who tend to be younger than the usual patient with ovarian carcinoma, are excellent candidates for conservative therapy. In any event, they certainly should be considered separately in studies of the effects of various treatments on ovarian tumors.

Steven G. Silverberg, M.D.  
Associate Professor of Pathology  
University of Colorado  
Denver, Colorado

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The Author’s Reply:

I agree completely with Dr. Silverberg’s statement regarding the delineation of the surface epithelial tumors of “borderline malignancy.” Unfortunately, with markedly limited space, I felt compelled to present only the most pertinent information for the practicing physician, but now realize that your suggestions should have been included.

Dr. Sheldon Sommers, Director of Pathology at Lenox Hill Hospital, has adopted the World Health Organization’s recommendation of the histologic typing of ovarian tumors that was published in a 1973 monograph, edited by Drs. Sirow, Scully and Sobin. This is a very complete breakdown of not only the common epithelial tumors but the gonadal stromal tumors, germ cell tumors, metastatic tumors as well as unclassified tumors. In addition to the usual three classifications of benign, borderline and malignant, it goes further and differentiates them according to whether the adenomatous or fibrous element is dominant.

Surface papillomas are included as a separate entity because there is increasing evidence to suggest that they may be more prone to spread than the completely encapsulated tumor, even though they are in the same clinical stage. The decision of whether serous tumors invade the stroma is usually not difficult. Although diagnosis is usually made without difficulty in clear cell or endometrioid cancers, it is not as straightforward as for serous cancers. Benign, borderline and malignant forms of any of these neoplasms may coexist in any one tumor. This has been confirmed in studies using the electron microscope and may explain the importance of examining many sections of the tumor before reporting the karyotype. Mucinous tumors are commonly multilocular and
parvilocular, often making it impossible to accurately determine whether glandular structures lying within the stroma are the result of budding from a larger gland or cyst, or indicate invasion of the stroma. The documentation of invasion in this group may have to await the results of studies of histologic and nuclear grading as well as stromal response.

At the American Association meeting I presented a paper, "Histologic and Nuclear Grading and Stromal Reactions as Indices for Prognosis in Ovarian Cancer," which answers the points you raise, including: (1) certain epithelial tumors are more potent than others within the same stage; (2) undifferentiated cancers are mainly in the unfavorable histologic and nuclear grades; (3) the histologic grading of tumors correlates with prognosis in the early stages, but is less remarkable in more advanced cancers; (4) since the potency of tumors varies within a given stage, treatment should be tailored to the cancer rather than the stage of disease; (5) tumors were named from their most differentiated portion and graded from their least differentiated parts, and (6) in general, stage of disease is more important than histologic or nuclear grades in determining prognosis.

The reports from Doctor Kottmeier's series are impressive. Among 121 patients with tumors classified as borderline or potentially malignant, 106 (88 percent) lived five or more years; among 555 diagnosed as invasive, 177 (32 percent) lived five or more years. It must be emphasized that tumors of borderline malignancy, or those that are potentially malignant, occasionally implant on the peritoneum and that such implants may be invasive; rarely, distant metastases occur. In patients with serous tumors of borderline malignancy, even those complicated by peritoneal implants or those following a typically indolent course with spread beyond the ovary, spontaneous regression of the implants has occasionally occurred. This group of borderline cancers has, in general, shown a significant survival rate.

The problem will be solved when all centers use the same criteria so that material, continents apart, can be accurately compared and evaluated. The use of the clinical staging and histologic classification established by the World Health Organization and the International Federation of Obstetrics and Gynecology has supplied a more uniform method of comparing therapeutic results among institutions around the world. It has led to a greater insight into the natural history of ovarian cancer and resulted in a more rational approach to therapy with anticipated results. Careful grading of the tumor, both for epithelial and stromal elements, should validate end results.

Hugh R. K. Barber, M.D.
Director, Department of Obstetrics and Gynecology
Lenox Hill Hospital
New York, New York