



# Clusterin immunoexpression is associated with early stage endometrial carcinomas

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## Abstract

Clusterin has anti-apoptotic, regeneration and migration stimulating effects on tumor cells. This study investigates the relation between clusterin expression and the clinicopathological parameters in endometrial carcinomas. Seventy one cases of previously diagnosed endometrial carcinoma (including 59 endometrioid adenocarcinoma, 9 serous adenocarcinoma, 1 clear cell adenocarcinoma, and 2 malignant mixed Mullerian tumor) and 30 tissue samples of non-cancerous endometrium (including 16 proliferative endometrium, 10 secretory endometrium and 4 endometrial polyps) were employed for clusterin detection using tissue microarrays and immunostaining. A total number of 23 (32.4%) cases were positive for clusterin immunostaining. Brown granular cytoplasmic expression of clusterin was detected in 33.9% of endometrioid adenocarcinomas, 22.2% papillary serous endometrial carcinomas. Three (10%) control cases showed granular cytoplasmic expression. Positive clusterin immunostaining was found more frequent in well differentiated and stage I endometrial carcinomas, showing significant statistical association ( $p$ -value = 0.036 and  $p$ -value = 0.002 respectively). Significant difference in clusterin expression was observed between tumor cases and control group ( $P$ -Value = 0.019), i.e., endometrial carcinoma cases are more than four times likely to show positive clusterin immunostaining (odds ratio 4.313 with 95% confidence interval 1.184–15.701). This study did not find relation between clusterin expression and disease recurrence, survival or any of the other clinicopathological parameters in endometrial tumors. The results of our study confirms the diagnostic values of clusterin in supporting the diagnosis of endometrioid carcinoma. When clusterin is expressed in endometrial tumors, it is associated with lower stage. The correlation of clusterin with tumor stage suggests involvement of this molecule in endometrial tumor progression.

## Keyword

Clusterin; Endometrial carcinoma; Immunohistochemistry

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