

# 可溶性E-钙粘蛋白、糖类抗原125、人附睾蛋白4联合检测在卵巢癌早期诊断中的临床价值

《现代肿瘤医学》[ISSN:1672-4992/CN:61-1415/R] 期数: 2019年16期 页码: 2921-2924 栏目: 论著 (妇科肿瘤) 出版日期: 2019-07-08

**Title:** Clinical value of sE-CAD combined with CA125 and HE4 in the diagnosis of early ovarian cancer

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**关键词:** 卵巢癌; 可溶性E-钙粘蛋白; 人附睾蛋白4; 糖类抗原125

**Keywords:** ovarian cancer; soluble E-cadherin; human epididymal protein 4; carbohydrate antigen 125

**分类号:** R737.31

**DOI:** 10.3969/j.issn.1672-4992.2019.16.029

**文献标识码:** A

**摘要:** 目的: 探讨联合检测sE-CAD、CA125和HE4在卵巢癌早期诊断中的临床应用价值, 以改善传统CA125和HE4检测在早期卵巢癌诊断中的不足。方法: 检测40例健康体检者、64例卵巢良性肿瘤患者、112例卵巢癌患者(I期: 14例, II期: 23例, III期: 41例, IV期: 34例) 血清中sE-CAD、CA125和HE4的表达水平, 结合临床资料, 进行相关统计学分析。结果: 不同临床分期卵巢癌组、卵巢良性疾病组和健康对照组sE-CAD、CA125和HE4的表达水平比较, 差异均有统计学意义 ( $P < 0.05$ ) , 卵巢良性疾病组与健康对照组比较, CA125表达水平明显升高, 差异具有统计学意义 ( $P < 0.05$ ) , sE-CAD、HE4水平则无显著变化 ( $P > 0.05$ ) 。sE-CAD、CA125和HE4联合检测用于早期卵巢癌(I-II期) 的诊断时, 其灵敏度、特异度、阳性预测值和阴性预测值分别达到90.8%、91.1%、83.4%、93.6%, ROC曲线下面积也升高至0.956 5, 95%CI为0.916 9-0.996 1, 比各指标单独检测均有所提升。结论: sE-CAD、CA125和HE4联合检测具有较高的灵敏度、特异度和ROC曲线下面积, 是诊断早期卵巢癌(I-II期) 较为理想的生物标志物组合。

**Abstract:** Objective: To evaluate the clinical value of sE-CAD combined with CA125 and HE4 as a new association marker in the diagnosis of early ovarian cancer. Methods: The expression of sE-CAD, CA125 and HE4 in 40 healthy control, 64 cases of benign ovarian tumor and 112 cases of ovarian cancer were measured in department of clinical laboratory. The sensitivity, specificity and ROC curves were used to evaluate the diagnostic value in the diagnosis of early ovarian cancer. Results: The expression of sE-CAD, CA125 and HE4 in patients with ovarian cancer were significantly higher than those in the benign ovarian tumor and the healthy control ( $P < 0.05$ ). Compared with the healthy control, the expression of CA125 was significantly higher in benign ovarian ( $P < 0.05$ ), but the levels of sE-CAD and HE4 were not significantly different ( $P > 0.05$ ). The sensitivity, specificity, positive predictive value, negative predictive value and ROC AUC of sE-CAD+CA125+HE4 were respectively 90.8%, 91.1%, 83.4%, 93.6% and 0.956 5 (95%CI 0.916 9-0.996 1). It performed better than any single test of sE-CAD, CA125 and HE4. Conclusion: The combined detection sE-CAD+CA125+HE4 shows higher sensitivity, specificity and ROC AUC. It is an ideal serum marker combination for the diagnosis of early ovarian cancer (stage I-II) patients.

## 参考文献/REFERENCES

- [1] Ferlay J, Soerjomataram I, Dikshit R, et al. Cancer incidence and mortality worldwide: Sources, methods and major patterns in GLOBOCAN 2012 [J]. Int J Cancer, 2014, 136(5):E359-E386.
- [2] Matteson KA, Gunderson C, Richardson DL. Committee opinion No. 716: The role of the obstetrician-gynecologist in the early detection of epithelial ovarian cancer in women at average risk [J]. Obstet Gynecol, 2017, 130(3):e146-e149.
- [3] Allemani C, Weir HK, Carreira H, et al. Global surveillance of cancer survival 1995-2009: Analysis of

- individual data for 25676887 patients from 279 population-based registries in 67 countries (CONCORD-2) [J] .Lancet,2014,385(9972):977-1010.
- [4] Yang WL,Lu Z,Bast RC J.The role of biomarkers in the management of epithelial ovarian cancer [J] .Expert Rev Mol Diagn,2017,17(6):577-591.
- [5] Solétermos G,Duffy MJ,Othman Abu Hassan S,et al.Clinical use of cancer biomarkers in epithelial ovarian cancer:Updated guidelines from the European Group on Tumor Markers [J] .Int J Gynecol Cancer,2016,26(1):43-51.
- [6] Horala A,Swiatly A,Lorek J,et al.Assessment of diagnostic utility of multivariate diagnostic models in differential diagnosis of ovarian tumors [J] .Ginekol Pol,2018,89(10):568-572.
- [7] Ferraro S,Robbiani C,Tosca N,et al.Serum human epididymis protein 4 vs.carbohydrate antigen 125 in ovarian cancer follow-up [J] .Clin Biochem,2018(60):84-90.
- [8] Tang MKS,Yue PYK,Ip PP,et al.Soluble E-cadherin promotes tumor angiogenesis and localizes to exosome surface [J] .Nat Commun,2018,9(1):2270.
- [9] Jiang X,Tang H,Chen T.Epidemiology of gynecologic cancers in China [J] .J Gynecol Oncol,2018,29(1):e7.
- [10] Eisenhauer EA.Real-world evidence in the treatment of ovarian cancer [J] .Ann Oncol,2017,28(suppl 8):61-65.
- [11] Muinao T,Deka Boruah HP,Pal M.Diagnostic and prognostic biomarkers in ovarian cancer and the potential roles of cancer stem cells-An updated review [J] .Exp Cell Res,2018,362(1):1-10.
- [12] Van den Akker P,Aalders AL.Evaluation of the risk of malignancy index in daily clinical management of adnexal masses [J] .Gynecol Oncol,2010(116):384-388.
- [13] Schummer M,Ng WV,Bumgarner RE,et al.Comparative hybridization of an array of 21 500 ovarian cDNAs for the discovery of genes overexpressed in ovarian carcinomas [J] .Gene,1999(238):375-385.
- [14] Zhang L,Chen Y,Wang K.Comparison of CA125,HE4 and ROMA index for ovarian cancer diagnosis [J] .Curr Probl Cancer,2018,S0147-0272(18):30074-30076.
- [15] Bendifallah S,Body G,Darai E,et al.Diagnostic and prognostic value of tumor markers,scores (clinical and biological) algorithms,in front of an ovarian mass suspected of an epithelial ovarian cancer:Article drafted from the French Guidelines in oncology entitled "Initial management of patients with epithelial ovarian cancer" developed by FRANCOGYN,CNGOF,SFOG,GINECO-ARCAGY under the aegis of CNGOF and endorsed by INCa [J] .Gynecol Obstet Fertil Senol,2019,S2468-7189(18):30381-30387.
- [16] Liest AL,Omrani AS,Mikiver R,et al.RMI and ROMA are equally effective in discriminating between benign and malignant gynecological tumors:A prospective population-based study [J] .Acta Obstet Gynecol Scand,2019,98(1):24-33.
- [17] Spacir Prskalo Z,Bulic P,Langer S,et al.Proofs for implementation of higher HE4 and ROMA index cut-off values in ovarian cancer preoperative stratification [J] .J Obstet Gynaecol,2019,39(2):195-201.
- [18] Trillsch F,Kuerti S,Eulenburg C,et al.E-Cadherin fragments as potential mediators for peritoneal metastasis in advanced epithelial ovarian cancer [J] .Br J Cancer,2016,114(2):213-220.
- [19] Reddy P,Liu L,Ren C,et al.Formation of Ecadherin-mediated cell-cell adhesion activates AKT and mitogen activated protein kinase via phosphatidylinositol 3 kinase and ligand-independent activation of epidermal growth factor receptor in ovarian [J] .Mol Endocrinol,2005,19(10):2564-2578.
- [20] Hu QP,Kuang JY,Yang QK,et al.Beyond a tumor suppressor:Soluble E-cadherin promotes the progression of cancer [J] .Int J Cancer,2016,138(12):2804-2812.
- [21] Auersperg N,Pan J,Grove BD,et al.Ecadherin induces mesenchymal-to-epithelial transition in human ovarian surface epithelium [J] .Proc Natl Acad Sci,1999(96):6249-6254.
- [22] Rosso M,Majem B,Devis L,et al.E-cadherin:A determinant molecule associated with ovarian cancer progression,dissemination and aggressiveness [J] .PLoS One,2017(12):e0184439.

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**备注/Memo:** 陕西省自然科学基础研究计划 (编号: 2017JM8121)

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更新日期/Last Update: 1900-01-01