Results: Two-hundred forty-four patients were identified who met H-IR criteria. One-hundred forty underwent surgery followed by observation, and 104 received adjuvant radiation therapy with or without chemotherapy. Recurrence rates for the two groups were similar at 11 and 8%. A univariate analysis was performed to assess the significance of individual predictors in the H-IR model as defined by H.M. Keys et al. (Gynecol Oncol 2004;92:744–51) in GOG 99. Both lymphovascular space invasion (LVSI) and invasion of the outer half of the myometrium were found to be significant predictors of recurrence ($P=0.003$ and $P=0.05$). On multivariate analysis, however, only LVSI remained significantly associated with disease recurrence. Kaplan–Meier curves were created for disease-specific survival in patients with and without adjuvant therapy. No difference in five-year disease-specific survival was observed between these cohorts on log-rank analysis ($P=0.39$).
Conclusions: In patients with surgically staged high-intermediate risk endometrial cancer, the overall risk of recurrence is low and is not significantly reduced when patients receive adjuvant therapy. Moreover, no survival benefit was demonstrated when adjuvant radiation therapy alone or in combination with chemotherapy was administered. Additionally, the use of adjuvant therapy in these generally low-risk patients does expose them to the risks of "multimodality treatment," which may increase overall complication rates.

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Retrospective review of an intraoperative algorithm to predict lymph node metastasis in low-grade endometrial adenocarcinoma

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Objective: The role of lymphadenectomy (LND) is controversial in endometrial cancer (EMCA), and algorithms to identify women most likely to benefit from LND are required. We sought to validate the "Mayo" algorithm to identify women intraoperatively who do not require a lymphadenectomy.

A multicenter retrospective chart review was completed using two independent institutional EMCA databases. Between 1977 and 2007, patients were identified with preoperative grade 1 or 2 EMCA. Inclusion criteria for the study were: (1) low-risk preoperative histology, excluding serous and clear cell; (2) no evidence of metastatic disease at surgery; (3) LND in which at least eight pelvic lymph nodes were sampled; (4) intraoperative pathology assessment. Patients were designated as satisfying the Mayo criteria if at the time of intraoperative assessment tumors were found to be grade 1 or 2 with endometrioid or endometrioid-like histology, myometrial invasion $\leq$50%, and tumor diameter $\leq$2 cm on intraoperative or final (if not measured intraoperatively) pathology. Nodal metastases and final staging were analyzed.
Results: Of 442 patients meeting inclusion criteria, 110 satisfied the Mayo criteria. Two (1.8%) patients had positive lymph node metastases; final pathology in node-positive cases was stage IIIC1 papillary serous adenocarcinoma and stage IIIC1 endometrioid adenocarcinoma. The negative predictive value of the Mayo algorithm was 98.2%. One hundred four of 110 (94.5%) patients meeting the Mayo criteria were stage IA on final pathology using the 2009 FIGO staging criteria. Two patients each (1.8%) had stage IB, IIIA, and IIIC1 disease. Intraoperative analysis was consistent with final grade in 54 patients (49.1%), upgraded on final analysis in 13 patients (11.8%), and downgraded in two patients (1.8%). For 41 patients (37.3%), grade was not available on either intraoperative or final pathology assessments because no invasive lesion was seen.
Conclusions: At several institutions with more traditional pathology systems, the Mayo algorithm identified with a 98.2% negative predictive value women who would not benefit from a lymphadenectomy for endometrial cancer. Discrepancies between intraoperative and final pathology results may limit the general applicability of this algorithm.

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Identifying Lynch syndrome in women with endometrial cancer

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Objective: Approximately 2% of endometrial cancers are attributable to Lynch syndrome. Selecting a subgroup of patients with endometrial cancer at higher risk for Lynch syndrome may identify a cohort for genetic counseling and testing.

From January 2008 to June 2010, 328 women underwent hysterectomy for endometrial carcinoma. Mismatch repair protein (MMR) immunohistochemistry was prospectively performed for MLH1, MSH2, PMS2 and MSH6. Microsatellite instability (MSI) testing was performed by PCR and reported as microsatellite stable (MSS), low instability (MSI-low) or high instability (MSI-high). Inclusion criteria included: (1) age $<$50; (2) personal history of a Lynch cancer (colorectal, endometrial, urothelial, gastric, small bowel, brain, etc.); (3) a first-degree family member with a Lynch cancer, or pathology characteristics suggestive of Lynch cancer (tumor-infiltrating lymphocytes, peritumor lymphocytic infiltrate, mixed undifferentiated and well-differentiated carcinomas, lower uterine segment tumors, etc.).
Results: One hundred twelve of 328 (34%) tumors fulfilled at least one criterion: 48 were under age 50, five had a personal history of colorectal cancer, 11 were diagnosed with a synchronous ovarian cancer, 36 had a notable family history, and 51 had suspicious pathologic features. All patients had MMR IHC performed on their tumor; 88 (79%) also had MSI testing. Thirty-one patients (28%) had loss of at least one or more MMR by IHC: 22 had loss of MLH1 and PMS2, one had loss of MSH2 and MSH6, four had loss of MSH6 only, and four had loss of PMS2 only. Among patients with loss of MMR by IHC, 26 of 31 (84%) underwent MSI testing and all but one were MSI-high. Two patients with MSI-high tumors had intact MMR by IHC. All 31 patients with loss of MMR by IHC were contacted for genetic counseling; only 13 (42%) accepted. Nine of 13 patients underwent genetic testing, and two of the nine were found to have Lynch mutations (1 MLH1, 1 PMS2): one patient had a mother with uterine cancer, and the other was 42 years of age.
Conclusions: The integrated use of clinical, histopathologic, and molecular markers may help identify women with endometrial cancer at risk for Lynch syndrome. Patient access and awareness of genetic counselors may help improve the identification process.

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Ten-year relative survival for epithelial ovarian cancer

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