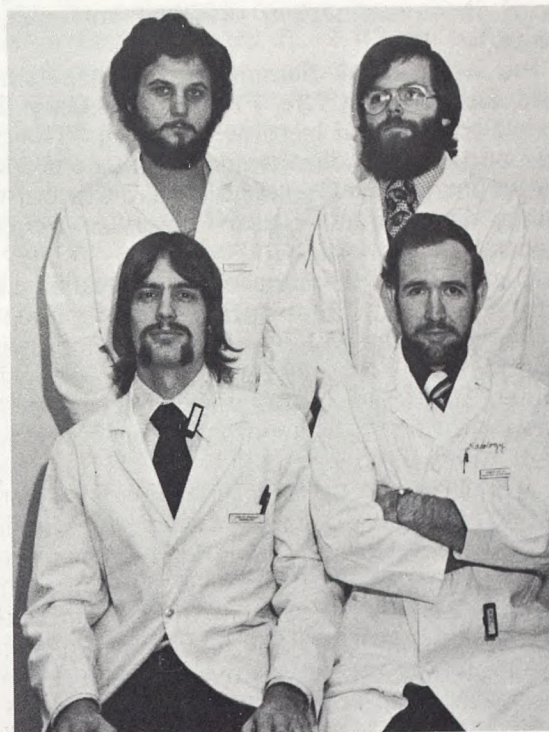
Mr. and Mrs. Tony Raia announced the arrival of a daughter, Angela Rose Raia, born September 18, 1974. Tony, who is the Technical Supervisor of Fourth floor, and his wife, Carol, have another daughter, Tina, age four.



TECHNO INFO

By Gary Brink, R.T.

Bearded Techs



This is not a tintype from 1860 but our own 1974 bearded techs from MIR. Standing, left, Larry Menendez, graduate technologist, and Charles Kehnast, R.T. Seated, left, Joe Bradley, graduate technologist, and Bob Ray, R.T., Assistant Technical Supervisor, 2nd floor.

TECHNO INFO

by Gary Brink, R.T.



Don Bernier, R.T., has been elected President of the Greater St. Louis Association of Nuclear Medicine Technologists. Mr. Bernier was guest lecturer on "In-Vitro and In-Vivo Procedures for Nuclear Medicine" at a National Registry Review in Omaha, Nebraska. The Review was sponsored by the Technologist Section, Missouri Valley Chapter of the Society of Nuclear Medicine.

Phil Sotir, R.T. is scheduled in January to present a lecture "Your Children and Their X-rays" to the St. Margaret's School Parent-Teachers Association. Mr. Sotir has also accepted the appointment as General Convention Chairman for the 1975 Annual Meeting of the Missouri Society of Radiologic Technologists to be held in St. Louis October, 1975.

Pursuing certification as a biological photographer, **Norman Hente, R.T.**, has successfully passed the written portion of the test required for national certification, and plans to take the remaining two stages of the examination, practical and oral, at a later date.

At the Annual Fall Seminar in Omaha, Nebraska, **Armand Diaz, R.N., R.T., FASRT** and **Gary Brink, R.T.**, delivered several lectures including "The E.M.I. Scanner and Other Advancements", plus a workshop on the "Dynamics of Organization and Structure of a Radiology Department", and "Inservice Education and Recertification".

Mr. Diaz and Mr. Brink have also scheduled a series of lectures entitled, "Elements and Management" to be presented to the M.I.R. supervisors and assistant supervisors over a six-week period commencing November 8. These lectures are being provided as a continuation of the Supervisory Development Program initiated several years ago.

Armand Diaz, R.N., R.T., FASRT has been appointed as National Education Committee, Chairman of the American Hospital Radiology Administrators, while **Gary Brink, R.T.**, has received an appointment as Chairman of the Professional Affairs Committee of the American Society of Radiologic Technologists.

Sheri Pasternak, R.T., has been elected Secretary-Treasurer of the Technologists Section, Missouri Valley Chapter of the Society of Nuclear Medicine, and has also been re-appointed News Coordinator for the *Journal of Nuclear Medicine Technology*.

Anyone for Motocross?

Yes, Dr. Matt Powers is for motocross, as well as trail-riding and hill-climbing on his made-in-Spain Bultaco 350cc motorcycle.

Dr. Powers and Dr. Richard Chepey, who owns three cycles, one a Yamaha 360, often go cycling together on weekends, sometimes joined by Dr. Chepey's wife, Nancy, also a cycling enthusiast. They wear boots, padded clothing, goggles and helmets. The speed averages 25-30 mph on all terrain and 55-60 mph on motocross trails.

Dr. Powers tells us he enjoys the 250 trials which are not a race for speed but a competence trial in which the cyclists must stay between two white lines while riding through a course of different types of terrain. Another challenge is hill-climbing and riding in muddy areas. The mud decreases bruises from falls.

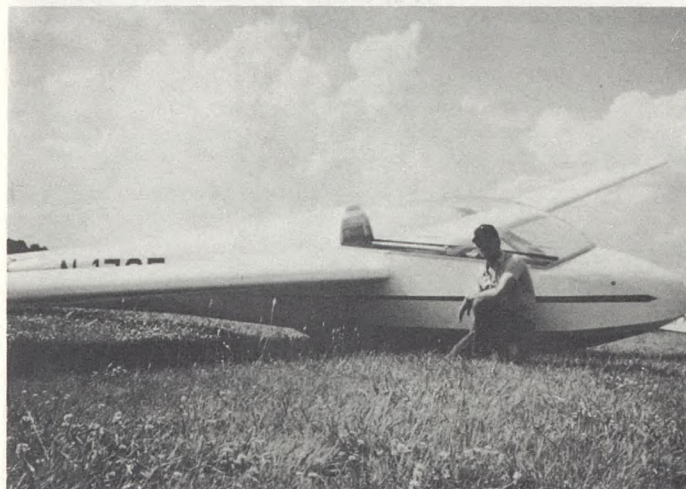
When asked about the danger of motorcycles, Dr. Powers considers them dangerous — on city streets. He never rides on the street but instead puts the cycle on a trailer and goes out to the country, gets away from the crowd and enjoys the country scenery.

An interesting fact, Dr. Powers notes, is that "motocross is the most popular sport in Europe and is also very popular in the southern USA because of the warmer climate".



Dr. Matt Powers and Dr. Richard Chepey, Motocross enthusiasts.

"He Floats Through The Air With The Greatest of Ease"



Dr. Alexander Cacciarelli and sailplane.

Dr. Alexander A. Cacciarelli, Instructor in Radiology at Mallinckrodt, began soaring in 1968. Always interested in flying, Dr. Cacciarelli was a licensed pilot in 1966 and obtained his sailplane rating during medical school in Newark, New Jersey. It was only a short while after arriving at MIR in 1971 that Dr. Cacciarelli joined the St. Louis Soaring Association which operates from a small grass field, about 2600 feet in length in Highland, Illinois, away from heavy air traffic.

An aerotow or a powered craft is used to tow the sailplane to about 2000 feet above the ground. The tow rope is then released and the sailplane, which is kept aloft by the rising air currents (thermals), can soar from 5000 to 10,000 feet.

Dr. Cacciarelli finds the best soaring weather is between May and October. The sun heats up the ground to produce rising air currents and on a good day a pilot can stay up all day, gliding from thermal to thermal. This is an indication of the strength of solar energy.

Constructed of metal or fiberglass, the sailplane is very maneuverable with basically the same controls as in an airplane.

Dr. Cacciarelli finds exhilaration in the challenge of staying aloft by utilizing his knowledge of air currents, aircraft training, and personal skill in flying. Besides it's peaceful and relaxing to sail through the sky in silence.

WHERE THE DEER AND ROY AND THE ANTELOPE PLAY

On October 16, Roy Ragan and three hunting companions left St. Louis in a red "Blazer of Glory" with a trailer jammed full of hunting gear in tow.

Eleven hundred miles from St. Louis lay Broadus, Montana, and Little Powder River and that's where Roy and company were headed!!

The sightseeing enroute was interesting and colorful — Badlands of South Dakota, Mount Rushmore in the Black Hills, and the Corn Palace which has an exterior construction made from South Dakota grain such as wheat, corn, and barley.

For seventeen years Roy has hunted on this privately owned ranch in Broadus — altitude about 4,000 feet. And no wonder — as in other years, Roy and his buddies found the plains where the "deer (mule) and the antelope play" and brought back their quota of both!! The lightning speed of the antelope is a challenge to any hunter!

But that's not all the story. While waiting for the game to be processed (about two days) Roy and friends staked out a 96 ft. x 42 ft. barn for the rancher. Pleasure + work = good deed!!

The only blue note of the trip was that Roy bagged a handsome ten point rack — but — shot off ½ of one point. Well, would you settle for 9½ points?

And so the story ends with Roy and entourage returning in the Red Blazer slightly camouflaged with four deer on top, four antelope (frozen, of course) inside, and four deer on top of the trailer. But the Glory remained!!



Roy Ragan, MIR Carpenter Supervisor

RUSSIAN SCIENTISTS

Dr. Ludmilla S. Matveyeva, Head, Roentgenoradiological Department, Myasnikov Institute of Cardiology and Professor Joseph K. Rabkin, Head, Roentgen Radiological Department, All-Union Research Institute of Clinical and Experimental Surgery were among a delegation of five distinguished Soviet scientists who visited Mallinckrodt Institute on Monday, November 4, 1974.

The visiting dignitaries were guests of St. Louis University Medical Center as part of the U.S.—U.S.S.R. continuing cooperative project on evaluating and treating ischemic heart disease which occurs when the coronary artery is narrowed by arteriosclerosis.

The Soviet delegation, traveling with two interpreters, began their U.S. visit at the National Institutes of Health, Bethesda, Md., continuing on to Johns Hopkins Medical School and then St. Louis, and were scheduled to visit Mount Sinai Medical School after their journey here.

At Mallinckrodt, Director Dr. Ronald Evens welcomed the scientists and hosted them to an informative and pertinent tour of various areas including the EMI scanner, pediatric radiology, 35 MeV linear accelerator, film library, and computer system installed on twelfth floor.

A congenial atmosphere of interest and respect prevailed throughout the visit as Dr. Evens effectively explained and demonstrated some of MIR's newest installations.



Pictured with Dr. Ronald G. Evens, Director of Mallinckrodt Institute, and Dr. V. L. Willman, Chairman of the Department of Surgery at St. Louis University School of Medicine, are five Soviet heart disease researchers and their interpreters who visited MIR on November 4, 1974. They are (from left): Interpreter, Mr. Alex Rudzianko, Dr. Joseph K. Rabkin; Dr. Zoya Z. Dorofeyeva; Dr. Ludmilla S. Matveyeva; Dr. Willman, Dr. Evens, Dr. Igor K. Shkhvatsabaya, Director of the Myasnikov Institute of Cardiology; Dr. Tamara Y. Sidelnikova; and Mrs. Tamara Holmes, interpreter.

High Fashion at Mir



Working in Radiation Oncology, Bettye James is known to us as an efficient and attractive technologist. She is also versatile in that during off hours her glamorous hobby of fashion modeling provides her with a complete change of pace which Bettye finds exciting and satisfying.



Bettye James, R.T., Fashion Model

BREAST CANCER CONFERENCE

A capacity crowd of physicians and nurse oncologists attended the conference entitled "Diagnosis and Treatment of Breast Cancer" which was held November 16, 1974, at St. John's Mercy Medical Center and jointly sponsored by Mallinckrodt Institute's Division of Radiation Oncology, St. John's Mercy Medical Center Departments of Radiology, Pathology, and Surgery and the Bi-State Regional Medical Program Grant, "Regional Information on Cancer Control".

Dr. Lily A. Hanes, Assistant Professor of Radiology, Mallinckrodt Institute of Radiology, coordinated the program of lectures and panel discussions by a faculty of regional and national authorities on breast cancer from St. Louis, Houston, Philadelphia, and Boston.

Exhibits included examples of xeroradiography and demonstrations of computerized radiation dosimetry, methods of delivering radiation therapy, and indications for radiation therapy in breast cancer.

Under the aegis of the American College of Radiology the program was accepted for Category I credit towards the AMA Physicians' Recognition Award.



Dr. Lily A. Hanes



Wedding Bells

Eddie Satterfield, Xomat service technician, was married September 14, 1974 to Mary Katherine Boyd, utility worker at McDonnell-Douglas Aircraft Corp.



Technician from Liberia Studies at Mir

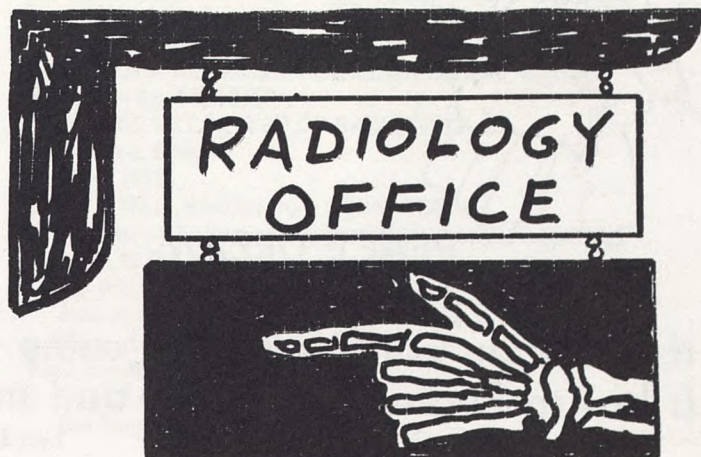


Katherine Harmon, whose home is in Monrovia, Liberia, West Africa, will be at Mallinckrodt studying radiation therapy technology until September, 1975.

Katherine was an x-ray technician at John F. Kennedy Medical Center in Monrovia, Liberia, when she was recommended to Dr. William E. Allen to come to Mallinckrodt for training in cobalt radiation therapy and the operation of the cobalt 60 unit. Dr. Allen is attempting to obtain a cobalt 60 Therapy unit for the John F. Kennedy Medical Center in Monrovia and Katherine is among technologists from Africa who are being trained to operate the unit when it is installed.

Katherine, one of ten children, has always been interested in medicine. As English is the major language in Liberia she has no language problem, but has experienced some difficulty in adjusting to the St. Louis winters and American food although she enjoys barbeque. She has found her training at MIR interesting, has made good friends among her fellow workers, and thinks bowling and movies are great.

A bright smile came to Katherine's face when she spoke of Dr. and Mrs. Allen and their hospitality and kindness to her.



SPOTLIGHT ON MIR SINGERS

THE DUAL TONES (Mary and Bettye)

Bettye J. Thomas, Staff Librarian and Secretary at MIR, and Mary L. Harvey, two sisters from a family of ten children have been blending their voices in gospel music over the years as often as possible. If there is a piano available, they may sing throughout the entire day.

Relatives and friends have encouraged them to record and with such persuasion Mary and Bettye decided to cut their first 45 rpm record which bears the Holloway label (their family name). The selections include "All My Help" and "The Work I've Done". Look for the Holloway label.



Bettye Thomas, Staff Librarian and Secretary



PEACE DREAM

If peace on earth will ever come to be,
It has to begin with you — and me.

Lan Lester

Ron Craig



Ron Craig, Clerk Typist in Nuclear Medicine, is a graduate of Sandusky, Ohio, High School, where he was a member of a selected singing group from the high school choir. He studied two years of music at Ohio State University and was second ranked in the state as the best baton twirler out of 575 twirlers. He was twice invited to twirl for the Cleveland Browns Football team.

Ron, who has a beautiful tenor voice, appeared in the musical "Hallelujah Baby" November 22-23 at Forest Park Community College.

MIR SONGBIRDS ARE WARBLING

The halls of Barnes have been resounding loudly the past few Monday evenings with enthusiastic MIR voices blending to the melodies of familiar Christmas carols and a few popular ditties like "Cabaret" and "Tie a Yellow Ribbon". Renard Hospital has kindly allowed us to use the beautiful new piano located in its recreation room for rehearsals.

Directed and accompanied by Virginia Trent, MIR Public Relations Director, who holds a Master's Degree in Music, the group will sing at the MIR Christmas Party on December 20.

Good fellowship and fun through singing together are the main objectives of the group but in doing so, there have been discovered some beautiful voices, enthusiastic interest, and fun and relaxation in the get togethers!



EXOTIC RESTAURANTS NEAR MIR

Within walking distance of Mallinckrodt are several "out of the ordinary" restaurants for those who like to try different foods.

El Maya, recently remodeled, is located just east of Euclid on Laclede and specializes in Honduran dishes. A suggestion for the first visit would be two chimichangos with either a guacamole salad or a Mayan salad. Be careful of the green salsa picante on the table. It's delicious, but hot. Note the hand-carved Honduras mahogany decorations and colorful tapestry hangings. Closed Mondays.

For your visit to the Grecian Gardens, on the west side of Euclid between Laclede and Forest Park Blvd., try the Gyro (pronounced hee-ro) sandwich. The meat is shaved in thin slices while rotating vertically and served rolled in pita bread, a green version of a Mexican taco. The green salad is a meal in itself so if you order both, you could share with someone. If you like to chew your coffee and eat it with a fork, order Greek coffee. It's very strong.

If you have time to drive, El Sarape, just east of Grand on Olive, is one of the best for Mexican food. Tacos, enchiladas, burritos are all good and the nochos are "something special". Here, again the salsa picante and jalapeño peppers are good but *muy caliente*.

O'Connell's, on the east side of Kingshighway, at the base of The Hill, is the most unique in that it has the atmosphere of a Greenwich village or San Francisco type meeting place. Businessmen in three piece suits share large tables with bearded denim wearers while a large stuffed moose head surveys the scene. Everyone who goes raves about the roast beef (ask for medium unless you like *very rare*) and Italian sausage sandwiches, and the french fried mushrooms are a must.

For inexpensive Italian food that is good and filling Rigazzi's offers the best luncheon menu in a strictly no nonsense environment. Both the veal parmesan and the lasagna are consistently well prepared, but several other good items are available at the noon hour.



CALENDAR OF EVENTS

December 12, 1974

CITY WIDE RADIOLOGY CONFERENCE

Scarpellino Auditorium, Mallinckrodt Institute, 5:30 P.M.

December 14, 1974

4th DISTRICT M.S.R.T. ANNUAL CHRISTMAS PARTY

John Henry's Railroad Restaurant, 7:00 P.M.

504 Northwest Plaza

December 20, 1974

M.I.R. CHRISTMAS PARTY

Eighth Floor, 4-7 P.M.

January 13, 1975

CITY WIDE RADIOLOGY CONFERENCE

Scarpellino Auditorium, Mallinckrodt Institute, 5:30 P.M.

January 16, 1975

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

"The Legal Aspects of Medical Ethics"

Charles E. Berry, A.B., M.Sc., H.A., J.D.

Alexian Brothers Hospital, 8:00 P.M.

February 10, 1975

CITY WIDE RADIOLOGY CONFERENCE

Scarpellino Auditorium, Mallinckrodt Institute, 5:30 P.M.

February 20, 1975

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

Essay Presentation — Moderator, Terry Karch, R.T.

St. Joseph's Hospital of Kirkwood, 8:00 P.M.

March 9-14, 1975

14th ANNUAL BREAST CANCER CONFERENCE

San Juan, Puerto Rico

March 5-9, 1975

MALLINCKRODT ALUMNI REUNION

Marriott's Camelback Inn

Scottsdale, Arizona

March 10, 1975

CITY WIDE RADIOLOGY CONFERENCE

Scarpellino Auditorium, Mallinckrodt Institute, 5:30 P.M.

March 20, 1975

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

"What Every Radiologic Technologist Should Know About Computers"

Gilbert Jost, M.D.

Scarpellino Auditorium, Mallinckrodt Institute, 8:00 P.M.

March 30—April 4, 1975

AMERICAN COLLEGE OF RADIOLOGY

Portland, Oregon

April 14, 1975

CITY WIDE RADIOLOGY CONFERENCE

Scarpellino Auditorium, Mallinckrodt Institute, 5:30 P.M.

April 17, 1975

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

Student Panel Discussion on Xeroradiography

Missouri Baptist Hospital, 8:00 P.M.

April 29—May 3, 1975

SCARD AND AUR

San Diego, California

PUBLICATIONS

"A Comparison of Three Cholecystographic Agents. A Double-Blind Study with and without a Prior Fatty Meal". **Robert J. Stanley, M.D., G. Leland Melson, M.D., Enrique Cubillo, M.D., and Albert E. Hesker, M.D.**, *Radiology* 112:513-517, September, 1974.

"In Vitro Effects of Iodinated Arthrographic Contrast Media on Bacterial Growth". **G. Leland Melson, M.D., Robert C. McDaniel, M.D., Paul M. Southern, M.D., and Tom W. Staple, M.D.**, *Radiology* 112:593-595, September 1974.

A paper entitled "Arthrography of the Post Meniscectomy Knee" by **Drs. James Debnam and Tom Staple** was published in *Radiology*, October, 1974.

"Disappearing References: A Practical Solution," **Francis, R.S., M.D., and Evens, R.G., M.D.** *Applied Radiology* 3:51-52 (Jan-Feb) 1974.

"The Application of Computer Simulation Modeling to the Radiology Film Library." **Evens, R.G., M.D., Falvey, N.J., M.S., Jost, R.G., M.D., and Hill, R.L., M.S.** *Radiology* 112:319-325 (Aug) 1974.

"Efficacy of Routine Screening and Lateral Chest Radiographs in a Hospital-Based Population," **Sagel, S.S., M.D., Evens, R.G., M.D., Forrest, J.V., M.D., and Bramson, R.T., M.D.**, *N Engl J Med*, 291:1001-1004 (Nov) 1974.

"Economic Analysis of Radiology Departments, in *Planning of Radiological Departments*," (eds Korman & Stieve), Stuttgart, Georg Thieme Publishers, 1974, sec IX, pp 313-319.

PUBLICATIONS IN PRESS

"Appraisal of the Angiographic Circulation Time as an Index of Cerebral Blood Flow." **Gado, M., M.D., Eichling, J., Ph.D., Grubb, R., Jr., M.D., Phelps, M., Ph.D., Raichle, M., M.D., and Ter-Pogossian, M., Ph.D.** *Radiology*.

"Parameter Estimation in the In Vivo Measurement of Metabolic Rates Using Externally Monitored Radiotracers." **Larson, K.B., D.Sc., Raichle, M., M.D., Phelps, M., Ph.D., Grubb, R.L., Jr., M.D., Welch, M.J., Ph.D., and Ter-Pogossian, M.M., Ph.D.** *Proceedings of the Third International Conference on Data Handling and Image Processing in Scintigraphy*, Cambridge, Mass., June, 1973, U.S.A.E.C.

"The Wealth of Unused Information in Diagnostic Radiology." **Ter-Pogossian, M.M., Ph.D., Phelps, M.E., Ph.D., Hoffman, E.J., Ph.D., and Eichling, J.O., Ph.D.** *Radiology*.

"Angiographic Circulation Time as a Physiological Variant. Correlation to Cerebral Blood Flow

and Vascular Mean Transit Time." **Gado, M., M.D., Eichling, J.O., Ph.D., Phelps, M.E., Ph.D., Raichle, M.E., M.D., and Ter-Pogossian, M.M., Ph.D.** *Radiology*.

"In Vivo Measurement of Brain Glucose Transport and Metabolism Employing ^{11}C -glucose." **Raichle, M.E., M.D., Larson, K.B., D.Sc., Phelps, M.E., M.D., Grubb, R.L., Jr., M.D., Welch, M.J., Ph.D., and Ter-Pogossian, M.M., Ph.D.** *Am. J. Physiol.*

"Application of Annihilation Coincidence Detection to Transaxial Reconstruction Tomography." **Phelps, M.E., Ph.D., Hoffman, E.S., Ph.D., Mullani, N., B.S., and Ter-Pogossian, M.M., Ph.D.** *J. Nucl. Med.*

"A Position Emission Transaxial Tomograph for Nuclear Medicine Imaging (PETT)." **Ter-Pogossian, M.M., Ph.D., Phelps, M.E., Ph.D., Hoffman, E.J., Ph.D., and Mullani, N., B.S.** *Radiology*.

DIVISION OF RADIATION SCIENCES

"The Effects of Changes in PaCO_2 on Cerebral Blood Volume, Blood Flow, and Vascular Mean Transit Time." **Grubb, R.L., M.D., Raichle, M.E., M.D., Eichling, J.O., Ph.D., and Ter-Pogossian, M.M., Ph.D.** *Stroke* 5:630-639, 1974.

"Cerebral Hemodynamics and Metabolism in Pseudotumor Cerebri." **Raichle, M.E., M.D., Gado, M.H., M.D., Eichling, J.O., Ph.D., Phelps, M.E., Ph.D., Grubb, R.L., M.D., and Hoffman, E.J., Ph.D.** *Neurol.* 24:397, 1974.

"Evidence of the Limitations of Water as a Freely Diffusible Tracer in Brain." **Eichling, J.O., Ph.D., Raichle, M.E., M.D., Grubb, R.L., Jr., M.D., and Ter-Pogossian, M.M., Ph.D.** *Circ. Res.* 35:358-364, 1974.

"Cerebral Blood Volume in Dementia." **Raichle, M.E., M.D., Eichling, J.O., Ph.D., Gado, M.H., M.D., and Grubb, R.L., Jr., M.D.** *Neurol.* 24:350, 1974.

"Brain Permeability of Water." **Raichle, M.E., M.D., Eichling, J.O., Ph.D., and Grubb, R.L., Jr., M.D.** *Arch. Neurol.* 30:319-321, 1974.

"Methods for the In Vivo Measure of Regional Cerebral Blood Flow and Volume Using ^{15}O -labeled H_2O and CO-hemoglobin and X-ray Fluorescence." **Phelps, M.E., Ph.D., Eichling, J.O., Ph.D., and Ter-Pogossian, M.M., Ph.D.** *Pittsburgh Meeting, IEEE, Ed. by H. Wayland, Cal. Tech., in Flow Its Measurement and Control in Science and Industry*, Vol. 1. Edited by Dowdell, R.B., 1974, pp 1433-1438.

"Production of Monochromatic X-rays from 8 to 87 keV." **Hoffman, E.J., Ph.D., and Phelps, M.E.,**

Ph.D. Phys. Med. Biol. 19:85-92, 1974.

"An Inherently Stable System For Measuring Tissue Iodine Using Its K Absorption Edge." Oldendorf, W., M.D., Phelps, M.E., Ph.D., Hoffer, P.B., M.D., and Cassen, B., Ph.D. Amer. J. Roentgen., Rad. Ther. & Nucl. Med. 120:583-588, 1974.

"The Effect of Radiographic Contrast Agents on the Autoregulation of Cerebral Blood Flow." Grubb, R.L., M.D., Hernandez, M., Ph.D., Raichle, M.E., M.D., and Phelps, M.E., Ph.D. Stroke, 5:155-160, 1974.

"A Quick Method for the Calculation of Vascular Mean Transit Time." Phelps, M.E., Ph.D., and Eichling, J.O., Ph.D. J. Nucl. Med., 15:814-817, 1974.

RADIATION SCIENCES IN PRESS

"In Vivo Assessment of Cerebral Blood Volume Employing Radioactive Oxygen-15." Eichling, J.O., Ph.D., Raichle, M.E., M.D., Grubb, R.L., Jr., M.D., and Ter-Pogossian, M.M., Ph.D. Circ. Res.

"Appraisal of the Angiographic Circulation Time as a Physiological Variant." Gado, M., M.D., Eichling, J.O., Ph.D., Phelps, M., Ph.D., Raichle, M., M.D., and Ter-Pogossian, M.M., Ph.D. Radiology.

SECTION OF CANCER BIOLOGY PUBLICATIONS

"Immunity and Cancer." Stewart, C.C., Ph.D. Applied Radiology. 3:37-40, 1974.

"Peritoneal Exudate Cells. I. Growth Requirement of Cells Capable of Forming Colonies in Soft Agar." Lin, H., M.D., Ph.D., and Stewart, C.C., Ph.D. J. Cell Physiol. 83:369-378, 1974.

"The Direct Determination of Cytolytic Antibody Titer and Specificity." Stewart, C.C., Ph.D., and Goldstein, S., B.S. J. Lab. and Clin. Med. 84:425-437, 1974.

"Experimental Observations on the Significance of Cell Burden in Tumor Control." Perez, C.A., M.D., Stewart, C.C., Ph.D. and Wagner, B., B.S. Cancer 34:113-121, 1974.

CITY-WIDE RADIOLOGY CONFERENCE

St. Louis, Missouri

Scarpellino Auditorium, Mallinckrodt Institute of Radiology, 5:30 P.M.

1/13/75

Contrast Agents in Radiology

Dr. Harry W. Fischer

Professor and Chairman

Dept. of Radiology

University of Rochester Medical

Center

St. Luke's and Christian Northwest
Hospitals

2/10/75

Crises in Infancy — Radiological
Manifestations

3/10/75

Roentgen Examination of
Diseases of the Facial Skeleton

4/14/75

Evaluation of Hydrocephalus by
Cysternography

5/12/75

Evaluation of Genitourinary Disease
by Radiographic Methods

University of Alabama Medical School

Best
Wishes
to All

Season's Greetings!
We wish you and
yours all the joy, and
love in the World.



Deen Getz, Graphic Art

Norm Hente, Photographer

Virginia R. Trent, Editor

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