

into the anterior chamber of the eye of animals of the same species. The method permits direct observation of the growth with the naked eye or under the microscope. The present paper deals with an attempt to establish whether or not the frog carcinoma can proliferate in the eyes of alien hosts. Two species belonging to the same family (green frog and bullfrog), a species from a different family (toad), and 2 different classes of cold-blooded vertebrates (gold fish and alligator) were used. The tumor was found to grow as readily in the eyes of frogs of alien species as in the eye of the natural host. In toads, the tumor grew well but the proportion of successful transplantations was distinctly less (37% as compared to 61 to 67% in the frogs). In frogs and toads, the character and rate of growth of the transplants was practically the same. The neoplastic cells retained their acinar arrangement, supported by a stroma which developed as well from the tissues of alien hosts as from those of the natural host. No progressive growth occurred in the fish, although characteristic acini persisted and a few mitoses could be found long after implantation. In the alligator, no growth occurred and the transplant deteriorated rapidly. No reaction developed in the eyes of any of the amphibians whereas a marked inflammatory reaction did occur in the eyes of fish and reptiles. The results indicate that, among cold-blooded vertebrates, the humors and tissues of the eye have a high degree of tolerance for foreign tumor grafts and that the success of transplantation into alien species decreases as the relationship to the original species becomes more distant. Seventeen photographs illustrate the paper.—A. C.

#### REVIEWS

**LOEB, L.** (Lab. of Research Path., Oscar Johnson Inst., Washington Univ. Sch. of Med., St. Louis, Mo.) *The significance of hormones in the origin of cancer.* *J. Nat. Cancer Inst.*, 1:169-195. 1940.

This comprehensive review, covering the period from 1916 to 1940, presents summaries, discussions, and interpretations of investigations of the role of hormones of the ovary, adrenal, and pituitary glands in the production of cancer. While most of the material presented deals with the relation of hormones to carcinomas of the mammary gland and genital tract of mice and rats, other species and other types of tumors are included, and some features of cancer of the breast in women are discussed. Genetic factors and the possible role of viruses are analyzed. After discussing both rhythmic and noncyclic growth processes the author concludes that "the study of the origin of cancer is, at the same time, a study of the mechanisms which in the normal organism tend to prevent the development of these abnormal growth processes." The bibliography contains 153 references.—S. B-J.

#### CLINICAL AND PATHOLOGICAL REPORTS

**BRAGA, A.** (Lisbon, Portugal.) *A fotografia com Radiações infra-vermelhas aplicada aos Tumores. Infra-red photography applied to tumors.* *Arq. de pat.*, 12:160-171. 1940.

Iford film, artificial light, and radiations of from 7,000 to 9,000 Å were used. Twelve sets of ordinary photographs compared to infra-red photographs are included.—M. D-R.

**PERRÍN, T. G.** (Fac. Med., Mexico, D. F.) *Sobre el diagnóstico histopatológico en el curso de las intervenciones quirúrgicas. Concerning histopathological diagnosis in the course of surgical operations.* *An. méd.*, 1:7-12. 1940.

The author reviews the recent literature on the subject and summarizes his own method used successfully for 16 years. Pieces of tissue less than 0.5 cm. thick are fixed 1 minute in boiling 15% formaldehyde solution. This is followed by sectioning in the freezing microtome, staining of the sections on a

slide with 0.5% toluidine blue for 20 seconds, rapid washing with water, and mounting and observation in neutral glycerol. Four photomicrographs are appended.—M. D-R.

**TENOPYR, J., and I. SILVERMAN.** (Brooklyn, N. Y.) *The importance of biopsy in tumor diagnosis: A report of experience with a new biopsy needle.* *Roentgenology*, 36:57-60. 1941.

This is a further report on the use of a new biopsy needle devised and previously described by the junior author.—E. A. L.

#### RADIATION—DIAGNOSIS AND THERAPY

**BOGART, F. B.** (Chattanooga, Tenn.) *Irradiation treatment of cancer of the skin.* *Radiology*, 36:12-22. 1941.

Various methods of irradiation of carcinomas of the skin are presented and illustrated with case reports. Massive doses of medium or low voltage x-rays with little or no filtration are used for practically all small lesions. High voltage, heavily filtered x-rays in fractionated doses are preferred for the large indurated lesions, all lesions involving cartilage, and all carcinomas of the lip. In selected cases x-ray treatment is supplemented with interstitial low intensity radium element needles.—E. A. L.

**GHONT, L. K.** (Univ. of Oklahoma Hosp., Oklahoma City, Okla.) *Sarcomas of the small intestine and reference to their radiosensitivity.* *Radiology*, 36:86-97. 1941.

One case of leiomyosarcoma and 3 of lymphosarcoma of the small intestine are reported, and the literature is reviewed. Thirty-four cases of leiomyosarcoma of the small intestine and over 400 of lymphosarcoma have been recorded in the literature. The author's case of leiomyosarcoma was the only one to have been irradiated. It responded well. Lymphosarcomas are radiosensitive.—E. A. L.

**FRIEDMAN, M.** (Bellevue Hosp., New York, N. Y.) *The treatment of carcinoma of the corpus uteri: Description of a new hysterostat.* *Radiology*, 35:28-35. 1940.

A new radium applicator, called a hysterostat, for the intracavitary radiation of carcinoma of the corpus uteri is described. It consists of a central crosspiece and 2 to 4 lateral tandem inserters. The central crosspiece is attached to a stem permitting variation of the angle between them. The lateral inserters are not fixed instruments but are separate pieces which can be interchanged to make various shapes to correspond to the shape of the uterine cavity.

Eight of the 13 patients treated with this instrument were subjected to total hysterectomy 4 to 6 weeks after the radium treatment. Seven of the 8 showed no residual cancer. Three of the remaining 5 are alive and well 6 to 24 months after treatment. The dose varied between 4,000 and 7,660 mgh.—E. A. L.

**HAWLEY, S. J.** (Geisinger Memorial Hosp., Danville, Penn.) *Rotation therapy.* *Radiology*, 35:65-69. 1940.

A method is described for rotation x-ray therapy in which the beam is directed horizontally towards the tumor area and the patient is rotated on a vertical axis. The advantage of this method is that there is a volume of tissue surrounding the axis of rotation which is continuously in the beam and receives the most intense radiation, whereas the skin receives the least radiation owing to the fact that it is moving most rapidly and is in the narrowest portion of the beam.—E. A. L.

**LAWRENCE, J. H.** (Univ. of California, Berkeley, Calif.) *Nuclear physics and therapy: Preliminary report on a new method for the treatment of leukemia and polycythemia.* *Radiology*, 35:51-59. 1940.

The use of radioactive isotopes as tracers and as substitutes for radium in direct radium therapy is discussed. Four representative cases of chronic myelogenous leukemia and 1 of chronic

lymphatic leukemia treated orally with radiophosphorus in the form of sodium phosphate are reported. The responses were similar to those usually following x-ray or radium therapy. To avoid a cathartic effect the total dose of sodium phosphate was kept below 3 gm. The dosage of radiophosphorus has been determined by experimentation and is probably too small. No patient received more than the equivalent of 3 r daily whole body radiation.

Two cases of polycemia vera treated in the same manner are also presented.—E. A. L.

**MURPHY, J. T., and C. E. HUFFORD.** (Toledo, Ohio.) The use of 200,000 volts in the treatment of advanced superficial cancer. *Radiology*, **36:23-31**, 1941.

Protracted fractionated x-ray irradiation with high voltage and heavy filtration is offered as a method of treating advanced carcinoma of the skin. Illustrated with case reports.—E. A. L.

**O'BRIEN, F. W.** (Boston City Hosp., Boston, Mass.) Radiation of cancer of the cervix. *Radiology*, **35:23-27**, 1940.

A series of 289 patients seen from 1923 to 1935 inclusive is presented. Twenty-seven of the cases were judged unsuitable for any radiation therapy. Thirty-five per cent of the remaining 262 were in stages 1 and 2 and 65% in stages 3 and 4.

The development of radium therapy in the early years of the series is discussed. In 1930 x-ray therapy was instituted and has been used since then in conjunction with radium. In 1933 a follow-up clinic was established, and it has been possible to follow 28 patients for 5 or more years. There was a 5 year survival in 7 cases. Six of the 7 died with disease in the 6th year and 1 remained free of demonstrable disease.

The need for increasing the radiation dose to the parametria is emphasized.—E. A. L.

**ROSH, R.** (Bellevue Hosp., New York, N. Y.) Factors influencing the prognosis in the treatment of carcinoma of the cervix. *Radiology*, **35:17-22**, 1940.

This is an analysis and discussion of the problems and complications encountered in treatment of carcinoma of the cervix. From 1925 to 1939, inclusive, 795 patients were seen. Until the last 4 or 5 years no case could be classed as stage I, the greater number being in stage IV. Two hundred sixty-one were transferred elsewhere for custodial care; 303 were given the complete course of treatment.

Successful treatment depends upon the general condition of the patient, stage of disease, quality of irradiation, continuity of treatment and individual response. Complications may arise in the skin from slow vascular changes; in the urinary tract from extension of the disease causing ureteral obstruction; in the rectum from small ulcerations; in the vagina from fistulae; and may arise from local extension of the disease causing intractable pain.—E. A. L.

**WIGBY, P. E., and M. COHEN.** (Parkland Hosp., Dallas, Texas.) Radiation therapy of carcinoma of the skin: An analysis of 83 lesions in 70 patients. *Radiology*, **35:70-78**, 1940.

The paper presents methods of irradiating carcinoma of the skin previously reported by others and discusses the methods used by the authors. Superficial basal cell lesions should receive between 4,000 r and 5,000 r low voltage therapy. Daily doses between 600 r and 1,000 r are given. For the larger and thicker basal cell tumors and for squamous cell carcinomas, various combinations of medium and high voltage therapy are used. The total dose is between 5,500 r and 6,000 r, and about 200 r are given daily.—E. A. L.

#### SKIN AND SUBCUTANEOUS TISSUES

**ESCALONA, E.** (National Univ., Mexico, D. F.) Angiomatosis de Lindeau y Von Hippel con adenomas sebaceos

simétricos tipo Pringle. Angiomatosis of Lindeau and Von Hippel with symmetrical sebaceous adenomas of Pringle's type. *Medicina, México*, **20:205-209**, 1940.

Report of 1 case.—M. D-R.

**MILLAN GUTIERREZ, J.** (Dept. Dermatol. General Hosp., Mexico, D. F.) Adenomas sebaceos simétricos. Symmetrical sebaceous adenomas. *Medicina, México*, **20:199-205**, 1940.

A case belonging to the neuro-ectodermic dysplasias of Von Bogaert, the clinical variety being that of the sclerosis tuberosa of Bourneville Brissaud. Four illustrations are appended.—M. D-R.

#### FEMALE GENITAL TRACT

**MASCIOTTRA, R. L., and A. A. DÍAZ COLODRERO.** (Rivadavia Hosp., Buenos Aires.) El carcinoma de la glándula de Bartholino. Carcinoma of Bartholin's gland. *Rev. méd.-quir. de pat. fem.*, **14:889-908**, 1939.

The extreme rarity of neoplasia in this location contrasting with the frequency of infection is emphasized, only 39 cases having so far been reported (Simendinger, E. A., *Surg., Gynec. & Obst.*, **68:952**, 1939). Two cases are described, 1 of squamous cell carcinoma and the other of adenocarcinoma. No metastases were observed, and the tumors gave the impression of being cysts under pressure. Excision was carried out in both cases and recurrence of the squamous cell tumor occurred shortly after. The paper is illustrated with 14 photomicrographs.—M. D-R.

**DIONISI, H.** (Maternity Inst., Buenos Aires.) Tumor de la teca interna del ovario. (Fibroma Thecozellulare xanthomatodes ovarii de Löffler y Priesel.) Tumor of the inner theca of the ovary. *Rev. méd.-quir. de pat. fem.*, **15:18-49**, 1940.

This is a case of the hormone-secreting tumors first described in 1932 by Löffler and Priesel (*Beitr. z. path. Anat. u. z. allg. Path.*, **90:199**, 1932). It originated in a woman 32 years old showing uterine hemorrhages and hyperplasia of the endometrium of a folliculinic origin. The tumor had the appearance of a fibroma with a tendency to epithelioid transformation. The cells were extremely rich in lipoids as shown by staining reactions and chemical and optical analysis. The paper includes 29 references and 22 pictures of gross and microscopic preparations.—M. D-R.

**SCHILLER, W., and D. D. KOZOLL.** (Cook County Hosp., Chicago, Ill.) Primary signet-ring cell carcinoma of the ovary—with a case report. *Am. J. Obst. & Gynec.*, **41:70-78**, 1941.

A case thought to be a primary signet ring cell carcinoma of the ovary (Krukenberg tumor) is reported. The status of this type of tumor, whether primary in the ovary, or metastatic from primary intestinal adenocarcinomas, is discussed. Histological characteristics differentiating the Krukenberg tumor from the pseudomucinous cystadenoma are considered.—A. K.

#### GASTROINTESTINAL TRACT

**COLILLAS, D., and R. L. MASCIOTTRA.** (Rivadavia Hosp., Buenos Aires.) Schwannoma del intestino delgado. Schwannoma of the small intestine. *Rev. méd.-quir. de pat. fem.*, **15:245-250**, 1940.

The authors summarize the characteristics whereby gastric schwannomas are recognized according to the recent work of Masson, Gosset, Roussy, etc. The are: (a) presence of whorls of fusiform pseudo-connective tissue cells showing anastomoses; (b) presence of cylinders of cells by isolation of some nodules of the whorls; (c) formation of palisades; and (d) microcystic degeneration of the cells. The tumors are slow-growing, benign, and do not affect the general condition of the patient. All of these clinical and histopathological traits were found in the reported case which would be the first example of a jejunum-

ileal schwannoma. The tumor was removed together with 20 cm. of intestine, and the patient, a woman of 44, promptly recovered. One color plate of the growth and 2 photomicrographs are appended.—M. D-R.

### BONE

**MANZANILLA, M. A. (Mexico, D. F.)** Osteocondroblastoma metacarpal primitivo. Primary metacarpal osteochondroblastoma. *Medicina, México*, **20:18-31**. 1940.

Report of 1 case accompanied by 4 illustrations.—M. D-R.

**MORAIS, E. (Lab. pat. An., Fac. of Med., Porto, Portugal.)** Tumores gigante-celulares. Giant cell tumors. *Arq. de pat.*, **12:5-98**. 1940.

A report based on the study of 28 giant cell tumors (6 in the tendon sheaths, 18 in the jaw bones, 3 in the large bones, and 1 in a rib) and also on that of the small lesions induced in 10 rabbits fed large amounts of cholesterol and in which tendons were experimentally injured. The primary lesion of all these pseudo-tumors is one consisting of histiocytes. This lesion may later develop into a fibroblastic, xanthomatous, or giant cell growth. All these lesions have a remarkable tendency to become sclerotic, and their varied morphological aspects depend either on their type or on the phase of their evolution. Although hypercholesterinemia, associated or not with trauma, is a factor in the genesis of the lesions, the part it plays is only subsidiary. Various other factors such as bacterial toxins, endocrine disturbances, vitamin deficiency, circulatory alterations, *etc.*, acting either alone or in combination, are sufficient in most cases to explain the different reactions of the bone tissues. Among them one must place the so-called tumors of myeloplaxes or giant cell tumors. These granulomatous lesions are entirely different both clinically and histologically from the giant cell sarcoma, and the latter should not be segregated from the general sarcoma group no matter how rich in giant cells they are. The literature is thoroughly reviewed and about 250 references are appended. The text contains 32 illustrations.—M. D-R.

### LEUKEMIA, LYMPHOSARCOMA, HODGKIN'S DISEASE

de **OLIVEIRA-CAMPOS, J. (Lisbon.)** Leucémie myeloblastique a manifestation tumorale. Myeloblastic leukemia with tumor formation. *Arq. de pat.*, **12:146-159**. 1940.

The author describes a case diagnosed clinically and cytologically as myeloblastic leukemia where a tumor composed of myeloblasts destroyed the prostatic and periprostatic tissues. Seven photomicrographs and 30 references are appended.—M. D-R.

**STEINER, P. E. (Dept. of Path., Univ. of Chicago, Chicago, Ill.)** Reliability and significance of the Gordon test in Hodgkin's disease. *Arch. Path.*, **31:1-10**. 1941.

The Gordon reaction was positive in 16 (76.2%) of 21 cases of Hodgkin's lymphogranuloma studied by the author. Of 310 cases previously reported the test was positive in 229 (73.9%). The author found no positive reactions with material from lymph nodes from 40 nongranulomatous conditions. Of 452 control cases previously reported positive reactions were reported in 8 (1.7%). The Gordon reaction is considered reliable in differential diagnosis of lymph node diseases if it is accompanied by histological examination.

The Gordon agent, extracted from lymphogranulomatous tissue, causes spastic paralysis, incoordination, ataxia, retraction of the head, fits, and loss of weight in rabbits and guinea pigs after intracerebral injection. A photomicrograph is reproduced

showing disappearance of Purkinje cells in the cerebellum following injection of the agent. The author concludes that the distribution of the Gordon agent is such as to make it unlikely that it is the causative agent of Hodgkin's disease. Its properties are those of a nonliving agent, probably enzymatic. The test, while reliable, is nonspecific.—S. B-J.

### STATISTICS

**APPERLY, F. L. (Dept. of Path., Med. Coll. of Virginia, Richmond, Va.)** The relation of solar radiation to cancer mortality in North America. *Cancer Research*, **1:191-195**. 1941.

The relationship between the incidence of skin cancer and general cancer rates is shown to be direct in cold climates and inverse in hot climates. The total cancer mortalities of the various North American states and Canadian provinces are shown to fall with increasing solar radiation and with the numbers of people exposed thereto and are independent of the production of skin cancer. A correlation is suggested between immunity to cancer and exposure to solar radiation or to artificial sources of ultraviolet light. Such exposure is proposed as a means of reducing mortality from cancer. The paper is illustrated by 5 graphs summarizing statistics of cancer mortalities among persons exposed to solar radiation in the American states and Canadian provinces and the relation of cancer mortality rates to Smith's solar radiation index in various regions.—S. B-J.

**MACKLIN, M. T. (Univ. of Western Ontario, London, Canada.)** An analysis of tumors in monozygous and dizygous twins. *J. Hered.*, **31:277-290**. 1940.

A review of the literature with 15 new cases not previously published. Both members of monozygous twins have tumors more frequently, have the same type in the same organ and an age of onset more nearly identical than do both members of dizygous twins. Heredity plays an important role in the production of tumors and the age at which they develop.—J. J. B.

### CANCER CONTROL AND PUBLIC HEALTH

**MacFARLANE, C., F. S. FETTERMAN, and M. C. STURGIS. (Woman's Med. Coll. of Pennsylvania, Philadelphia, Penn.)** An experiment in cancer control. Preliminary report on periodic pelvic examinations of one thousand well women. *Am. J. Obst. & Gynec.*, **39:983-989**. 1940.

It is stated that the percentage of uterine cancer cases which are cured varies inversely with the stage of the disease in which the patient receives treatment. This statement is supported by the data from 50 cases of cancer of the cervix. Periodic pelvic examinations of 1,000 women 30 years of age and over are being made by the authors. This report covers the 1st and 2nd examinations. In the 1st examination 4 uterine malignancies were found, 3 of the cervix and 1 of the corpus. Benign lesions (papillomas, leucoplacic areas, polyps, endocervicitis, myomas, *etc.*) were found in 318 women, treatment being carried out in 113 cases. After an interval of 6 months a 2nd examination was made. No malignancies were found. Old benign lesions were present in 177 women, new lesions were found in 69 women. Of the 4 patients with malignant lesions 2 might have waited weeks or months before reporting to their physicians, since there were no pelvic symptoms except a moderate amount of leucorrhoeal discharge. The opinion is expressed that areas of chronic epithelial irritation predispose to the development of cancer and the only way to discover early cervical lesions is by means of periodic pelvic examinations.—A. K.