Incidence of lung tumors and of metastases. The material studied comprised 362 mice bearing primary lung tumors (90 control and 272 experimental); 41 of the former (46%) and 154 of the latter tumors (56%) were malignant. Metastasis occurred in 1 control and in 9 experimental mice (all female). The fawn mice appear to be somewhat more liable to lung tumors. Each experimental batch must be accompanied by a control batch, as the incidence varies in mice living 10 months or more (from 8.9% to 14.2% in controls, average 11.3%) and has declined in recent years. The 33 mammary tumors (2 of these in males) occurred in 2.5% of the control and 1.4% of the experimental mice; the author does not state in which series the tumors in males occurred.—E. L. K.


Fifty-two tumors of the testis were examined—1 from a calf, 2 from horses, and the remainder from dogs—and classified as follows: teratoma (1 case), seminoma (33 cases), benign interstitial cell tumor (1 case), malignant interstitial cell tumor (2 cases), and Sertoli cell tumor or tubular adenoma (15 cases). In addition there were 12 cases of nodular hyperplasia of interstitial cells.

Testicular tumors seem to occur more frequently in animals than in man. Evidence is given to show that the nodular hyperplasia of interstitial cells is not truly neoplastic, and that seminoma in dogs is of low grade malignancy as compared with the corresponding human tumor.

The paper is illustrated with four plates and includes an excellent bibliography and short review of the veterinary literature.—A. H.


A spontaneous chondrosarcoma attached to the ilium and metastasizing to the mammary region of a senile female guinea pig is described.—Authors' abstract.

Clinical and Pathological Reports

ETIOLOGY


During 30 years spent in a surgical clinic and pathological laboratory, the author has seen but two cases of sarcoma which seemed to fulfill the criteria of a sarcoma due to a single trauma.—H. G. W.

MULTIPLE TUMORS


A case report.—H. G. W.


A case report.—H. G. W.


A case is described of triple primary carcinoma; namely, carcinoma of the breast, adenocarcinoma of the rectum, and carcinoma of the adrenal, of which the last alone showed numerous intracellular inclusion bodies.—H. G. W.

DIAGNOSIS—GENERAL


Various types of precancerous lesions are discussed, and the importance of careful assay of every diagnosis of precancerous lesion is emphasized. The lesions considered are endocervicitis, intestinal polyposis, papillary tumors of the bladder, chronic cystic mastitis, intracystic papilloma of the breast, leukoplakia, hyperkeratoses, and lesions due to irritants. It is advised that a healthy skepticism be exercised in interpreting these lesions. Analysis of several groups of statistics on precancerous lesions tends to discount the belief that a large number of so called precancerous lesions eventuate in cancer.—R. C. R.

RADIATION—DIAGNOSIS AND THERAPY


An analysis of 52 cases of advanced carcinoma of the bladder treated with 800 kv. roentgen irradiation shows 7 of these cases to be cystoscopically free of disease for periods varying from 7 years (3 cases) to 6, 5, 2, and 1 year respectively.—H. G. W.

GARDNER, W. J., and NOSIK, W. A. [Cleveland Clinic, Cleveland, Ohio.] EXPERIENCES WITH ENCEPHALOGRAPHY IN CEREBELLAR TUMOR. Am. J. Roentgenol., 47:681-698. 1942.

The injection of air into the spinal subarachnoid space in cases of subtentorial tumor is universally condemned. At the Cleveland Clinic, encephalography is freely used in patients with brain tumor, although ventriculography is employed for subtentorial tumors. Encephalography was inadvertently carried out on 24 patients with subsequently verified cerebellar tumors. There were 3 unfavorable reactions with 1 death. Characteristically, the films showed absence of air in the ventricles, unusual prominence and curving of the supracallosal and singulate sulci, flattening of the pontine cisterns, and the presence of cerebellar herniation. The films do not localize the lesion but indicate that it is in the posterior fossa.—C. E. D.


The roentgen methods of diagnosing cancer of the colon that depend upon the barium enema are satisfactory only when the lesions are large and well advanced.
The double contrast enema, however, makes possible the diagnosis of early lesions. The earliest stages of carcinoma were found in the absence of gastrointestinal symptoms. In a small group of cases, the only common finding preceding the symptoms was occult blood in the stools. The technic of the double contrast enema is described and several roentgenographic illustrations are presented.—J. L. M.


After a review of the physical agents involved in the production of radiation effects, the histological changes are described and discussed in relation to the cell, connective tissue and blood vessels, epidermis and skin appendages—for such topics as radio-sterilization, radio-ulceration, radio-atrophy, radio-carcinoma, and xeroderma pigmentosum. So far as the mode of action of radiation is considered, stress is laid on the essentially destructive nature of the process, proliferation being regarded as a secondary reaction.

Two cases of roentgen carcinoma are referred to, the first showing an extremely early stage of squamous cell carcinoma, and the second the most advanced changes after a total duration of more than 30 years.

The paper is well illustrated (35 figures) and is provided with a useful bibliography.—A. H.


Much can be accomplished by the palliative treatment of widespread metastases from breast cancer. Pain is often relieved, bone metastases may calcify, skin metastases may be destroyed, visceral metastases, except those in the liver, may be improved, and useful life is often prolonged from one to several years. Data are presented on 124 cases, showing the distribution of metastases and the duration of life after the appearance of metastases. The technic of radiation therapy is described with charts, photographs, and illustrative roentgenograms. Eighty-three treated patients lived an average of 20 months as compared with an estimated 5 months' survival of untreated patients.—C. E. D.


During a period of 20 years the author treated approximately 1,000 patients with cancer of the cervix. About 30% remained tumor-free for at least 5 years. He considers radium an auxiliary to surgical treatment of mammary cancer, especially when it is impossible to remove large axillary metastases completely. Two examples of favorable results in cases of the latter type are cited.—M. J. E.


A study is presented of 82 patients with cancer of the breast who received roentgen therapy between 1933 and 1937 at the Presbyterian Hospital, New York. In 38 patients this treatment was followed by radical mastectomy. Tables are given showing the relationships between the size of the primary tumor, the presence of axillary metastases, the histological type, the gross and microscopic response to radiation, and the ultimate outcome. Patients whose tumors showed initial regression after irradiation survived longer than the others. Small tumors showed greater regression than large ones. Radiation produced greater regression in the primary tumors than in axillary metastases. The five year survival rate among the patients with axillary involvement (6 of 18) is higher than might be expected from surgical treatment alone.—C. E. D.


The benefits to be derived from radiation therapy in inoperable recurrent or metastatic cancer of the breast are generally accepted. The role of radiation in primary operable cases is problematical. As yet, no convincing data support the theory that preoperative irradiation is useful but a plea is made for its fair trial. The author has found postoperative irradiation beneficial in cases with lymph node metastases. Roentgen castration of women who are still menstruating after the age of 50 might be warranted as a preventive of breast cancer.—C. E. D.


Acoustic nerve tumors constitute about 9% of all intracranial new growths. They usually originate within the bony canal near the internal auditory meatus. Bone atrophy about the bony canal and in the petrous pyramid at the internal auditory meatus are the earliest roentgenological changes. Planigraphy is useful in making the meatus visible. A shift in the position of the pineal body may be of help. The differential diagnosis between acoustic neuroma and other subtenorial growths is discussed.—C. E. D.


The author presents data showing a 67% five year survival in 24 cases of group I carcinoma of the breast treated by preoperative irradiation and a 54% survival in 53 cases of group II similarly treated. He believes this represents an improvement over the results of surgery alone. Practically identical survival rates were obtained in cases of operable cancer treated with radium implantation plus roentgen rays without surgery, while the results of roentgen therapy alone were inferior.—C. E. D.


Part of a general review, this section dealing with effects on the gonads and the nervous system.—H. G. W.
SKIN AND SUBCUTANEOUS TISSUES


A study of 60 cases, in 36.7% of which the primary growth was on the lower extremities; in 41.7% on the head; in 11.7% on the upper extremities; and in 10% on the trunk. The incidence in the two sexes was nearly equal, there being 33 males and 27 females. There were 2 Negroes in the series. Of 25 patients presenting themselves in hospital practice comparatively late, only 2 were known to be alive after 5 years, whereas of 35 seen in dermatologic practice, 17 survived from 7 to 18 years. If the lymph nodes are involved the chances of cure by any operative procedure are practically nil.—H. G. W.


A case report with discussion.—R. C. R.


Two cases of angiomatous basal cell tumors are added to Geschickter’s series of 6 cases, none of which showed metastases. The tumors seem to arise from skin appendages and their relative malignancy may vary.—H. G. W.


A case report.—R. C. R.

Nervous System


An analysis of 179 cases of primary brain tumor seen at the Peter Bent Brigham Hospital between 1932 and 1941. The gross case mortality was 24.7% and the gross operative mortality was 16.3%. The majority of patients lived less than 2 years, although 72 survived from a few months to 8 years. Of the total series 59 (32.9%) are alive at the present time; 18 (30.5%) of the living patients are seriously crippled, while the remaining 41 (69.5%) are leading normal lives.—H. G. W.


An analysis of 151 cases emphasizes the necessity for early diagnosis since spinal cord tumor is frequently a surgical emergency.—H. G. W.


Evidence is presented emphasizing the significance of embryonal and histogenetic factors in the production of brain tumors. It is demonstrated that these factors are operative particularly in the region designated as the striatothalamic junction, including the sulcus terminais, and in other areas—the zone of coalescence of the anterior horns of the lateral ventricles and the subependymal cell plate about the nucleus caudatus and the septum pelucidum. These areas are frequent sites of tumor formation since they constitute common sites for embryonal residues. The spongioneuroblastoma is the most common variety of tumor and is not infrequently multiple. Evidence is presented that the spongioneuroblastoma and its transitional forms are a type of tumor in which both neural and glial elements coexist in varying ratios. Tuberous sclerosis has frequently been found associated with the spongioblastic variety of tumor, and the fact that numerous ependymal granulations are frequently found in spongioneuroblastosam and tuberous sclerosis points to the significance of the subependymal plate as the source of neoplastic alterations.—H. G. W.


A study of the significance of massive hemorrhage into brain tumors and its probable relationship to rapidly fatal termination was made in 94 cases of brain tumor not subjected to operation. The conclusion was drawn that
sudden death in the course of brain tumor is rarely associated with hemorrhage into the tumor or trauma to the head. Thrombosis is a much more important factor in sudden changes in the clinical course. Trauma to the head plays no part in the production of hemorrhage into a tumor.—H. G. W.

**BREAST**


A study of 5 year end results in 3,535 cases, in which an attempt was made to evaluate surgery alone, preoperative irradiation, postoperative irradiation, and irradiation alone in the cure of operable breast cancer, revealed that the cases treated by surgery alone were a highly selected group and not representative of a cross section of the accomplishments of treatment by this method. The study shows that the preferable method of treating operable breast cancer is immediate radical mastectomy combined with postoperative irradiation. In the cases so treated, a 5 year survival was obtained in 76.8% of those with no axillary involvement, and in 41.8% of those with axillary involvement. The poorest end results observed in this study were in those unselected cases (24%) given irradiation only. The 5 year period was survived in 69% of the total 1,383 cases, making a salvage of 51%.—H. G. W.


The responses of breast tissue to irritation or stimulation are limited and are made up of various combinations of proliferation, functional differentiation, and involution. These reactions may be complicated by retrograde changes. The boundary between benign and malignant hyperplasia is arbitrary. The origin of sarcomas can usually be traced to old fibroadenomas. Epithelial proliferation may be considered benign only as long as the normal double layered epithelial cells remain in "sympose." Neoplasia may be arbitrarily defined as beginning in epithelial lesions when the two layers of differentiated cells cease to be formed and growth is of a uniform cell type. The earliest cancers are intraepithelial growths limited by intact basement membranes.—C. E. D.


A splendidly illustrated article giving the details of the operative removal of the breast.—H. G. W.


The report is based on 65 specimens from partial or total mastectomy in the male examined at the Bland-Sutton Institute of Pathology during the years 1924-1940. Two of these are of particular interest in that they were from workers in stilbestrol, in each of whom hypertrophy of one breast occurred. In the whole series there were 19 malignant neoplasms, of which 15 were carcinomas arising in the gland tissue of the breast, 3 were sarcomas, and one was a rodent ulcer of the nipple. There were 5 benign neoplasms, and the remaining cases (41) were of chronic mastitis. Of the last, only 3 showed a "dangerous" degree of epithelial proliferation, and 2 of these were from the stilbestrol workers. Their ages were 18 and 23 and they had been handling stilbestrol or its precursors for 12 and 10 weeks respectively. The whole of the above material is analyzed and compared with similar lesions occurring in women during the same period. Chronic mastitis occurred in the male twice as commonly as cancer (the reverse proportion obtaining in women) but a degree of epithelial proliferation sufficiently advanced to give rise to apprehension of possible malignancy occurred in cases of chronic mastitis in men only half as frequently as in women.—A. H.


Twenty benign lesions of the male breast are reviewed and one unusual case of lipoma of the male breast is described in detail. Trauma was an etiological factor in but 2 of 14 cases.—H. G. W.

**FEMALE GENITAL TRACT**


Adenomyosis is the result of spontaneous generation of endometrial stromal or interstitial cells from and within the myometrium. The stromal or interstitial cells thus produced differentiate later to form the gland cells of the endometrium. Adenomyosis of the uterus is definitely not a potentially malignant lesion.—H. G. W.


The formation of mesenchyme from the epithelium of the müllerian duct is described in detail. It occurs near the caudal end of the duct while the latter is growing toward the urogenital sinus. Similar formation of mesenchyme also takes place at the expense of the nearby peritoneal epithelium, the so called tubal ridge. Consequently, the nonepithelial tissues of the urovaginal canal arise not only from the mesenchyme originally present in that area but also, in part, from the epithelia of the inner and outer linings of the canal. Thus a strong possibility exists that these nonepithelial cells may possess the developmental potentials of their epithelial coverings. These facts make reports of postmenstrual regeneration of uterine epithelium from the stroma appear less improbable than is generally assumed. Furthermore, the possibility must be taken into account that a clear cut distinction of epithelial and nonepithelial structure may not always be possible in tumors of derivatives of the ccelomic wall.—H. G. W.


In contrast to the view that mitotic division is seldom or never seen in uterine leiomyomas, the authors, by using...
an improved technic, found mitotic figures in 63% of these tumors, and in 21% found them easily and in great numbers.—H. G. W.


The authors feel strongly that a prompt diagnosis and adequate early treatment will bring about a pronounced increase in the cures of this disease. Radiation very seldom cures carcinoma of the vulva and frequently delays the institution of proper treatment to such an extent that cure becomes impossible. Radical surgery should be carried out whenever feasible.—J. L. M.

MALE GENITAL TRACT


A report of a series of 40 cases in which immediate general improvement and relief of metastatic pain was obtained. Changes in the primary growth following castration were evident clinically and at autopsy; x-rays showed the healing of bone in metastatic areas and disappearance of metastatic tumors in the lungs. Stilbestrol caused regression of the primary growth and clinical improvement but not to the same extent as castration.—H. G. W.


Reduction of the action of androgens in the body, either by surgical castration, or by biochemical neutralization by the administration of the synthetic estrogen stilbestrol, or by a combination of the two, the method used in a majority of the cases (77%), benefited 26 out of 27 cases of inoperable carcinoma of the prostate. No beneficial effects on bone metastases were noted. The acid phosphatase, if elevated, fell rapidly toward normal following castration or stilbestrol therapy, whereas the alkaline phosphatase usually rose. Estimations of the 17-ketosteroids were made in 18 cases before and after castration and the impression was gained that the level of the 17-ketosteroids does not give information of value.—H. G. W.


Although patients with prostatic cancer are more comfortable after castration or the administration of estrogens, the majority die, but the duration of life may be somewhat longer. The clinical benefit that follows the oral administration of stilbestrol seems to be as great as that following castration. It seems well demonstrated that the natural history of cancer of the prostate may be definitely modified by changes in the endocrines. This idea possibly gives a starting point for the cure and also the prevention of prostatic cancers.—H. G. W.


An attempt is made to point out the proper management of tumor of the testicle by emphasizing the need for early recognition of the tumor, early orchietomy, the role of roentgen irradiation, the significance of hormone studies in correlation with the histologic picture, and subsequent treatment including a regular physical, roentgenologic, and hormone check up for metastases. Forty-two cases of tumor of the testicle are reported. Fifteen patients are living, the survival time being from 4 months to 12 years. Five of the living patients are not well, 2 have demonstrable metastases. Twenty-seven patients are dead, 7 died within the first year of treatment, 5 of the 27 had evidence of metastases. Eighteen lived for 1 to 6 years, 1 for 8 years, and 1 survived 10 years.—J. L. M.


A report is made of an external female pseudohermaphrodite with embryonal carcinoma of an abdominal testicle, and 60 cases of tumors in pseudohermaphrodites, found in the literature, are reviewed.—H. G. W.


Among 5 patients with carcinoma of the prostate, castrated 7 to 9 years ago, none was cured, although relief was obtained in some cases.—H. G. W.


An analysis of 29 tumors, 20 of which were homologous and 9 heterologous. In 10% there was a history of trauma. The heterologous tumors appeared in an earlier age group and offer a poorer prognosis than the homologous tumors.—H. G. W.

URINARY SYSTEM—MALE AND FEMALE


A report of 3 patients, apparently dying of genitourinary carcinoma, who were given intraspinal alcohol injections to relieve pain and have unexpectedly survived, 2 of them for 5 years.—H. G. W.


Pathological studies of 6 cases of carcinoma of the renal pelvis and ureter show that the early changes that first involve the subepithelial supporting tissue are inflammatory in type. This is followed by proliferation of the basal layer which eventually becomes papillary or infiltrating.—H. G. W.


On the basis of the hypothesis that vesical papillomatosis is the result of a virus, the author recommends excision...
of the growths with the wire loop electrode, cauterization of the bases with the ball electrode, and sterilization of the bladder mucosa with phenol.—H. G. W.


A report of a fifth case of lymphosarcoma of the bladder. The tumor apparently originates from lymphoid tissue formed in response to chronic irritation and is a localized condition without evidence of generalized glandular involvement.—H. G. W.


A plea for early radical treatment of carcinoma of the bladder.—H. G. W.


In 1,806 necropsies, 22 adrenal rests in the kidneys were disclosed.—H. G. W.

ORAL CAVITY AND UPPER RESPIRATORY TRACT


The tracheal carcinoma arose at the point of irritation by the tracheotomy tube that had been inserted 15 years before at the time of operation for cancer of the larynx.—H. G. W.


Methods are described for removing operable growths involving the lower pharynx and upper esophagus.—H. G. W.

SALIVARY GLANDS


The mixed tumors of the salivary glands are a group by themselves. It is impossible to be dogmatic about them for they disregard every canon of oncology and continually do the most unexpected things. It is impossible through the microscopic study of their structure to foretell what any of them will do, and any variety may recur. The long standing metastases exhibited the histologic structure of the parent tumor.—H. G. W.


The so-called mixed tumors of the salivary glands include cancerous and noncancerous neoplasms composed of one or two different types of neoplastic cells. Both types of cells are normally present in the salivary glands, one represented by the secreting epithelium, the other by the basket cells. The latter are peculiar smooth muscle cells belonging to the myoepithelium. Some of these neoplasms arise from the epithelium. In these tumors an excessive and probably also qualitatively abnormal secretion produces a peculiar myxomatous and pseudocartilaginous appearance of the connective stroma. True cartilage may be present and is formed by metaplasia from the stroma. Other neoplasms arise from both the epithelium and the basket cells. These are truly organoid tumors which closely reproduce the normal components and structure of the salivary glands. Squamous metaplasia of the epithelium, myxomatous and pseudocartilaginous stroma, and true cartilage and bone may be present. A few neoplasms arise from the basket cells alone. The presence of myoepithelial cells in these neoplasms accounts for the resemblance to tumors of the sweat glands, the mammary glands, and probably also the lacrimal and ceruminous glands.—H. G. W.


A report of a tumor, 13 by 9 cm., removed under local anesthesia.—H. G. W.

INTRATHORACIC TUMORS—LUNGS—PLEURA


Two cases are reported of metastatic tumor invasion of bronchi with the presenting symptom of hemoptysis simulating primary bronchiogenic carcinoma.—H. G. W.


The observations reported here point out the similarity of infantile types of structures, especially the bronchial mucous glands and the peribronchial and peritracheal lymphohendoid tissue, to the histologic findings in bronchial adenoma.—H. G. W.


An investigation of a pleural tumor by the method of tissue culture leads to the conclusion that the tumor is truly a mesothelioma. In a footnote, however, Pappenheimer throws doubt on this conclusion, and suggests that the growth is really a secondary tumor from an apparently benign uterine myoma.—H. G. W.
Gastrointestinal Tract


The conception is presented that the gastric mucosa can act as an endocrine gland by means of hormones. There are pronounced differences in blood hormone content between the sexes, which may explain the sex discrepancy in gastric cancer.—H. G. W.


A discussion of operative technic.—H. G. W.


The prevalent assumption that prepyloric ulcers are more likely to be malignant than ulcers situated elsewhere in the stomach has been challenged in recent years. To obtain information that might help to solve the question, ulcerous prepyloric lesions observed roentgenologically and operated on at the Mayo Clinic during the period 1937 to 1941 inclusive were reviewed. All ulcerating carcinomas that had been diagnosed roentgenologically were excluded from consideration. After other exclusions made necessary by the roentgenologic approach, there remained 61 ulcerating carcinomas and 71 ulcers; of the latter, 63 were benign and 8 (11.3%) malignant. These figures are compatible, though not identical, with the generally accepted estimate that from 10 to 12% of all gastric ulcers prove to be malignant. This study thus supports the newer view that prepyloric ulcers are not more often carcinomatous than are gastric ulcers in other locations.—H. G. W.


Three cases of multiple adenomatosis of the colon are presented, in all of which malignancy had developed. One patient had a family history of bowel malignancy.—H. G. W.


Of the 30 cases of limitis plastica observed, 26 involved the stomach, 3 the large intestine, and 1 the gall bladder. The time interval between the onset of symptoms and death was much shorter than with other types of cancer and the survival time after operation was very brief. Metastasis to the liver was found only 3 times, but among 6 females the ovaries were involved 3 times. It is very questionable whether limitis plastica, in the sense of a purely inflammatory, nonmalignant lesion, exists.—H. G. W.


A report of a carcinoid tumor growing from the stump of the appendix into the cecum with metastases to the regional lymph nodes. This is the 77th reported case of malignant carcinoid tumor.—H. G. W.


The 3 cases here reported are the only ones to be found in the literature.—H. G. W.


Based on an experience of 147 cases, the conclusion is reached that, in carcinoma of the colon, resection and aseptic anastomosis is the ideal operative procedure.—H. G. W.

Bone and Bone Marrow


This case of a 25 year old male was remarkable for the total absence of Bence-Jones proteinuria and for an absorption of bone so extensive that the body of the patient seemed like a flattened, collapsed, fluctuant mass.—H. G. W.


A report of the survival for 13 years of a patient with an osteogenic sarcoma of the femur and numerous pulmonary metastases.—H. G. W.

Blood Vessels


Success in the treatment of hemangiomas often depends on selection of the appropriate form of therapy. Radiation usually gives poor results in capillary hemangiomas or "port wine stain" since doses large enough to produce permanent skin injury are necessary to destroy the mature capillary endothelium. The hypertrophic endothelial hemangioma or "strawberry mark" is made up of masses of proliferating endothelium and generally responds well to radiation. Surgical excision is usually the treatment of choice in cavernous hemangioma, although radiation may sometimes be used. Sclerosing solutions, carbon dioxide snow, and electrocoagulation have been successfully used but have several disadvantages. The technic of surface and interstitial radium and radon application is discussed in detail.—C. E. D.

Correction

The author of the paper entitled "The Distribution of Doses of Radioactive Phosphorus in Leukemic Patients," Cancer Research, 3:334-336. 1943, wishes it said that mc. in lines 5, 11, and 12 on page 336 should have been μc.