Vitamin D receptor and cellular retinol-binding protein-1 immunohistochemical expression in normal, hyperplastic and neoplastic endometrium: Possible diagnostic and therapeutic implications

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Introduction/Background We conducted this study to assess the effect of VDR and CRBP-1 immunohistochemical expression on the endometrium and to explore their role in endometrial cancer carcinogenesis.

Methodology This study comprised two hundred paraffin-embedded endometrial tissue samples diagnosed as 42 and 63 proliferative and secretory endometrium respectively, 45 endometrial hyperplasias with atypia and 50 endometrial carcinomas (25 low-grade and 25 high-grade endometrial carcinomas). The immunohistochemical method was done to determine the expression of VDR and CRBP-1.

Results VDR was strongly expressed in 8 (17.8%) cases with endometrial hyperplasia, 15 (60%) cases with low grade endometrial carcinoma, and 22 (88%) cases with high-grade endometrial carcinoma. While CRPB1 overexpression was noted in 15 (60%) cases with low grade endometrial hyperplasia, 15 (60%) cases with low grade endometrial carcinoma, and 3 (6.7%) cases respectively and all malignant cases showed negative expression.

Conclusion Increased VDR expression and reduced CRBP-1 expression are associated with malignant features of the endometrium with a significant statistical difference of immunoreactivity between groups of normal endometrium, hyperplastic changes & carcinoma. Our data suggested that increased VDR expression is partly associated with endometrial cancers through a premalignant phase. Also, increased VDR and reduced CRBP-1 expression are associated with the progression of endometrial carcinoma with higher grades.

REAL-WORLD PREVALENCE OF MICROSATELLITE INSTABILITY TESTING AND RELATED STATUS IN PATIENTS WITH RECURRENT OR ADVANCED ENDOMETRIAL CANCER INITIATING FIRST LINE OF THERAPY IN EUROPE


Introduction/Background Recently approved therapies have proven clinical benefits for recurrent or advanced endometrial cancer (aEC) patients with known microsatellite instability (MSI) status, highlighting the prognostic significance of this biomarker. There is little information available on the prevalence of MSI/mismatch repair (MMR) testing in Europe. The objective of this study was to understand the real-world use of MSI/MMR testing in Europe.

Methodology Endometrial Cancer Health Outcomes-Europe-1st-Line (ECHO-EU-1L) is a multicenter, retrospective, chart review study conducted in the United Kingdom (UK), France, Germany, Italy, and Spain. Physicians extracted data from medical records of female patients diagnosed with recurrent or aEC (Stage III or IV) initiating 1st-line systemic therapy between July 1, 2016 – March 31, 2020. Data included patient demographics, clinical/treatment characteristics. Data were de-identified before analyses. The study was IRB-approved in respective countries.

Results Of the 57 participating physicians, 94.7% were medical oncologists, 56% were in practice for ≥15 years, 96.5% practiced in urban settings, and 91.2% had hospital-based practices. The median age of 244 patients with recurrent or aEC at 1st-line therapy initiation was 69 years, 184 (75%) were White/Caucasian, and 121 (49.6%) had endometrioid carcinoma histology. A total of 88 patients (36.1%) underwent testing to determine MSI/MMR tumor status, and clinical/treatment characteristics. Data were de-identified before analyses. The study was IRB-approved in respective countries.

Conclusion At 1st-line initiation, median age of 244 eligible patients was 69 years, 49.6% had endometrioid carcinoma histology, and 76.7% had an ECOG status of 0/1. For 1st-line therapy, 227 (93%) received chemotherapy-based regimen (carboplatin plus paclitaxel (CP) most common), while 7% received hormonal or other therapy. After a median of 3 months on 1st-line therapy, 163 (66.8%) patients reached an overall response; 70 (43%) eventually lost response. During the 19-month median follow-up, 233 (96%) discontinued after a median of 3 months. Median OS from 1st-line initiation was 21 months (95% CI:18.0-23.0) and median rwPFS was 12 months (95% CI:11.0-14.0).

Conclusion In Europe, CP is the standard 1st treatment for recurrent or aEC patients. A third of patients do not respond to CP therapy; patients had poor outcomes with median survival <2 years and median PFS of 1 year. Overall, there seems to be significant unmet medical need and novel therapies could improve outcomes in this patient population.

Abstracts

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