BACKGROUND

Neuroendocrine tumors (NET) of the female genital tract are rare, and represent ~2% of all gynecological malignancies. Most NET are small cell carcinomas, and a smaller portion are large cell variants. These are high-grade tumors that behave aggressively.

Studies comparing squamous cell carcinoma (SCC) and NET of the cervix have shown that patients with NET present at a later stage, younger age, and have a worse prognosis. However, studies have not been done for neuroendocrine tumors of the uterine corpus (uNET).

OBJECTIVE

To compare the clinicopathologic features and survival outcomes of uNET and endometrioid type endometrial carcinoma (EC).

METHODS

Patients with invasive EC and uNET were identified using Surveillance, Epidemiology and End Results (SEER) cancer registry database from 1993 to 2012. Chi-square, t-tests, Kaplan-Meier curves, and Pearson-Correlation tests were used to analyze the data using SPSS.

RESULTS

- From 1993 to 2012, a total of 98,363 patients were identified to have either EC or uNET.
  - The odds of having distant metastases in uNET compared to EC is 18.8 (95% CI 13.1–27.2).
  - Overall survival in EC is 14.4 years compared to 4.6 years in uNET ($p \leq 0.01$).
  - Overall survival in uNET patients with negative nodal status was 9.8 years vs. 2.4 years for positive nodal status ($p < 0.01$). Overall survival in EC with positive lymph node status was 10.8 years.
  - The cancer-specific survival in EC is 17.7 years compared to 5.7 years in uNET ($p \leq 0.01$).

CONCLUSIONS

- Similar to studies of the cervix, this study showed that uNET present at a later stage and have a worse prognosis compared to EC.
- uNET patients are less likely to receive surgery compared to EC patients, and a majority do not receive radiation therapy. (Data on treatment with chemotherapy is not available in the SEER database.)
- A majority of patients with uNET have positive lymph node metastases at the time of diagnosis. They tend to have worse survival outcomes compared to their counterparts with negative lymph nodes status, and EC patients with positive lymph node status.