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From 1974 through 1990, 23 women with stage I and five with stage II epithelial ovarian carcinoma received intraperitoneal ^{32}P as the only form of adjuvant therapy after complete debulking and comprehensive surgical staging laparotomy. Surgery consisted of total abdominal hysterectomy with bilateral salpingo-oophorectomy, omentectomy, peritoneal washings for cytology, multiple biopsies of pelvic and abdominal peritoneum, and selective pelvic/para-aortic lymphadenectomy. Intraperitoneal ^{32}P therapy was administered a median of 7 days after laparotomy. Significant toxicity was minimal; none of these patients required surgery for bowel obstruction. Overall 5-year survival was 90 and 100% but disease-free survival was only 65% (95% confidence limits: 36–86%) and 60% (95% confidence limits: 12–81%) for patients with stage I and II disease, respectively. Two patients developed intraperitoneal and six developed systemic relapses; all patients received cisplatin regimens after relapse. Univariate analysis of age, stage, histology, Ovarian Cancer Study/Gynecologic Oncology Group risk status, lesion size, and presence or absence of capsular adhesions revealed that only age $\geq$50 years was associated with an adverse effect on disease-free survival ($P < 0.03$). This study suggests that assessment of stage and host-tumor biology may be most important in determining the survival of women with early ovarian cancer defined by comprehensive surgical staging. Intraperitoneal ^{32}P does not appear to be effective adjuvant therapy in these women.

5. *Transition from Benign to Malignant Epithelium in Mucinous and Serous Ovarian Tumors.* L. E. PULS, D. E. POWELL, J. R. VAN NAGELL, JR., H. H. GALLION, P. D. DEPRIEST, AND J. E. HUNTER, University of Kentucky Medical Center, Lexington, Kentucky 40536.

The malignant potential of benign and borderline epithelial ovarian tumors is presently unknown. In order to determine the presence of histologic transition from benign to malignant epithelium, the epithelial lining of 17 mucinous and 33 serous ovarian tumors was examined microscopically. Eleven of these tumors were classified as borderline and 39 as malignant according to World Health Organization (WHO) criteria. An average of 9 (range, 1–38) slides from each tumor were evaluated, and all cases were reviewed by one pathologist (D.E.P.). The mean age of the patients studied was 56 years (range, 18–85 years) and 30 were postmenopausal. The presence of histologic transition related to grade, cell type, and stage is as follows:

Grade	Pts.	Transition	Stage	Pts.	Transition
Borderline	11	11	I	21	20
Grade 1	11	11	II	3	1
Grade 2	9	6	III	21	11
Grade 3	19	6	IV	5	2

Cell Type	Pts.	Transition
Mucinous	19	17
Serous	31	16

Transition from benign to borderline epithelium was observed in 100% of borderline ovarian tumors and from benign to malignant epithelium in 59% of malignant ovarian tumors. Histologic confirmation of epithelial transition was noted in 100% of grade 1 tumors, 67% of grade 2 tumors and 32% of grade 3 tumors. Histologic transition was more commonly observed in early than in late stage tumors and in mucinous than in serous ovarian cancers. The findings of this study indicate that histologic transition from benign to malignant epithelium is common in serous and mucinous ovarian tumors. These data support the concept that certain benign epithelial ovarian tumors have the potential for malignant transformation. Removal of these tumors should result in a subsequent decrease in the frequency of frankly invasive ovarian cancer in the population. These findings have significant implications for ovarian cancer screening.

6. *A Decade of Experience with Cisplatin-Based Chemotherapy in Patients with Optimal Epithelial Ovarian Cancer: "Maintenance" Therapy Reconsidered.* D. GERSHENSON, M. FOLLEN MITCHELL, N. ATKINSON, E. SILVA, J. KAVANAGH, M. MORRIS, T. BURKE, D. WARNER, AND J. WHARTON. University of Texas M. D. Anderson Cancer Center, Houston, Texas 77030.

From 1978 to 1988, 215 patients (pts) with stage III or IV epithelial ovarian cancer were entered onto one of three consecutive prospective clinical trials involving cisplatin-based combination chemotherapy. A homogeneous subset of these pts with the following characteristics was selected for this analysis: (1) grade 2 or 3 tumors (borderline and grade 1 tumors excluded), and (2) optimally debulked tumors (residual disease $\leq$2 cm). The purpose of the study was to investigate the influence of duration of chemotherapy on survival. The treatment plans were as follows: Trial 1: 12 cycles of cisplatin/melphalan (43 pts); Trial 2: 12 cycles of cisplatin/cyclophosphamide (25 pts); and Trial 3: 6 cycles of cisplatin/cyclophosphamide (48 pts). The dose of cisplatin was 60 mg/m^2 in the first trial and 50 mg/m^2 in the second and third trials. Median survival times for the 3 groups are 43, 30, and 37 months, respectively (NS). Median progression-free survival (PFS) times are 32, 22, and 15 months, respectively ($P = 0.0103$). Combining pts from the first 2 trials, the median PFS for pts receiving 12 planned cycles of chemotherapy is 28 months vs 15 months for pts receiving 6 planned cycles ($P = 0.0026$). Using a forward step-wise Cox proportional hazard model, the use of 12 cycles of therapy and melphalan were predictive of increased PFS ($P = 0.045$ and $P = 0.027$, respectively). In view of the results of this analysis, the lack of published data supporting the superiority of 6 over 12 cycles of chemotherapy, and the rather recent availability of less toxic maintenance therapy (i.e., carboplatin), we believe that a multiinstitutional trial comparing the 6-cycle regimen with more prolonged chemotherapy is justifiable.

7. *Lymph Node Sampling in Patients with Epithelial Ovarian Carcinoma.* GARY L. GOLDBERG, M.D., JONATHAN SCHEINER, ALAN FRIEDMAN, KATHERINE O'HANLAN, M.D., SUSAN A. DAVIDSON, M.D., AND CAROLYN D. RUNOWICZ, M.D., Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, New York 10461.

Lymph node (LN) sampling is part of the FIGO staging of patients (pts) with ovarian carcinoma and is usually part of a meticulous second look operation (SLO). Retroperitoneal dissection is more difficult at SLO especially if extensive sampling has been performed at initial surgery. We analyzed the primary LN status of pts and compared this to the LN status at SLO. From 3/86 to 3/91, 97 pts with epithelial ovarian tumors were treated at this institution. Seventy-one of the 97 pts (73.2%) had LN sampling at primary surgery. Thirty of the 71 pts had positive LN (42.2%) and 41 pts were LN negative (57.8%). Of the initial 97 pts, 58 were eligible for SLO (59.8%) and 48 of these pts had LN sampled at SLO. Nine of the 48 pts had positive LN (18.7%) and 39 had negative LN at SLO (81.3%). Of the pts with negative LN at primary surgery, 25 pts had SLO and 24 of these pts had LN sampling at SLO. All pts with negative LN at primary surgery had negative LN at SLO. Of the 30 pts with positive LN at primary surgery, 12 underwent SLO. Four pts had persistent positive LN and 8 pts had negative LN. There was no correlation between disease status at SLO and LN status. Our data suggest that pts with negative LN at primary surgery are unlikely to have positive LN at SLO. Therefore, we believe that LN sampling under these circumstances is unnecessary.