The occurrence of multiple carcinomas in the same patient was at one time thought extremely rare; but in recent years, with extensive investigation, its incidence is recognized to be more common. Indeed, it is true that an individual with one cancer has a good chance of harboring a second one and, in fact, is more likely to develop another than one who is cancer-free.

Billroth in 1869 was the first to observe and describe the presence of two independent carcinomas occurring in different parts of the body. He laid down the following requirements for identification of multiple carcinomas as independent lesions: (1) The lesions must differ histologically so as to exclude the possibility that they are of the same origin but in different stages of development. (2) Each lesion must develop from its parent epithelium. (3) Each lesion must produce its own separate group of metastases.

Mercanton in 1893 added the qualification that, if the patient remained free of the disease after removal of the two carcinomas, the two growths must have been independent, as otherwise there would have been other metastases.

Believing that these postulates and criteria were too strict and impossible to fulfill if the multiple malignant growths occurred in the same organ, Warren and Gates in 1932 broadened the requirements as follows: (1) Each tumor must present definite evidence of malignant change; (2) each must be separate and distinct; and (3) the possibility that one tumor is a metastasis from the other must be excluded.

In spite of the more frequent recognition of multiple malignant tumors,
our experience with 2 patients each of whom had 4 synchronous primary carcinomas of the gastrointestinal tract, seemed so unusual as to merit recording in detail.

**CASE REPORTS**

**Case 1**

Mr. C. V., a 77-year-old male, was admitted to the Bryn Mawr Hospital on Jan. 7, 1959, with severe, incapacitating epigastric pain. Epigastric burning pain had occurred several hours after eating and during the night for 2–3 months. Ingestion of food brought about some relief. Two weeks prior to admission, the pain suddenly increased in intensity, with radiation to the anterior substernal area and the right costal margin. These symptoms continued until admission. In addition, there appeared nausea and vomiting after meals and occasionally at night. There were no other significant symptoms. The only pertinent previous illness was an episode of epigastric burning pain and occasional vomiting 3 years earlier.

Physical examination disclosed a very pale, white male in acute distress with unremarkable vital signs. There was a Grade 4 apical systolic murmur. Abdominal examination was negative except for tenderness in the midepigastrium. A 24-cm. sigmoidoscopic examination was negative.

The results of laboratory studies, including the usual basic tests plus liver function studies, were unremarkable, with the exception of a hemoglobin of 4.9 gm./100 ml., a serum iron of 36 mg./100 ml., and repeated stools positive for occult blood. The electrocardiogram was normal. An abdominal and a chest X-ray were negative. Upper gastrointestinal X-ray examination revealed a huge penetrating gastric ulcer on the lesser curvature of the stomach in the region of the incisura, with apparent perforation into the gastrohepatic omentum (Fig. 1).

The patient was treated with hourly milk feedings, transfusions, and the usual medical program. Since operation was obviously indicated, and with the thought that some procedure involving the colon might be necessary, he was placed on a bowel-preparation program of 2 gm. of sulfathaladine 4 times a day. On this regimen he became symptom-free.

At laparotomy on Jan. 16, 1959, a mass in the sigmoid colon 6 in. above the peritoneal reflection was first noted. A second discrete mass was noted in the ascending limb of the splenic flexure, infiltrating the serosa from within. A third discrete mass was located in the cecum. On the lesser curvature of the stomach, a fourth large mass was palpated; it represented the area of the perforated ulcer seen on X-ray. This mass, too, was believed to be malignant. Further examination revealed multiple metastatic nodules in the liver. A subtotal gastrectomy was performed. Next, the terminal 9 in. of the ileum and the entire colon, with the exception of that part of the sigmoid and rectum 2 in. distal to the sigmoid lesion, were resected (Fig. 2), and an ileosigmoidostomy was carried out.

The pathologist reported the stomach lesion to be a 6.0 × 4.8-cm. ulcerated mass with elevated, rolled edges. A perforation at the base of the crater was 1.4 cm. in greater diameter (Fig. 3). The ulcer was firm, especially in its distal portion. Microscopic sections revealed a moderately well-differentiated adenocarcinoma which was actively secreting mucus. It extended through the thickness of the muscularis. The cecal lesion was a fungating, pinkish-red, elevated, circumscribed mass measuring 4.8 × 3.2 × 0.8 cm. Microscopically, it was composed of closely spaced, moderately well-differentiated, gland-