RB PROTEIN IS EXPRESSED IN HUMAN ENDOMETRIAL CARCINOMAS

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Investigations in the fields of molecular biology have recently shown that the development of cancer in humans is a process implicating several alterations within oncogenes, tumor suppressor genes, and growth factors. The first tumor suppressor genes cloned was named RB gene. The gene encodes a 110-kDa nuclear protein participating in the signal transduction process (RB/cyclin D1/cdk4/p16-pathway) within cell. In the current study, we investigated the retinoblastoma protein (pRB) expression in formalin-fixed, paraffin-embedded specimens obtained from sixty-two patients suffering from endometrial cancer. The avidin-biotin peroxidase detection system with microwave pretreatment and the mouse anti-human NCL-RB1 monoclonal antibody (Novocastra, UK) were used. Heterogeneous nuclear pRB reactivity was observed in the glandular cells of the endometrial carcinomas analyzed, while stromal components were unreactive. In three out of 62 endometrial neoplasms stained, no pRB immunoreaction was noted. In the cases with concomitant hyperplastic and neoplastic endometrial lesions, pRB immunoreaction was heterogeneous in the hyperplastic endometrial cells and in the adjacent neoplastic endometrium. Eight cases of endometrial carcinomas harboring K-ras codon 12 gene point mutations [1] overexpressed pRB, while none of three pRB negative slides had a K-ras gene alteration. In conclusion, our data support the view that retinoblastoma protein is expressed in most of the human endometrial carcinomas. The lack of the pRB staining suggest RB gene rearrangements in a small subset of endometrial neoplasms.

REFERENCE