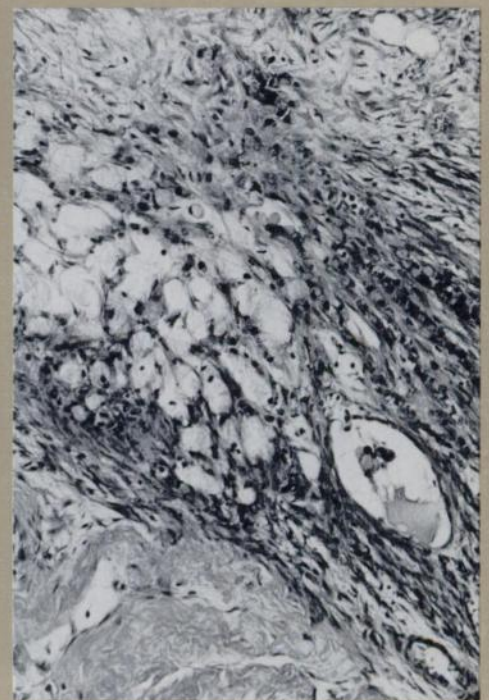
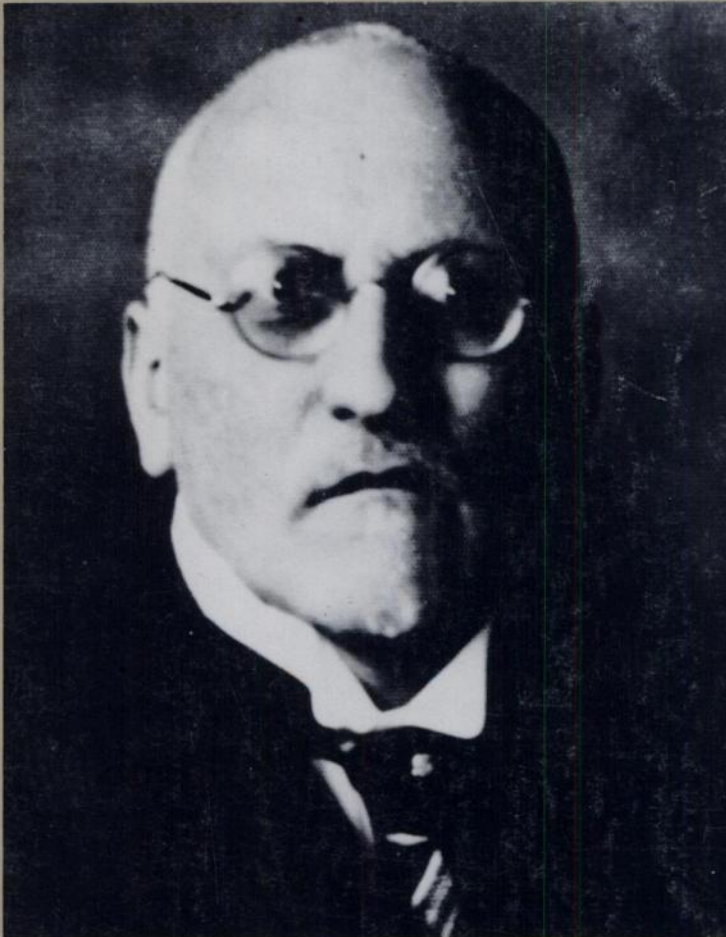


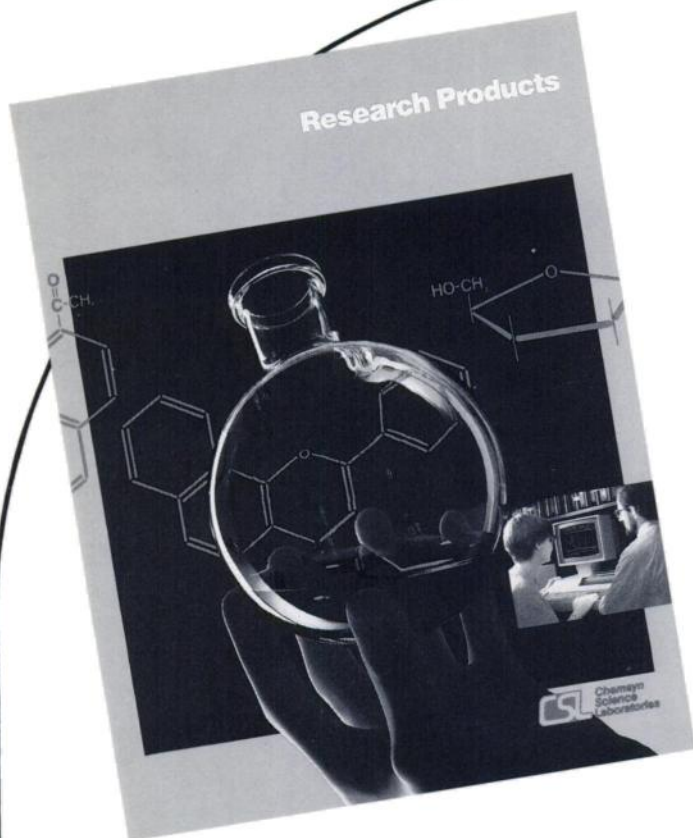


# Cancer Research

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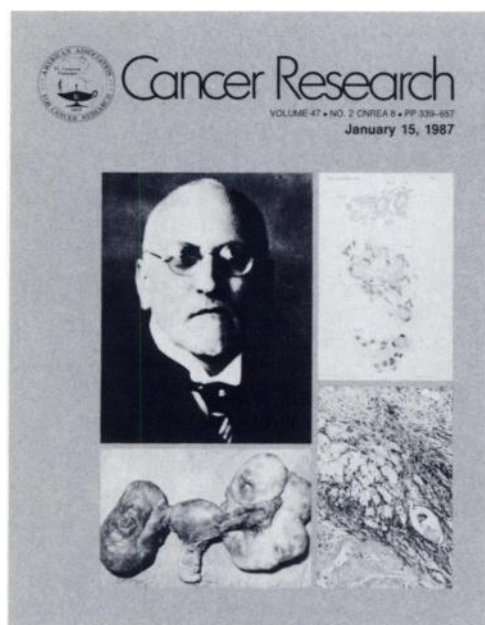


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# COVER LEGEND

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In 1896, Friedrich Ernst Krukenberg (1871–1946) published a paper reviewing six cases of peculiar bilateral ovarian tumors from the collection at the pathology institute at Marburg (*Arch Gynäkol.*, 50: 287, 1896). The clinical histories were unknown for all but one of the cases. Krukenberg thought that these tumors were primary ovarian neoplasms and called them “Fibrosarcoma ovarii mucocellulare (carcinomatodes).” F. Schlagenhauer (1854–1918), in a paper 6 years later, clearly showed that the ovarian tumors described by Krukenberg were not primary but metastatic from the stomach, colon, and other abdominal

sites (*Monatschr. Geburtsh. Gynäkol.*, 15: 485, 1902).

Despite the confusion in the interpretation of the original description, the striking finding of firm, solid, bilateral ovarian tumors that are metastases from an obscure primary, so that the ovarian metastases are more prominent than either the primary or metastases elsewhere, acquired the eponym of Krukenberg tumor. A strict designation of Krukenberg tumor requires that the metastases be from gastric carcinoma and contain the characteristic signet-ring cells [*cf.* H. Speert, *Cancer (Phila.)*, 8: 869, 1955].

E. R. Novak and J. D. Woodruff state that Krukenberg tumor is generally secondary to the gastrointestinal tract, especially stomach or colonic lesion, “although a few are unquestionably primary” (*Gynecologic and Obstetrical Pathology*, Ed. 6. Philadelphia: W. B. Saunders Co., 1967). A metastasizing tumor to the ovary is not necessarily Krukenberg unless it fulfills certain histological criteria. The presence of typical signet cells, with considerable degrees of mucinous degeneration and marked hyperplasia of the stromal elements, is paramount.

Little is known about Krukenberg, who died 50 years after the appearance of his report. In one reference book he is stated to have been an ophthalmologist in Halle. The only available portrait of Krukenberg, taken late in his life, is from the National Library of Medicine.

The line drawing of signet cells is from Krukenberg’s original article. We are indebted to Dr. Novak for the photograph of the gross specimen of a Krukenberg tumor, reproduced by permission of W. B. Saunders Co., and to Dr. Clyde Dawe for the photomicrograph.

M. B. S.