of 26% (25 tumor mice among 96 animals).—Authors' abstract.

The Chemical Aspects of Cancer. Rhoads, C. P. [Memorial Hosp., New York, N. Y.] *J. Mt. Sinai Hosp.*, **9**: 1-10. 1942.

From experimental work carried out in the author's and other laboratories, the following conclusions can be drawn: dibenzanthracene can be oxidized in the body thus losing its carcinogenic power; the carcinogenic effect of another chemical, butter yellow, can be postponed or prevented by dietary constituents, one of which appears to be riboflavin, and another an unidentified substance present in casein; a continued deficiency of Coenzyme I may be induced in the affected liver cell by the feeding of a deficient diet plus butter yellow; a metabolic derivative of butter yellow that poisons the Coenzyme I system has been isolated, and its toxic effect on normal cells has been demonstrated both *in vitro* and *in vivo;* under certain conditions the cancer cell is immune to the toxic derivative that damages the normal cell. This development of resistance toward a toxic agent may provide an explanation of the mechanism of malignant transformation. A search for a compound that will reverse the phenomenon last mentioned, *i.e.*, damage cancer cells and leave normal cells unharmed, is suggested as the next step in the study.—S. A. G.

The Chemistry of Carcinogenesis and Tumor Growth. Fifth Frank Billings Lecture of the Thomas Lewis Gilmer Foundation, May 28, 1943. Voegtlin, C. [Bethesda, Md.] *Proc. Inst. Med. Chicago,* **14**: 454-467. 1943.

From the biochemical and functional viewpoint, the author suggests the following tentative picture of the cancer process: chemical carcinogenic agents acting in optimum concentration upon genetically susceptible cells set in motion long-continued cell proliferation. This does not necessarily give rise to cancer cells and under certain conditions may be reversible. The cause of malignant change is still a mystery, but it may involve alterations in intracellular enzyme patterns as revealed by comparative studies on malignant tumors and their normal homologous tissues. Progress will depend on a better understanding of the chemistry and physiology of the normal cell.—M. E. H.

Clinical and Pathological Reports

Skin and Subcutaneous Tissues

Treatment of Epithelioma of the Skin of the Ear. Driver, J. R., and Cole, H. N. [Sch. of Med., Western Reserve Univ. and Univ. Hosps., Cleveland, Ohio] *Am. J. Roentgenol.*, **48**:66-73. 1942.

Unusually difficult complications may arise in the treatment of epithelioma of the ear, usually as a result of insufficient or faulty initial treatment. These tumors are no more difficult to treat than other skin tumors if an early diagnosis is followed by proper therapy.

The author treated 130 cases and followed 107 for 1 year or more. Thirteen patients are known to have died of cancer leaving 94 or 87.9% who were possibly cured. The average age of the patients was 64 years, and men outnumbered women in a ratio of 3:1. Sixty-six per cent of the growths were on the helix or posterior auricular fold. The tragus was involved primarily or secondarily in 14 cases, the anthelix in 5, the lobe in 11, and the concha in 4. The primary tumor was in the auditory canal in only one instance, but extension into the canal was found 6 times. The perichondrium was involved in 35 cases (27%). Biopsies of 71 tumors showed 41 (57.7%) squamous cell carcinomas, 24 (33.8%) basal cell carcinomas, 2 basosquamous epitheliomas, 1 cylindroma, 2 melanoepitheliomas, and 1 sarcoma of Kaposi. Radiation therapy was used in most of the cases, although early lesions were treated by electrodesiccation.—C. E. D.

Treatment of Cancer of the Skin of the Nose. Robinson, G. A., and Harris, J. H. [New York, N. Y.] *Am. J. Roentgenol.*, **48**:59-65. 1942.

The nose is the most frequent location of cancer of the skin of the face. Most of the tumors are either of the reticulated or adenoid basal cell type. Small superficial lesions may be treated by monopolar electrodesiccation; more extensive infiltrating growths require x-ray or radium treatment; surgery is necessary in occasional cases. The technique of radiation therapy is discussed at some length with particular stress on the use of adequate dosage. Reconstructive surgery may be necessary after treatment of large lesions. The end results were satisfactory in all but 12 of 146 patients treated by the authors.—C. E. D.

Cutaneous Carcinoma. IV. Analysis of 20 Cases in Negroes. Schrek, R. [Veterans Administration, Hines, Ill.] *Cancer Research,* **4**:119-127. 1944.

The records of Edward Hines Jr. Hospital and the data presented in the literature were analyzed statistically to determine the incidence and the etiologic factors of carcinoma of the exposed and covered skin in the colored race. It is concluded that scars and chronic inflammatory lesions are important etiologic agents in cutaneous cancer of the negro.—Author's abstract.

Nervous System

Lymphoblastoma of the Spinal Cord Simulating Other Organic Diseases: Report of Two Cases. Baker, G. S. [Mayo Clinic, Rochester, Minn.] *Proc. Staff Meet., Mayo Clin.*, **17**:588-592. 1942.

In the 2 cases reported an unsual type of tumor of the spinal cord was found. Both are particularly interesting since the symptoms had suggested a serious organic disease in a region remote from the central nervous system. In the first case the lesion was operable, and the patient received definite benefit from the removal of the tumor and postoperative roentgen therapy. In the second case the tumor was advanced and biopsy only could be performed. The outlook for return of function in this patient was poor.—J. L. M.

Cysts of the Cerebellopontine Angle Simulating and Masking Acoustic Neurinoma: Report of Two Cases. Svien, H. J., and Love, J. G. [Mayo Clinic, Rochester, Minn.] *Proc. Staff Meet., Mayo Clin.*, **17**:385-390. 1942.

The authors report a case of chronic cystic arachnoiditis in which symptoms and findings closely simulated those of acoustic neurinoma. A second case is reported in which

a cystic cap (containing xanthochromic fluid) of such magnitude that it was thought to be sufficient to account for the patient's symptoms, overlay a neurinoma of the acoustic nerve.—J. L. M.

Eye

Pathological Findings in Eyes Enucleated for Glaucoma Due to Sarcoma of the Uvea. Bothman, L. [Univ. of Chicago, Chicago, Ill.] *Illinois M. J.*, **83**:173-175. 1943.

Report of 4 cases. No detension operation to save a blind, painful eye should be done in any case in which the etiology of the secondary glaucoma is not definitely known. Such operations may postpone the enucleation of an eye containing a sarcoma.—M. E. H.

Precancerous Melanosis and the Resulting Malignant Melanoma (Cancerous Melanosis) of Conjunctiva and Skin of Lids. Reese, A. B. [Inst. of Ophth., New York, N. Y.] *Arch. Ophth.*, **29**:737-746. 1943.

Malignant melanoma arising from diffuse differentiation acquired in middle age is different from that arising from a nevus. "Cancerous melanosis" seems to be a suitable term for the type of malignant melanoma that arises from acquired precancerous melanosis. There is a general discussion of the appearance and histology of this type of tumor.—E. C. R.

Female Genital Tract

A Review of Ninety-Four Mixed Mesodermal Tumors of the Uterus. With Report of an Additional Case. Glass, M., and Goldsmith, J. W. [Kings County Hosp., Brooklyn, N. Y.] *Am. J. Obst. & Gynec.*, **41**: 309-317. 1941.

In the additional case, fibroids as well as a mixed tumor were found. Muscle tissue could not be demonstrated within this mixed tumor. Radical surgery followed by deep x-ray therapy is the treatment recommended.—A. K.

Two Types of Urological Complications Occurring in Patients Treated for Cancer of the Cervix. Hayllar, B. L. [Pennsylvania Hosp., Philadelphia, Pa.] *Urol. & Cutan. Rev.*, **46**:617-619. 1942.

The two types of complications referred to are ureteral stricture and bladder ulceration. Illustrative cases are reported. With proper urological attention the 5 year cure rate may be increased, especially since many complications are not due to the presence of an active tumor.—V. F. M.

Unusual Coexistence of Granulosa Cell Tumor and Ovarian Teratoma Containing Thyroid Tissue. Murray, N. A., Dockerty, M. B., and Pemberton, J. deJ. [Mayo Clinic, Rochester, Minn.] *Am. J. Obst. & Gynec.*, **44**: 134-137. 1942.

A case report. In a woman past the menopause the unusual coexistence of a granulosa cell tumor and an ovarian dermoid cyst containing hyperplastic thyroid tissue was observed.—A. K.

Carcinoma of Bartholin's Gland. Pund, E. R., and Cole, W. C. [Univ. of Georgia Sch. of Med., Augusta, Ga.] *Am. J. Obst. & Gynec.*, **43**:887-890. 1942.

A case of carcinoma of Bartholin's gland is reported, the thirty-ninth to appear in the literature. The tumor was of low malignancy and no metastases were found. The lesion bore a striking resemblance to that of lymphogranuloma venereum. In the vulva the "elephantiasis" was unilateral and confined to the labium majus. The Frei test was repeatedly negative.—A. K.

Cancer of the Cervix as Seen in a Hospital for Far Advanced Cases. Saltzstein, H. C., and Rao, J. [Mercy Hall Tumor Clinic and Hosp., Detroit, Mich.] *J. Mt. Sinai Hosp.*, **10**:156-166. 1943.

In a review of 139 cases of carcinoma of the cervix, the authors conclude that 50% occur before the menopause, the initial symptoms being hemorrhage and leucorrhea. Hysterectomy has practically been eliminated as a form of therapy; x-ray and radium in combination is now the only treatment these far advanced patients receive. Ten per cent of cases still seek their first medical consultation after they have had symptoms more than 1 year. The preponderant symptoms of the far advanced stage are pain and weakness. Ureteral strictures, present in 50 to 75% of these patients at time of death, have been relieved by cutaneous ureterostomies. Rectovaginal and vesicovaginal fistulae are frequent. Uremia starts insidiously and is frequently the cause of death, with sepsis often added. General metastases are more frequent than they were formerly, since many patients now live longer following treatment. In the series of cases reviewed in the present report, no untreated patient lived longer than 3 years. Of 15 treated patients, 10 lived more than 5 years, thus treatment definitely prolonged the lives of many of those who ultimately died.—A. Cnl.

The Present Status in the Treatment of Cervix Cancer. Taussig, F. J. [St. Louis, Mo.] *J. Mt. Sinai Hosp.*, **10**:172-175. 1943.

While the immediate mortality following radiation treatment of cancer of the cervix is considerably less than that following hysterectomy, the late complications often leading to death are definitely more frequent. The damage done by surgery is immediately evident, whereas the injuries produced by x-rays and radium may take years for development. In group I cancers (League of Nations classification) surgery in patients who are good operative risks presents definite advantages over radiation. In group II cancers, radiation of the primary tumor is advisable because radical surgery gives too high a primary mortality. Radiation can be combined with surgical removal of tributary pelvic lymph nodes, since the primary mortality of this procedure is only 1.6%, and the 5 year additional salvage by this operation is 15%. In group III and group IV cancers, radiation alone should be considered even though it may often be attended by fatal complications and can be expected to save only 1 out of every 5 or 6 patients.—A. Cnl.

Removal of Vulvae and Perineal Body Because of Squamous Cell Epithelioma. Tyler, A. F. [Immanuel Hosp., Omaha, Nebr.] *Am. J. Surg.*, **61**:302-304. 1943.

Report of a case treated surgically and with x-rays (1,600 r to each inguinal region). There was no recurrence 32 months after operation.—W. A. B.

Hematuria Complicating Fibromyoma of the Uterus. Wimpfheimer, S. [Mt. Sinai Hosp., New York, N. Y.] *J. Mt. Sinai Hosp.*, **10**:301-304. 1943.

Urologic complications are not uncommonly associated with gynecologic conditions, mostly as a result of pres-

sure on the ureter and bladder by pelvic tumors, or inflammatory disease. In these conditions it is unusual to see hematuria unless some gross lesion is present in the urologic tract. In the case reported, the pressure by the tumor probably produced vascular stasis with rupture of vesical veins resulting in bloody urine. Following the removal of the uterine fibromyomas and adnexa, the ureteral defect made visible preoperatively in the retrograde pyelogram disappeared, as did the hematuria. Cystoscopy at no time revealed any blood from the ureter.—A. Cnl.

Male Genital Tract

Carcinoma of Penis—Report of a Case of Carcinoma and Active Gonorrhea Co-Existing. Caponegro, F. [Greenpoint Hosp., Brooklyn, N. Y.] *Urol. & Cutan. Rev.*, **45**:501-504. 1941.

The etiology of carcinoma of the penis is discussed, and its infrequency after circumcision is stressed. Only a few cases have been reported in circumcised patients. A case is described presenting coexistent gonorrhea, which was treated first. Later, amputation and excision of nodes was performed.—V. F. M.

Testicular Neoplasms (with Case Histories). Fenton, C. C. [Morgantown, W. Va.] *Urol. & Cutan. Rev.*, **45**:681-684. 1941.

The various types of testicular neoplasms are described. A mixed tumor, 3 embryonal carcinomas, and 2 embryonal carcinomas with lymphoid stroma are reported with illustrations.—V. F. M.

Fibroma of the Tunica Vaginalis Testis. Schulte, W. G. [Salt Lake City, Utah] *Northwest Med.*, **41**:60-63. 1942.

Palpable nodules thought to be malignant proved, on removal of the testis, to be multiple fibromas of the tunica vaginalis. Observations concerning all forms of testicular tumors are quoted from the literature.—E. E. S.

Cord Tumor. Whitcomb, B. B. [Hartford Hosp., Hartford, Conn.] *Connecticut M. J.*, **7**:693-696. 1943.

Six cases representing both the typical and the unusual types of cord tumors are reported.—M. E. H.

Perineal Prostatectomy Versus Transurethral Resection for Hypertrophy and Cancer of the Prostate. Young, H. H. [Brady Urological Inst., Johns Hopkins Hosp., Baltimore, Md.] *Surg., Gynec. & Obst.*, **77**:1-15. 1943.

A critical analysis of 200 selected cases indicates that perineal prostatectomy is superior to transurethral resection in the larger hypertrophies, in cases with calculi in the prostate, and in chronic prostatitis. Another great advantage of the perineal procedure is the opportunity it affords to make a diagnosis and effect a cure of carcinoma of the prostate.—J. G. K.

Tumors of the Spermatic Cord: Report of a Hemangioma. Zide, H. H. [Station Hosp., Fort Ord, Calif.] *J. Urol.*, **50**:255-257. 1943.

A hemangioma of the spermatic cord in a 27 year old patient is described.—V. F. M.

Salivary Glands

Primary Malignant Tumors of the Submaxillary Gland with Special Reference to Mixed Tumors. Dockerty, M. B., and Mayo, C. W. [Mayo Clinic, Rochester, Minn.] *Proc. Staff Meet., Mayo Clin.*, **17**:593-603. 1942.

Eighty-one primary submaxillary malignant tumors are reviewed from clinical and pathologic aspects. Adenocarcinoma of the mixed tumor type constituted 63% of the series. They represented low grade, slowly growing adenocarcinomas usually not associated clinically with pain or much local fixation. The tendency toward recurrence was not pronounced except when inadequate tissue had been removed.

Adenocarcinoma of the cylindroma type accounted for 18.5% of the tumors. The cylindromas were as a rule associated with a clinical history somewhat shorter than that of mixed tumors. Pain was a prominent clinical symptom, and local fixation was sometimes observed. Pathologically, the lesions, although they were of a moderate degree of malignancy, presented pronounced infiltrative tendencies with selective invasion of nerves. The rate of recurrence was extremely high, and the outlook generally unfavorable.

An intermediate group of lesions presented the microscopic features of both the mixed tumor and cylindroma but, unfortunately, the prognosis of the latter.

Atypical tumors described as miscellaneous were present in 9.9% of the cases. Prognosis depended partly on the type and grade of the lesion and partly on the extent of involvement of the lymph nodes.

Clinical follow-up studies demonstrated the usefulness of the microscopic classification in relation to prognosis. Disappointing results followed conservative operation on malignant tumors of the submaxillary gland. Tumor and gland should be removed in all cases of mixed tumor. For cylindromas, pure or mixed, and for most of the neoplasms in the miscellaneous group, dissection of the lymph nodes should be carried out as well.—J. L. M.

Gastrointestinal Tract

Clinical and Roentgenologic Manifestations of Tumors of the Small Intestine: Review of Thirty-Five Cases. Good, C. A., and MacCarty, W. C., Jr. [Mayo Clinic, Rochester, Minn.] *Proc. Staff Meet., Mayo Clin.*, **17**:20-22. 1942.

Roentgenologic examination of the small intestine is difficult and time-consuming. The necessity for prolonged and repeated roentgenoscopic observation increases the amount of radiation received by the patient and the examiner. For this reason it is expedient that patients who are referred for examination be carefully selected and that unnecessary or routine examinations be kept at a minimum.

In order to determine a practical basis for the selection of patients for roentgenologic investigation of the small intestine, a review was made of all cases of tumor of the duodenum, jejunum, or ileum encountered at operation from 1939 to 1941, inclusive. Only those cases were included in which exploration was carried out primarily because of the tumor. Thirty-five cases fulfilled these requirements. The pathologic type and incidence of each lesion are given. By far the most common tumor was adenocarcinoma, with leiomyoma second in frequency. Although carcinoid tumors are considered true adeno-

carcinomas, they are classified separately because of their differing clinical features. The lesions were situated in all segments of the small intestine; 8 occurred in the duodenum, 15 in the jejunum, and 12 in the ileum. Thirteen of the 16 adenocarcinomas, as well as 4 of 6 leiomyomas, were in the upper portion of the small intestine. Study of the records of these patients revealed that the most important clinical manifestations were (a) evidence of loss of blood, (b) the presence of a mass in the abdomen, and (c) evidence of past or present intestinal obstruction. In the majority of instances the lesson can be demonstrated roentgenologically.—J. L. M.

Colonic Polyposis: Its Role in Failure to Effect Cure in Certain Cases of Carcinoma of the Colon and Rectum by Resection of the Primary Lesion. MAYO, C. W. [Mayo Clinic, Rochester, Minn.] *Proc. Staff Meet., Mayo Clin.*, **17**:181-184. 1942.

Records made at necropsy of 334 patients who had died with primary carcinoma of the colon or rectum were studied. It was found that 114 patients, or 34%, had had polyps in addition to the primary neoplasm accounting for the symptoms. In 14% of the cases these polyps were already malignant. In 8 cases there was so-called congenital multiple polyposis; in 31 instances polyps were few but were in multiple situations in the colon, and in 5 cases the situations had not been noted.

Additional study of the series of cases revealed that in 131 resection of the colon or rectum had been performed with the indication at the conclusion of the operation that the patient had a good chance of being cured. Death in this particular group ensued within less than 3 weeks after operation. Therefore, it can be assumed that no change relative to polyps of the colon would have taken place in the short time between operation and death. It was found that in 49, or 37%, of these latter cases, there were remaining polyps.

In order better to interpret these observations, records made at necropsy of a control series of 100 patients who had died after surgical operations performed for conditions other than malignancy were studied. It was found that in 16 instances polyps of the colon or rectum were present, and in 8 of these the polyps were malignant.—J. L. M.

Carcinomatous Sigmoidovesical Fistula Associated with Multiple Polypoid Disease of the Colon: Report of Case. MAYO, C. W. [Mayo Clinic, Rochester, Minn.] *Proc. Staff Meet., Mayo Clin.*, **17**:460-461. 1942.

This case is reported because it demonstrates that not all sigmoidovesical fistulas caused by malignant lesions are inoperable, that multiple polypoid disease of the colon is a serious problem requiring radical surgical procedures, but that in selected cases the rectum can be preserved and an abdominal ileal stoma obviated.—J. L. M.

Lymphosarcoma of the Intestine. Report of Two Cases. MENNE, F. R., MASON, D. G., and JOHNSTON, R. [Univ. of Oregon Med. Sch., Portland, Ore., and St. Luke's Hosp., San Francisco, Calif.] *Arch. Surg.*, **45**:945-956. 1942.

A brief review of the literature and report of 2 cases. Both lesions, which were removed at operation, involved the terminal ileum and cecum. One patient shows no evidence of recurrence 4 years after operation; the other died of recurrence of the tumor.—G. H. H.

Premalignant Lesions of Colon, Rectum, and Anus. PARKINSON, E. D. [Boise, Idaho] *Northwest Med.*, **41**: 206-208. 1942.

Polypi occurring in the distal portion of the colon are considered important lesions because of the danger of malignant transformation. In the anal region the precancerous lesions are said to be fistulae, ulcers, hemorrhoids, papillitis, and pruritus. Papillomas with a broad base are especially likely to become malignant. Excess mucous production or hemorrhage may lead to their detection. Pain is seldom present but lesions in the lower rectum may produce tenesmus. It is believed that at least 14% of persons have colonic or rectal polypi. Removal of polypi is urged as a prophylactic measure against cancer.—E. E. S.

Transthoracic Resection of the Stomach and Esophagus for Carcinoma: Report of Case. WALTERS, W. [Mayo Clinic, Rochester, Minn.] *Proc. Staff Meet., Mayo Clin.*, **17**:241-247. 1942.

In this paper the author reports the first case in which transthoracic resection of the stomach was performed successfully at the Mayo Clinic and considers briefly some results obtained by, and the value of, the clinical investigation of surgical problems.—J. L. M.

Surgery of the Terminal Ileum, Cecum, and Right Colon. WHIPPLE, A. O. [Columbia-Presbyterian Med. Center, New York, N. Y.] *Surgery*, **14**:321-327. 1943.

General discussion with presentation of immediate results of various procedures for cancer and other diseases.—W. A. B.

Cancer of the Colon. ZINNINGER, M. M., and HOXWORTH, P. I. [Univ. of Cincinnati, and Cincinnati Gen. Hosp., Cincinnati, Ohio] *Surgery*, **14**:366-377. 1943.

The technic of resection and anastamosis for cancer of the colon is described. The mortality among 45 patients operated upon was 8.8%.—W. A. B.

LIVER

Primary Carcinoma of the Gallbladder. Report of Two Cases. BERGHAUSEN, O. [Cincinnati, Ohio] *Ohio State M. J.* **38**:125-127. 1942.

The lowered incidence of this tumor in the past 25 years is noted. There is a brief summary of the clinical course and a list of the autopsy findings in 2 patients having carcinoma of the gall bladder. A history of biliary colic was not elicited from either patient; one had cholelithiasis with suppurative infection of the gall bladder. Three patients with secondary carcinoma in the liver are also described.—E. E. S.

Benign Neoplasms of the Gallbladder. SHEPARD, V. D., WALTERS, W., and DOCKERTY, M. B. [Mayo Clinic, Rochester, Minn.] *Arch. Surg.*, **45**:1-18. 1942.

A review of the literature and a study of 150 cases of benign tumors of the gallbladder. The types of tumor encountered are polypus, adenomyoma, and fibroma. Preoperative diagnosis can be made only by means of cholecystography. Chronic cholecystitis is always found in association with these tumors, and cholelithiasis is usually present. The incidence of malignant change is low.—G. H. H.

Carcinoma of the Biliary Papilla. A Case Record Presenting Clinical Problems. WEBB, J. P., and JOHANS-

MANN, R. [Cincinnati Gen. Hosp., Cincinnati, Ohio] *Ohio State M. J.*, **38**:763. 1942.

The paper records the detailed history.—E. E. S.

Spleen

Malignant Neoplasms of the Spleen. Review of the Literature and Report of a Case of Primary Lymphosarcoma (Reticulum-Cell Type). HAUSMANN, P. F., and GAARDE, F. W. [Mayo Clinic, Rochester, Minn.] *Surgery*, **14**:246-255. 1943.

Splenectomy was performed for a "primary reticulum-cell lymphosarcoma" of the spleen. The patient, aged 38, received x-ray therapy postoperatively but died approximately 1½ years after the onset of symptoms and 10 months after operation without generalized involvement of lymph nodes.

A review of malignant splenic neoplasms is presented. Lymphosarcoma is the commonest type. Generalized lymphosarcomatosis subsequently developed in only 2 of 9 cases of splenic lymphosarcoma reported in the literature and in 1 of 4 cases followed at the Mayo Clinic. Although the number of cases of lymphosarcoma studied was small, the authors believe that splenectomy is justifiable for lymphosarcoma confined to the spleen.—W. A. B.

Adrenal

The Estrogenic Reaction in Adrenal Cortical Carcinoma. FRANK, R. T. [Mt. Sinai Hosp., New York, N. Y.] *J. Mt. Sinai Hosp.*, **8**:514-519. 1942.

In 1934 attention was drawn to the great excess of estrogen excretion in 2 patients with adrenal cortical carcinoma. Since then 6 more patients have been under observation. Assays for estrogen were made by the injection of fresh urine into castrated mice. A positive vaginal smear with 1 cc. of urine indicates a minimum of 1000 I.U. per liter. A positive reaction has been obtained from as low a urine titer as 0.075 (13,000 I.U. estrogen/L). Negative tests were obtained uniformly in the many controls covering a great variety of conditions including hirsutism, obesity, and high blood pressure. In female patients a negative pregnancy test is required, as there is a physiologic increase in estrogen excretion during the gravid state.—S. A. G.

Surgical Treatment of Lesions of the Adrenal Glands. WALTERS, W. [Mayo Clinic, Rochester, Minn.] *Proc. Staff Meet., Mayo Clin.*, **17**:223-224. 1942.

The treatment of tumors of the adrenal glands is, of course, surgical removal of the tumor. Although transthoracic, transpleural, and retroperitoneal approaches to the adrenal glands have been used, in the opinion of the author the approach that gives the best opportunity for minute and careful inspection of the gland is a posterolumbar incision similar to that used in exposing the kidney. After the fascia of Gerota has been incised, the perirenal fat is reflected from the upper pole of the kidney, and the kidney is retracted downward; this exposes the inferior and posterior aspects of the adrenal gland. It is possible in this manner to study the gland accurately from every side without disturbing the circulation.

At the Mayo Clinic, 9 hyperfunctioning cortical tumors and 3 medullary tumors have been removed without any mortality. Two of the cortical tumors were very large and weighed 600 and 1,050 gm. respectively, whereas the others averaged approximately 10 to 15 gm. and were 2 to 4 cm. in diameter. In addition, in 3 cases malignant adrenal tumors that had not produced hyperfunction were removed without mortality.

Although microscopic examination revealed early malignant changes in all of the cortical tumors, in most of the cases the tumor was encapsulated definitely, and recurrence has not taken place. In the 2 cases in which the cortical tumors were very large, the tumor had penetrated the capsule: the growth was attached to the diaphragm in one case and to the inferior vena cava in the other. In both cases the lesions were malignant. There were signs and symptoms of recurrence, and both patients died within 2 years after operation. The 3 medullary tumors that were removed were encapsulated and benign.—J. L. M.

Miscellaneous

Tumor Diagnostic Services in Illinois. OTTEN, H. [Springfield, Ill.] *Illinois M. J.*, **84**:312-317. 1943.

The author seeks to develop greater interest in early diagnosis and treatment of all tumors, and to increase the facilities offered, as well as the scope of the work, by a presentation of the tumor diagnostic services available in Illinois. These services were initiated in Illinois in 1940.—M. E. H.

Minimal Criteria Required to Prove Causation of Traumatic or Occupational Neoplasms. WARREN, S. [Harvard Cancer Comm., New England Deaconess Hosp. and Harvard Med. Sch., Boston, Mass.] *Ann. Surg.*, **117**:585-595. 1943.

To prove trauma responsible for a tumor, at least the continuity of the previously unbroken tissue concerned must be interrupted with regenerative processes resulting, the neoplasm must follow after a reasonable time interval, and the type of atypical growth must be reasonable for the site of injury. The most convincing evidence for the occupational nature of tumors is the significantly greater incidence of a tumor, characteristic in type and location, among individuals occupied in a single industry, when compared to similar data for the general population. When application of the agent leads to the appearance of tumors in animals, the conclusion has additional support. The author gives a modification of Hueper's classification of occupational neoplasms.—W. J. B.

Clinical and Pathological Reports

Cancer Res 1944;4:204-208.