

The Director's Message

The Year Behind Us....The Year Ahead....

1990 has been a most challenging and exciting year for us here at the AFIP, with much news to report to the military and civilian medical communities. Through the establish-

ment of a variety of programs and the expansion of others, a number of steps have been taken to ensure continued excellence in our three missions of consultation, education, and research.

Our new "fee for consultation program," implemented this past fall in Gynecologic and Breast Pathology, has been well received. Turnaround time for consults in this area is now three working days, and we are looking at expanding the program in 1991. Your participation and cooperation has been vital to its success.

Dr. Florabel Mullick, Asssociate Director, CAP, Group B, and Dr. Carlyle Guerra de Macedo, Director of the Pan American Health Organization, Regional office of WHO. (Story page 6).

1990 saw the evolution of the Department of Environmental and Toxicologic Pathology, a move which enabled the AFIP to focus on environmental pathology issues in cooperation with numerous federal agencies, including the EPA. The past year also saw the opening of our new \$1.94 million National Pathology Repository (see page 4), improving our efficiency and further protecting the nation's largest collection of pathological tissue specimens.

A number of exciting initiatives are underway as we enter the new year, especially in the fields of Image Processing and DNA Typing. The Department of Cellular Pathology is hard at work developing a high capacity computer-based image processing and analysis system. The system will include high-volume image archival, quantitative analysis from two- and three-dimensional data, and three-dimensional graphical rendering of cells and tissues.

The Office of the Armed Forces Medical Examiner has proposed to do DNA storage and typing on all service

members through a computerized DNA typing base (popularly known as DNA Fingerprinting). Efforts in this area have proved to be very encouraging, and the Armed

Forces DNA Identification Laboratory (AFDIL), is now working to define and refine current technologies.

We are also excited about the prospects for the National Museum of Health and Medicine of the AFIP. The NMHM Foundation Board of Trustees, chaired by Dr. C. Everett Koop, continues its pursuit of government and private funds for the establishment of a new exhibit hall. Recently, the Department of Health and Human Services

received an appropriation from Congress to continue and expand Public Health Service support and participation in the planning of the National Museum of Health and Medicine. We believe that the Museum, the Foundation and the AFIP will work together in a cooperative effort to make the most of this opportunity.

Finally, our best wishes to all for a happy and healthy holiday season, and for a prosperous 1991!

ROBERT F. KARNEI, JR. CAPT, MC, USN
The Director

Capt Kimberley Power Appointed Administrator, CAME

Capt Kimberley K. Power, USAF, has been appointed Administrator, Center for Advanced Medical Education



(CAME), at the AFIP. In her new role, she will oversee support for over 40 medical education courses, along with the medical library, audiovisual division, and study sets.

This is Capt Power's third return to Washington, and the first as a military member. A native of Manhasset, NY, Capt Power was among the first women admitted

to Georgetown University School of Business Administration, where she earned her degree in 1970. Following graduation, she relocated to Taipei and Hsinchu, Republic of China, where she did graduate work in Chinese and taught for two years.

Upon returning to the United States, Capt Power worked on the 1972 Nixon presidential campaign and later served in the White House as a Liaison Assistant to Presidents Nixon and Ford. In 1977, she married and moved to Italy when her husband, a U.S. Air Force officer, was assigned to the San Vito Air Station Clinic.

Capt Power returned in 1979 to Wichita Falls, Texas, where she served as a news producer/anchorwoman for the local CBS affiliate. In 1981 she came on active duty in the U.S. Air Force, and spent 3 years as Executive Officer and Chief of Administration for the School of Health Care Sciences at Sheppard AFB.

Her next assignment took her to Norton Air Force Base, California, where she served as Patient Affairs Officer, Medical Readiness Officer and Resource Manager. Capt Power holds a masters degree in Management and is a student at Georgetown University Law Center. She is married to Lt Col John D. Power, USAF, Commander of the 9th Air Evac Squadron, Yokota, Japan.

Capt Power has two children, Jason and Marcus.

Major Phillip Cooper Appointed as Administrator of the Center for Advanced Pathology (CAP)

Major Phillip Cooper, USAF, has been named Administrator for CAP. In his new role, Major Cooper will coordinate



the administrative support for CAP. He has a special interest in developing departmental budgets for all resources and assisting all areas in the cross-utilization of resources.

Major Cooper comes to the AFIP from the Office of the Air Force Surgeon General (AFSG), where he served as the Professional Services Program Manager in the

Clinical Consultants Division.

A native of central Oklahoma, Major Cooper received his B.S. from Cameron State University, Lawton, Oklahoma, and his M.S. in Health Care Administration from Trinity University, San Antonio, Texas. He was awarded the Quality Assurance specialty identifier after completion of a Fellowship in Quality Assurance while serving on the AFSG staff.

Although this is Major Cooper's first assignment at a "true" tri-Service organization, he has a long association with our Armed Forces. He began his military career as a Navy hospital-corpsman in 1964 and served in Vietnam as a Fleet-Marine corpsman with both the 1st and 3rd Marine Divisions. After discharge from the Navy, while pursuing his B.S. degree, he worked for the Army at Ft. Sill, OK.

Major Cooper has served as the Director of Patient Affairs, Resource Management Officer, Medical Logistics Officer, and Clinic Administrator prior to serving on the staff of the AFSG. He also has extensive civilian hospital administration experience, having served as the Chief Executive Officer of three civilian medical facilities prior to joining the Air Force.

Lieutenant Eleanor Valentin Appointed Assistant to Deputy Director, MIRER

Lieutenant Eleanor Valentin, MSC, USN, has been appointed Assistant to the Deputy Director (Museum, Illustra-



tion, Repository, Education and Research — MIRER). LT Valentin has been selected for LCDR. In her new role, LT Valentin will oversee personnel and budget management, streamline MIRER operations, and track various special projects, including computer use, contract development and workspace moves. She will also take part in various committees, task

forces and work groups in order to make use of her administrative expertise throughout the Institute.

Born and raised in Seattle, Washington, LT Valentin earned two bachelor of science degrees in Zoology and Psychology from the University of Washington. She also holds two masters degrees in Public Health (Health Policy and Planning, and Biostatistics) from the University of Hawaii.

From 1978 to 1982, LT Valentin served as a Health Planner for the Santa Clara County Health Systems Agency in San Jose, CA. In 1982 she was commissioned in the U.S. Navy and first assigned as Assistant Head, Outpatient Administration Department, and Assistant to the Director for Administration at the Naval Hospital, San Diego, CA.

From 1984 to 1988 she was Head, Facilities and Operating Management, Security Officer, and Disaster Preparedness Officer for Naval Medical Clinic, Norfolk. From 1988 through June, 1990, she was Head, Manpower Management Department, at the U.S. Naval Hospital, Guam.

LT Valentin is married to CDR Dennis G. Larsen, USN, currently assigned to the staff of the Oceanographer of the Navy.

AFIP Happenings...

- Pathology Department, travelled to Russia in June 1990, on behalf of the National Cancer Institute. He explored the possibility of a joint research project in cancer of the bladder and other urologic tumors. Dr. Mostofi visited a number of institutes during his two week stay, which was sponsored by the USA-USSR Cancer Program.
- Dr. William J. Hartley, a comparative pathologist and an internationally recognized veterinary neuropathologist, New South Wales, Australia, visited the AFIP on Oct 15. During his visit, he discussed comparative pathology in Australia with Dr. George Migaki, protozoal diseases in Australian mammals with CDR Chris Gardiner, MSC, USN, , and the Pathology Data Retrieval System with Ms. Joyce Manus.



Dr. Hartley (left) examines tissue sections with CDR Chris Gardiner, USN, parasitologist, consultant to the Department of Veterinary Pathology, AFIP.

- Dr. Anne Osborn, Distinguished Scientist in Radiologic Pathology at the AFIP, moderated a film interpretation panel of experts before an audience of over 8,000 at the 1990 meeting of the Radiologic Society of North America. All of the case material used in the presentation was drawn from the Archives of the Department of Radiologic Pathology. Completing the AFIP team was the pathologist discussant, Dr. Leslie Sobin, of the Department of Gastrointestinal Pathology.
- Doctors Kamal G. Ishak and Zachary D. Goodman, Department of Hepatic Pathology, attended and participated in a meeting on "Hepatocellular Carcinoma in North America" sponsored by the National Cancer Institute, September 26-27.

RIBBON-CUTTING CEREMONY AT NATIONAL PATHOLOGY REPOSITORY

Over 200 AFIP employees attended ribbon-cutting ceremonies for the new 15,200 square foot AFIP National Pathology Repository, held at the Forest Glen Annex on September 21, 1990. The \$1.94 million repository contains the nation's largest collection of pathological tissue specimens, according to AFIP Director Robert F. Karnei, CAPT, MC, USN. The climate-controlled building has a sophisticated formaldehyde gas detection system, four robotic inserter/extractor carousels that hold a combined total of 5,000 large slide bins, and 12-foot high moveable aisle shelving to store

wet tissues and paraffin blocks. The new building exceeds U.S. Occupational Safety and Health Administration and Environmental Protection Agency standards

dards.

Guests at the ribboncutting ceremonies included Army Deputy Surgeon General, MG Alcide M LaNoue, MG Richard Cameron, Commander, Walter Reed Army Medical Center, along with numerous AFIP dignitaries. They

were addressed by COL Ronald R. Blanck, representing Enrique Mendez, M.D., Assistant Secretary of Defense for Health Affairs, who lauded them for their persistence and dedication in having the facility constructed. "The new tissue repository contains many features that will facilitate the mission of the AFIP, improve efficiency, protect this

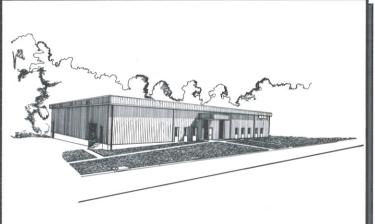
valuable tissue collection, and improve the working environment for the staff," he said.

Capt Annette Anderson, USAF, administrator of the Research and Repository Service, agrees. "It has been a goal of the AFIP for a number of years to construct this modern facility, and by doing so, we've resolved a number of long-standing problems," she says. The previous AFIP Repository was located in an aging downtown Washington, D.C. building, with limited heating, inadequate ventilation and no air conditioning. According to Capt Anderson, paraffin

blocks melted and formaldehyde gas leaked during hot weather, impacting the health and morale of AFIP employees and creating community relations problems with the surrounding neighborhood.

Plans for the new building began in 1984, but budget constraints and contractual difficulties pushed groundbreaking back to March 1988. In 1989, the shell of the building was completed, and the AFIP

then began moving 500,000 wet tissue specimens and 30,000,000 paraffin blocks to their new location. "We're currently in the process of transferring and unloading a collection of over 55,000,000 slides from a temporary storage facility in Rockville, MD," notes Capt Anderson. The transfer should be complete in early 1991.



American Registry of Pathology Note on Consultations

The ARP is pleased to announce that the turn-around time for Gynecologic and Breast Pathology Consultations is now 3 working days. Processing may be expedited by sending your sample by Express Mail. We will return reports by Fax Telephone or Courier at your pleasure.

We regret that we are unable to bill patients directly but have included a billing procedure for hospitals or pathologists who may make arrangements for reimbursement from third parties. A pre-payment of \$100 will satisfy all services required, except electron microscopy, when done.

All questions regarding the consultation program should be directed to Mr. Leo Bell at 202-576-4566/67 or Fax 202-576-0941.

PATHOLOGY DATA DIVISION CLEARS BACKLOG New Quality Assurance Program is Successful

With the recent elimination of over 28,000 back-logged cases and the establishment of a new quality assurance

program, Repository and Research Service's Pathology Data Division is now entering pathologic diagnoses into the research database within three days.

The primary role for this division has been to code all pathologic diagnoses for entry into and retrieval from the AFIP's research database. According to Capt Annette Anderson, USAF, Administrator, Repository and Research Service, the efforts made to eliminate the backlog resulted in a new focus on quality assurance. "For the past number of years we've experienced a coding backlog, primarily due to shortages of trained personnel and high turnover," she notes.

"In November of 1989, we established a three-pronged attack to eliminate the backlog," Capt Anderson notes. The division increased recruitment efforts, established an aggressive training program, and judiciously used overtime to bring down the numbers.

she says, "and our personnel are currently able to code and enter cases in a 3-day time frame."

In July, 1990, division personnel began to focus on administrative quality assurance issues in order to improve the overall quality of pathological case files. " A standard document sequencing arrangement was developed," she says, "and each record received is now not only coded and entered, but its entire contents are screened and placed in logical sequence. Any administrative errors or inconsistencies are brought to the

attention of the applicable pathology department for correction."

The Pathology Data Division's efforts have been readily apparent. Review of case folders is now much quicker and easier, and any errors are immediately corrected. "We've also dramatically improved materials accountability and space utilization," notes Capt Anderson, "due to our focus on the use of materials retention codes and a purging of extraneous items." Capt Anderson salutes the fine efforts of the division, led by Ms. Joyce Manus, for their hard work

Terry Lloyd and Toni Dickens (top), and Mark Sacks and Carole

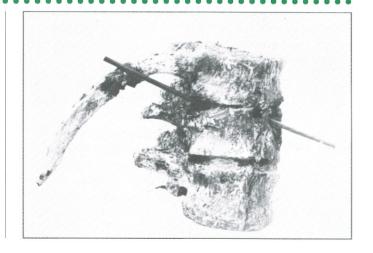
Vrugtman (bottom) discuss quality assurance and coding procedures.

"By October of 1990, the entire backlog was eliminated,"

and dedication in reaching this goal.

F.Y.I...

Recently, several shows on public television have used NMHM collections. Ken Burns researched in the Otis Historical Archives for "The Civil War" and used several photographs from the collections. On "The American Experience: Insanity on Trial," which aired on Oct. 29th, the assassination of President James Garfield by Charles Giteau was reviewed. Giteau attempted to plead insanity but was convicted and executed. The museum holds part of Garfield's spine in which Giteau's bullet was lodged, and Giteau's brain and skeleton. Part of this show was filmed in Anatomical Collections and briefly pictured Paul Sledzik, Curator of Anatomical Collections.



Radiologic Pathology Department Receives Grant

A \$100,000 grant from Sterling Winthrop, Inc., has been received by the American Registry of Pathology to support a visiting professor and eight guest lecturers in the Department of Radiologic Pathology.

Dr. Anne Osborn, 1989-90 Distinguished Scientist, and now Professor of Radiology at the University of Utah, has been named Sterling Winthrop Visiting Professor in Diagnostic Imaging. In this capacity, Dr. Osborn will continue to participate in the educational and research programs of the Department on an ongoing basis.

In addition, the new grant will support eight Sterling Winthrop national guest lecturers. These individuals deliver lectures over a two-day period to students enrolled in each of the six-week courses in radiologic pathology that are conducted throughout the year by the Department.

The donors of this generous grant have expressed their commitment to continued support on an annual basis.

Dr. Macedo of Pan American Health Organization Visits the AFIP

The AFIP played host on 22 October 1990, to Dr. Carlyle Guerra de Macedo, Director of the Pan American Health Organization, Regional Office of the World Health Organization.

Dr. Macedo, a significant contributor to the development of health programs throughout South America, visited the AFIP in order to develop a dialogue with the AFIP AIDS Task Force, directed by Dr. Florabel Mullick. Discussions about the Institute's clinical and research AIDS programs were held, and a visit to key laboratories currently engaged in HIV-1 diagnosis and pathogenesis took place.

Dr. Mullick's AIDS Task Force is presently conducting large scale research aimed at containing the epidemic in Africa, and providing essential obstetric and pediatric data about the impact of AIDS in developing nations.

Dr. Macedo and Dr. Mullick hope to develop cooperative programs aimed at limiting the spread of AIDS in South America and the world.

Robert D. Pugatch, M.D., Appointed Distinguished Scientist

The Department of Radiologic Pathology has appointed Robert D. Pugatch, M.D., as Distinguished Scientist in



Radiologic Pathology for the Academic Year 1990-1991

Dr. Pugatch, an established authority in the field of pulmonary radiology, is on sabbatical leave from Harvard Medical School where he is Associate Professor of Radiology. He also serves as chief of Thoracic Radiology at the Brigham and Women's Hospital in Boston.

During Dr. Pugatch's year as Distinguished Scientist he will collaborate with Dr. Melissa Rosado de Christenson, Chief of Pulmonary Radiologic Pathology, on both educational and research projects.

Histotechnology Notes

Preparation of Tap Water for Use in Flotation Baths

Tap water used in flotation baths upon which ribbons of tissue sections are floated is prepared as follows:

Boiling the solution removes CO_2 from the tap water, which, reduces air bubble formation in the flotation bath. The addition of 1% hydrochloric acid prevents the precipitation of mineral salts which occurs after the CO_2 has been boiled off. Precipitated mineral salts deposit as crystals on unstained sections and bind with dyes during the routine and special staining process. This artifact will appear as splotches of dye in stained tissue sections when examined by light microscopy. Also, histologic sections later used for scanning electron microscopy, which were floated on water contaminated by precipitated mineral salts, render false positive results during mineral detection tests.

Otis Historical Archives (OHA)

Photographs of Surgical Cases and Specimens or Surgical Photographs

On May 21, 1862, Surgeon General William A. Hammond authorized the creation of the Army Medical Museum for the study of military medicine and surgery. In Circular No. 5 of June 9, 1862, Hammond authorized the Medical Museum to begin collecting documentation of cases and reports for the compilation of the massive Medical and Surgical History of the War of the Rebellion. To make the medical knowledge being compiled more immediately useful, the Surgeon General's Office issued books detailing parts of research throughout the war and afterwards.

Photographs of Surgical Cases and Specimens is an eight volume set of albumin photographs taken from 1863 until 1881. Several volumes were issued during the Civil War and showed the result of surgical operations. These photographs showed that an operation to excise the damaged part of the bone was possible as opposed to amputation of the entire limb. Many photographs show the ravages of osteomyelitis that occurred when an injury was never treated with antibiotics. As America expanded westward, the focus changed from Civil War injuries to wounds suffered during the Indian Wars or pathologies such as cancer. The series ends with photographs of President James Garfield's spine, showing the bullet hole inflicted by

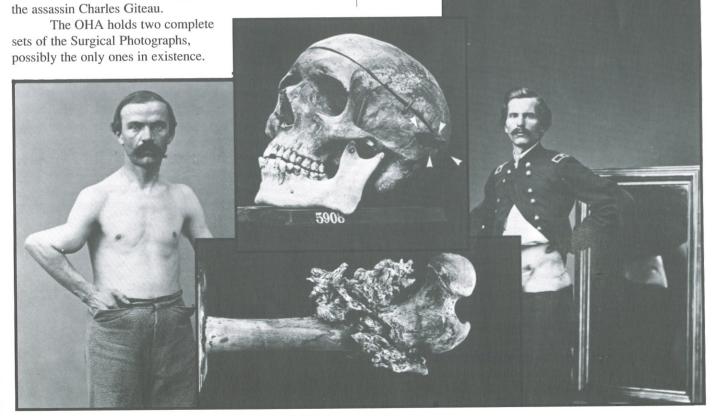
Several large glass plate negatives, looking much like a pane of window glass, still exist as well. Unlike modern negatives, these plates can be 12 inches on a side and weigh several pounds. Each negative had to be individually sensitized with a mixture of chemicals painted on the glass. After a several second exposure, the plate had to be developed immediately. Some of the photographs were copied from pictures donated to the museum, but many were taken at the museum by William Bell, a noted medical photographer.

Clockwise from center top: "Pvt. Martin W., Troop E, 4th Cavalry, was killed by Indians, on Sept. 30, 1870, twenty miles from Fort Concho, Texas, while on duty as one of the mail-stage guard from Fort Chadbourne. The escort being attacked by a band of Comanches, this soldier was wounded by an iron-headed arrow..."

One of the most famous Surgical Photographs shows Major H.A. Barnum of the 12th New York after he was wounded at Malvern Hill on July 1, 1862. This photograph was taken in August 1865 after Barnum had been promoted to a Brigadier General, but the wound was still discharging. Barnum was wounded twice more during the war.

"Pvt. E.W.A., Co. G, 5th Florida Regiment, was 18 years old when he was wounded on July 3rd, 1863 at the battle of Gettysburg. He "lingered till September 15th, 1863, when he died from exhaustion." (Osteomyelitis)

"Pseudarthrosis after gunshot fracture in a soldier who visited the Museum, in 1867." After the Civil War, the Army Medical Museum was housed in Ford's Theatre which the government had bought after Lincoln was shot. It shared space with the Surgeon General's Library (now the National Library of Medicine) and the Pension Office. When men would apply for their disability pension, Medical Museum doctors would ask them to have their injury photographed.



Reprints

Reticulohistiocytoma of the Limbus and Cornea

Guy S. Allaire, MD, FRCP(C), Ahmed A. Hidayat, MD, Lorenz E. Zimmerman, MD, Lawrence Minardi, MD

Reticulohistiocytoma is a rare, benign histiocytic lesion usually occurring as an isolated skin nodule or as part of a systemic disorder known as "multicentric reticulohistiocytosis." The clinical and histopathologic findings of two women who presented with a single, painless mass localized to the cornea and limbus without skin lesions or systemic disease are reported. Histopathologically, the lesions were composed predominantly of large mononuclear and a few multinucleated cells with finely granular, "ground-glass" cytoplasm and large nuclei with prominent nucleoli. Immunohistochemical and electron microscopic studies confirmed the histiocytic nature of these cells. Reticulohistiocytoma should be included in the differential diagnosis of epibulbar benign histiocytic lesions.

Ophthalmology. 1990;97: 1018-1022.

Mature Teratoma of the Retroperitoneum: Radiologic, Pathologic, and Clinical Correlation

Alan J. Davidson, MD, David S. Hartman, MD, and Stanford M. Goldman, MD

The authors retrospectively evaluated radiologic, clinical, and pathologic findings in 23 cases of mature teratoma arising within peri- or pararenal spaces. Radiologic studies — including abdominal radiographs (21 cases), excretory urograms (12 cases), sonograms (17 cases), and computed tomographic (CT) scans (18 cases)— were evaluated for tumor location, mass effect, calcification, fat, tumor invasion, echo pattern, and tissue characteristics. Most patients were female (3.4:1), younger than 6 months (50%), and asymptomatic. Abdominal radiography demonstrate a mass in 95%, calcium in 92%, and fat in 60% of cases in which CT revealed these components. Similarly, sonography showed uncomplicated fluid in 76% and calcium in 50% of cases. Fat was not reliably distinguished from other soft-tissue components on sonograms. The most characteristic radiologic findings of mature teratoma of the retroperitoneum are a complex mass containing a well-circumscribed fluid component of variable volume, adipose tissue and/or sebum in the form of a fat-fluid level, and calcification in either a congealed or linear strand pattern. These findings are better demonstrated by CT than by sonography. Radiology 1989;172:421-425.

Malignant Germ Cell Tumors of the Ovary: Radiologic-Pathologic Correlation

Harry M. Brammer III, LCDR, MC, USN, James L. Buck, LCDR, MC, USNR, Wendelin S. Hayes, DO, Sheila Sheth, MD, and Fatteneh A. Tavassoli, MD

Malignant germ cell tumors are the most common malignant ovarian neoplasms in girls and young women. The most well known of these neoplasms are dysgerminoma, immature teratoma, endodermal sinus tumor, and a mixture of two or more of these elements. All malignant germ cell tumors, especially immature teratoma, can be associated with mature (benign) teratoma. These tumors are generally large and have a complex but predominantly solid appearance on cross-sectional images. Elevated serum β -fetoprotein and human chorionic gonadotropin levels can help establish the diagnosis. Cystic areas or calcifications suggestive of mature teratoma do not exclude a coexisting malignant neoplasm Radiographics. 1990;10:715-724.

Carcinoembryonic Antigen and Carcinoids of the Gastrointestinal Tract

Birgitte H. Federspiel, Allen P. Burke, Kris M. Shekitka, and Leslie H. Sobin

We studied the prognostic significance of immunohistochemically localized carcinoembryonic antigen in 131 nonmetastasizing and 35 metastasizing gastrointestinal carcinoid tumors. The rate of positivity was lower with preabsorbed versus nonabsorbed polyclonal antiserum. compared with generally used prognostic features (depth of invasion, tumor size, and mitotic rate) positivity for absorbed anticarcinoembryonic antigen was the most specific feature for metastatic tumors but was least sensitive. Although our results demonstrate that anticarcinoembryonic antigen, particularly when absorbed, is highly associated with metastatic disease, depth of invasion and tumor size are better predictors of behavior. Modem Pathology 1990;3(5):586-590.

Postgraduate Short Courses in Continuing Education Academic Year 1990-91

Course Title	Scheduled	Application	Non-Federal	Federal
	Dates	Deadline	Fee	Fee
*Surgical Pathology of the Head & Neck	3-5 Dec 90	2 Nov 90	\$295	\$35
Path of Congenital Heart Disease	3-7 Dec 90	2 Nov 90	\$250	N/A
Emergency Oxygen Administration	12 Jan 91	12 Dec 90	\$125	\$50
Orthopaedic Pathology	. 28 Jan-2 Feb 91	28 Dec 90	\$400	\$30
Neuroradiology Review	2-3 Feb 91	2 Jan 91	\$275	\$20
Neuropathology Review	4-8 Feb 91	4 Jan 91	\$450	\$30
Pathology of Congenital Heart Disease	4-8 Feb 91	4 Jan 91	\$250	N/A
Uroradiology	6-7 Feb 91	7 Jan 91	\$275	\$20
Genitourinary Pathology	8-13 Feb 91	8 Jan 91	\$500	\$100
Infectious and Parasitic Diseases Pathology	18-22 Feb 91	18 Jan 91	\$435/485	\$45
Hyperbaric Chamber Awareness	16-17 Mar 91	16 Feb 91	\$175	\$50

Reflects change in course dates

Course Descriptions

Surgical Pathology of Head & Neck

Course emphasis is on the histopathological appearance of disease processes that involve the upper respiratory tract, salivary glands, thyroid glands and oral regions. Fundamental aspects of surgical pathology of the head and neck will be discussed to include recent developments in these areas. Clinical, radiographic and microscopic characteristics will be illustrated with emphasis on developing an understanding of the basic disease process.

Enrollment limited to 125. Approximately 19 CME credit hours.

Pathology of Congenital Heart Disease

Designed for fellows, residents, and board eligible candidates in cardiology, cardiothoracic surgery, pathology and radiology. Lectures on the gross and microscopic pathology of the major forms of congenital heart and aortic disease and demonstrations with gross and microscopic preparations and select videotapes. Ample time for interaction between faculty and attendees.

Enrollment limited to 15. Course offered Feb, May, Aug, and Dec each year. When applying, please specify when you want to attend. Approximately 30 CME credit hours.

Emergency Oxygen Administration and Field Management of Scuba Diving Accidents

Course is directed at physicians, nurses, EMT's, paramedics, emergency rescue personnel, diving instructors, and divemasters. It provides information on the causes, symptoms, prevention and basic physiology of air embolism and decompression sickness. Also, hyperbaric chambers, drowning, immersion hypothermia, air evacuation safety, and the field evaluation and care of the victim with disbaric injuries will be discussed. Hands-on instruction in the use of resuscitators, oxygen, airways, and backboards. Curriculum is same as that offered by National Association of Underwater Instructors (NAUI) and the National Association for Search and Rescue (NASAR). CPR certification is required for the course.

Enrollment limited to 20. Approximately 8 CME credit hours.

Orthopaedic Pathology

Course will consist of lectures, demonstrations, and laboratory experience in orthopaedic pathology, and will emphasize radiologic-pathologic correlation and conceptual morphologic analysis developed at the AFIP. Course is designed to introduce basic biological principles underlying orthopaedic pathology to both experienced pathologists and senior pathology trainees through a conceptual approach.

Enrollment limited to 90. Approximately 46 CME credit hours.

Neuroradiology Review

The Sixth Annual AFIP Neuroradiology Review Course precedes the Neuropathology Review Course. The course offers neurologists, neurosurgeons, pathologists, and radiologists a basic review of neuroradiology. The essential morphologic and physiologic principles which create the diagnostic image will be emphasized. Important radiologic-pathologic concepts will be illustrated by CT,

MRI as well as conventional studies.

Enrollment limited to 250. Approximately 12 CME credit hours.

Neuropathology Review

A basic review of neuropathology stressing recent developments in the understanding of clinical and pathophysiological bases of neurological diseases and their techniques of study. Course especially useful in studying for specialty exams. Radiographs and slides of clinical cases will be available for study and will be discussed in a CPC format. Sets of slides will be available for purchase. Enrollment limited to 250. Approximately 33 CME credit hours.

Pathology of Congenital Heart Disease

Designed for fellows, residents, and board eligible candidates in cardiology, cardiothoracic surgery, pathology and radiology. Lectures on the gross and microscopic pathology of the major forms of congenital heart and aortic disease and demonstrations with gross and microscopic preparations and select videotapes. Ample time for interaction between faculty and attendees.

Enrollment limited to 15. Course offered Feb, May, Aug, and Dec each year. When applying, please specify when you want to attend. Approximately 30 CME credit hours.

Uroradiology

This course is designed to offer radiologists and urologists a summary of the most important morphological principles that underlie the evaluation of roentgenologic signs. Particular emphasis will be placed on the differential diagnosis of abnormal urograms.

Enrollment limited to 200. Approximately 14 CME credit hours.

Genitourinary Pathology

Course consisting of basic and comprehensive survey of pathology of kidney, ureter, bladder, prostate, testes, penis, and urethra. Course designed for urologists and will be presented by lectures, demonstrations, and study of microscopic slides. Course is not designed for pathologists as it is quite elementary. Microscopes will be provided for the microscopic slide portion of the

Enrollment will be limited to 250. Approximately 59 CME credit hours.

Infectious Parasitic and Tropical Diseases

Designed for physicians, pathologists, parasitologists, and veterinarians who have an interest in study and control of infectious, parasitic, and tropical diseases, and want further knowledge in pathology, pathogenesis, clinical manifestations, diagnosis, treatment and prevention of those diseases.

Course enrollment limited to 150. Approximately 41 CME credit hours.

Hyperbaric Chamber Awareness

Orientation to researchers, physicians, nurses, technicians and sport SCUBA divers on hyperbaric chambes with emphasis on applications in rescue operations, clinical hyperbaric ocygen therapy, research in oxygen physiology, and diving. Course includes lectures, demonstrations and two chamber dives.

Enrollment limited to 40. Approximately 14 CME credit hours.

^{*} Course offered every other year

Instructions for Filling Out Registration Form for AFIP Courses

- Course Fee: Payments for all courses are to be made payable to the American Registry of Pathology or ARP. To safeguard your course space, we strongly encourage advance fee payment when registration form is submitted, but not later than the Application Deadline (does not apply to non U.S. citizens).
- 2. Application Deadline: Fifty percent of the course spaces are reserved for federal applicants and 50% for non-federal applicants until the Application Deadline Date. After that date applications will be considered on a first-received, first-accepted basis.
- Federal Personnel Please Note: To insure a space will be held for you, submit an application for each course you desire to attend directly to the Education Division, AFIP. Do this regardless of any funding action.
- Accreditation: The Armed Forces Institute of Pathology is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.
- 5. Registration Procedures for International Applicants: Civilians:

Mail letter of application to:

Chief, Program Resources Branch E/VCP United States Information Agency 301 4th Street, S. W. Washington, D.C. 20547 Telephone: (202) 485-7228 Letter of application should include:

- 1. Title of Course
- 2. Inclusive dates of course
- 3. Your present position
- 4. Your home and office mailing address
- 5. Your date and place of birth
- 6. Your country of citizenship
- Your financial arrangements for stay at this course (U.S. Government cannot be responsible for any expenses incurred while you are in the U.S.)

With your letter of application, attach a copy of course application form, a check drawn on a U.S. bank or International Money Order, made payable to the American Registry of Pathology, in U.S. dollars in the amount required.

Military

Request the desired training through your military training channels to the Security Assistance Office of the U.S. Mission in your country.

International Applicants Employed by an Agency of the U.S.

Government

Attach to letter of application (see above) a letter certifying employment from your servicing personnel office and mail to:

U.S. Army Health Professional Support Agency

U.S. Army Health Professional Support Agency Attn: SGPS-EDI 5109 Leesburg Pike

Falls Church, VA 22041-3258

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