

## البحث الرابع

تأثير تعبير ال سي دي 70 في سرطان الرحم: دراسة مناعية هستوكيميائية

### **CD70 expression in endometrial endometrioid carcinoma: an immunohistochemical study**

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### **بحث جماعي**

#### **Abstract**

##### **Aim**

CD70 is aberrantly upregulated in hematological malignancies and some solid malignancies, including renal cell carcinoma (RCC), brain tumors, thymic carcinoma, melanoma, pancreatic, nasopharyngeal, lung, ovarian and colon carcinoma. CD70 on tumor cells interacts with its receptor CD27 on tumor infiltrating lymphocytes (TILs), inducing apoptosis of B and T lymphocytes resulting in immune suppression. CD70 expression has been linked to poor prognostic factors and progression in many tumors. Novel therapeutic agents targeting CD70 have entered clinical trials. To our knowledge, CD70 expression was not assessed in endometrial endometrioid carcinoma (EEC). The purpose of our study was to characterize CD70 expression in EEC specimens and correlate its expression with other pathological prognostic variables.

##### **Methods**

This study has included 60 paraffin-embedded EEC. The tumors were categorized by grade, stage, depth of myometrial invasion by the tumor tissue, the presence of lympho-vascular emboli, regional lymph node metastasis and TILs within the vicinity of the tumor. A histochemical score was used to evaluate CD70 expression by the tumor cells.

##### **Results**

In this study, CD70 showed mild expression in 16 cases (26.7%), moderate expression in 20 cases (33.3%), marked expression in 12 cases (20%), while it is negative in 12 cases (20%). CD70 expression showed no significant relation with tumor grade ( $P>0.05$ ). CD70 expression was significantly more marked in tumors of higher stage as well as in tumors infiltrating more than half the myometrial thickness ( $P<0.05$ ). CD70 expression was significantly higher in tumors having lympho-vascular emboli and in tumors with metastatic regional lymph nodes ( $P<0.05$ ). Also, there was significant positive correlation between CD70 expression and the density of TILs ( $P<0.05$ ).

##### **Conclusion**

CD70 expression in EEC is significantly higher in tumors having poor prognostic factors including stage, depth of myometrial invasion, lympho-vascular emboli, regional lymph node metastasis. These findings suggest that CD70 might be a good targeted therapy in endometrioid carcinoma. Further researches are warranted to clarify the function of CD70 expression in the pathophysiology of EEC, to elucidate the response to treatment with CD70 targeted therapy and the possibility of using CD70 as a predictive immunohistochemical marker for assessing the response to anti-CD70 targeted therapy.