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“Reported LVSI and survival outcomes for stage I-II Endometrial Cancers in a region with limited access to formal gynecologic pathology review.”

Approximately 1 in 5 women with early-stage endometrial cancer (EC) will have lymphovascular space invasion (LVI). LVI reporting requires skilled evaluation and has prognostic implications that impact adjuvant treatment. Access to gynecologic pathologists (GPath) may contribute to disparate healthcare outcomes. From the practice setting of a deep south institution with no employed GPath, we aim to describe reporting rate and survival outcomes of LVI in stage I-II EC.

A multicenter, IRB-approved retrospective chart review was performed at 3 hospitals with no employed GPath. Women with stage I-II EC treated with hysterectomy from 2013-2019 were included. Women were excluded if they presented with stage III or IV disease or had systemic or radiation therapy prior to surgical staging. Demographic, pathologic, treatment, and survival data were collected. Statistics were performed for the cohort at large as well as for women with myoinvasive EC (MI+) and for women who had MI+, endometrioid EC, with a lymph node assessment (GOG99-like).

Of 129 women, most were white not Hispanic (51.9%) and black not Hispanic (42.6%). For staging, hysterectomy was accomplished minimally invasively in 46.8% of cases; 57.4% had a lymph node assessment. 69.8%, 17.1%, and 13.2% were stage IA, IB, and II, respectively. The median depth of invasion was 16 mm (95%CI, 19.7-29.2). Endometrioid histology was most common (82.2%). Most were grade 1 (51.6%), with 25.0% grade 2 and 23.4% grade 3. Fifteen(11.6%) cases were LVI+ : 4 focal, 1 diffuse, and 8 not described. At a median of 23.0 months (95%CI 23.5-31.1) follow up from diagnosis, 87.6% were alive with no evidence of malignancy (NEM). For MI+ subjects, 12.2% were LVI+. At a median of 28.0 (95%CI 23.4-32.6) months, 90.3% of MI+ subjects were alive NEM. In the 50 GOG99-like subjects, 12.0% were LVSI+; at a median of 23.6 (95%CI 23.4-32.6) months, 94% were alive NEM; 67.7% of LVI+ and 97.8% of LVI- women were alive NEM. 3 (6%) had recurrent disease in that time.

In GOG 99 rates of reported LVI were 23.2% and at 24 months the cumulative incidence of recurrence in the treatment group was 3% (90%CI 2-6%). Our rates of reported LVI were 11.6% overall and 12% in our GOG99-like group. With a median of 2 years of follow up, 10% of our total cohort and 2.3% of a GOG-99 like cohort recurred. “Missed” LVI would likely result in detrimental survival outcomes. LVI- excellent survival and recurrence rates are at expected levels and reassuringly signals that missed LVI is not contributing detectably to mismanagement.