

from the ganglion nodosum of the vagus nerve; in the second there were two separate tumours, one arising in the vagus nerve and the other in the carotid body of the opposite side; the third patient had an upper anterior mediastinal tumour; and in the fourth case there were three independent tumours, involving respectively the ganglion nodosum, carotid body, and adventitia of the aortic arch. Microscopically, these tumours all resembled those of the carotid bodies and those of the glomus jugulare. The carotid body, the glomus jugulare, the paraganglion intravagale, and the aortic-arch bodies all have a similar structure and are probably similar chemoreceptors; they form a "paraganglionic system" which is quite distinct from the chromaffin tissues. The development of similar, and not infrequently multiple, tumours from these several structures is thus readily understandable. This is the first report of tumours of the aortic bodies in man, though Bloom has described such tumours in the dog (*Arch. Path.*, 1943, 36, 1). The present paper contains a full bibliography, and also includes some excellent photomicrographs of the aortic and vagal paraganglia.

R. A. Willis.

Prognosis in Carcinoma of the Breast.

BLOOM, H. J. G. (1950). *Brit. J. Cancer*, 4, 259.

A series of 470 cases of carcinoma of the breast treated at the Middlesex Hospital were graded according to the degree of tubule formation, uniformity in size, shape, and staining of the nuclei, and the number of hyperchromatic nuclei and mitoses.

By combining this method with the Manchester system of classification, a more accurate prognosis can be given than by classification alone. Certain tumours, if they are of a low histological grade, may be associated with a better prognosis even if they have reached Stage III than other more malignant grades still confined to the breast in Stage I; this finding is a strong argument in favour of the author's system of grading.

Possible fallacies in grading and staging are discussed.

Errors in staging arise from involvement of lymph nodes (as in the internal mammary chain) not revealed clinically or post-operatively; and from the fact that lymph nodes clinically enlarged may not be actually involved in tumour, and conversely that nodes involved may not be palpable clinically. Supraclavicular lymph-node involvement, undetectable either clinically or after operation, is another factor which might vitiate the accuracy of staging. Nevertheless, the author concludes that the system which he proposes is the best possible means of classification available, and he makes out a well-argued case that the universal adoption of this combined clinico-pathological method will lead to more accurate assessment of different methods of treatment.

H. J. B. Atkins.

Unilateral Renal Cortical Necrosis and Unilateral Benign and Malignant Nephrosclerosis associated with Contralateral Artery Occlusion: Report of a Case. ARONSON, S. M., and SAMPSON, M. C. (1951). *Arch. Path.*, 51, 30.

The case is described of a man of 52 who complained of cough, fever, headache, and loss of weight. At necropsy the left kidney showed the changes of benign and malignant hypertension and gross cortical necrosis. The right kidney was normal. The renal artery on the right side was grossly sclerotic, with marked reduction of the lumen, which was terminally thrombosed. There were old and recent infarcts in the heart, a non-tuberculous cavity in the lung, and [?] viral hepatitis. The pituitary gland was normal.

It is thought that the hypertension was due to ischaemia of the right kidney, and that this was unaffected by the cortical necrosis because its functional activity was low and its nutritional demands adequately supplied by the capsular anastomotic vessels.

D. M. Pryce.

Correction.—Dr. Callender writes that in her paper "The Effect of Citrovorum Factor (Folic Acid) on Megaloblasts *in vitro*" (*J. clin. Path.*, 4, 204) the abbreviation $\mu\mu\text{g}$. was used for millimicrograms instead of $\text{m}\mu\text{g}$.