

DR-NM23在浸润性乳腺癌中的表达及与临床病理参数的关系

《现代肿瘤医学》[ISSN:1672-4992/CN:61-1415/R] 期数: 2018年23期 页码: 3760-3763 栏目: 论著 (胸部肿瘤) 出版日期: 2018-11-01

Title: Expression of DR-NM23 protein in invasive breast cancer and its relationship with clinicopathology parameters

作者: 袁建良¹; 蒋晓波²; 曹方¹; 丁厚中¹; 胡永伟¹

1. 江苏大学附属昆山医院普外科, 江苏 昆山 215300; 2. 昆山市第三人民医院ICU, 江苏 昆山 215300

Author(s): Yuan Jianliang¹; Jiang Xiaobo²; Cao Fang¹; Ding Houzhong¹; Hu Yongwei¹

1. General Surgery Department, Kunshan First People's Hospital Affiliated to Jiangsu University, Jiangsu Kunshan 215300, China; 2. ICU, Kunshan Third People's Hospital, Jiangsu Kunshan 215300, China.

关键词: DR-NM23; 浸润性乳腺癌; 免疫组化; Western blot检测

Keywords: DR-NM23; invasive breast cancer; immunohistochemical; Western blot analysis

分类号: R737.9

DOI: 10.3969/j.issn.1672-4992.2018.23.014

文献标识码: A

摘要: 目的: 探讨DR-NM23蛋白在浸润性乳腺癌组织及癌旁组织中的表达及与临床病理参数的关系。方法: 选取82例乳腺癌组织, 应用免疫组织化学法检测癌组织中DR-NM23蛋白的表达, 并分析与临床病理参数的关系; 再利用多因素Logistic回归分析进一步确认。利用Western blot检测分析DR-NM23在25例新鲜冰冻的浸润性乳腺癌组织与其对应癌旁组织中的表达。结果: 82例乳腺癌组织免疫组化显示DR-NM23蛋白在癌组织及其癌旁组织中阳性表达率分别为25.61%和85.37%。乳腺癌组织中DR-NM23蛋白与组织学分级、淋巴转移、TNM分期及雌激素受体表达呈负相关($P<0.05$)。此外, DR-NM23蛋白与年龄、肿瘤大小、PR受体、Her-2受体无明显相关性($P>0.05$)。利用Western blot法检测显示DR-NM23在癌组织中的平均相对表达量(0.135 ± 0.024), 癌旁组织相对表达量(0.710 ± 0.091), 癌组织中DR-NM23蛋白表达水平明显低于癌旁($P<0.001$)。结论: 浸润性乳腺癌组织中DR-NM23蛋白表达明显低于癌旁, 且其与组织学分级、淋巴转移、TNM分期及雌激素受体表达呈负相关, 提示其在乳癌进展中起到了重要作用, 为探索乳癌新靶点提供理论依据。

Abstract: Objective: To explore the relationship between the expression of DR-NM23 protein in infiltrating breast cancer tissues and adjacent tissues and the clinicopathological parameters. Methods: The expression of DR-NM23 in 82 breast cancer tissue was selected by immunohistochemistry, and the relationship with the clinical pathological parameters was analyzed. Then multivariate Logistic regression analysis was used to confirm it. Western blot analysis was used to analyze the expression of DR-NM23 in 25 patients with fresh frozen breast cancer tissues and their corresponding adjacent tissues. Results: The positive expression rate of DR-NM23 protein in infiltrating breast cancer tissues was 25.61%, while the positive expression rate of DR-NM23 protein in adjacent tissues was 85.37%. The expression of DR-NM23 in breast cancer tissues was negatively correlated with histological grade, lymphatic metastasis, TNM stage and estrogen receptor expression ($P<0.05$). In addition, there was no significant correlation between DR-NM23 protein and age, tumor size, PR receptor, Her-2 receptor ($P>0.05$). The relative expression of DR-NM23 detected by Western blot was (0.135 ± 0.024) in cancer tissue and (0.710 ± 0.091) in adjacent tissues. The expression level of DR-NM23 in cancer tissues was significantly lower than that in adjacent tissues ($P<0.001$). Conclusion: In invasive breast, the expression of DR-NM23 in cancer tissues was significantly lower than in adjacent tissues, and the DR-NM23 protein was negatively correlated with histological grade, lymphatic metastasis, TNM stage and estrogen receptor expression. DR-NM23 played an important role in the progression of breast cancer, and provided theoretical basis for exploring new targets for breast cancer.

参考文献/REFERENCES

- [1] Li T, Zhou QM, Zhang WH. Advances in research of PI3K/Akt/mTOR signaling pathway for treatment of triple negative breast cancer [J]. China Cancer, 2018, 27(01): 40-45. [李甜, 周钱梅, 张卫红. PI3K/Akt/mTOR信号通路在三阴性乳腺癌治疗中的研究进展 [J]. 中国肿瘤, 2018, 27(01): 40-45.]
- [2] Yang CX, Liu YN, Shen RF, et al. Distribution of NM23 gene polymorphism in healthy Chinese Hans population in Hubei, China [J]. Chin J Immunol, 2015, 31(09): 1156-1161.
- [3] Negroni A, Venture D, Tanno B, et al. Neuroblastoma specific effects of DR-NM23 and its mutant forms on differentiation and apoptosis [J]. Cell Death and Differentiation, 2000, 7: 843-850.
- [4] Qu LJ, Liang L, Su JJ, et al. Inhibitory effect of upregulated DR-NM23 expression on invasion and metastasis in colorectal cancer [J]. European Journal of Cancer Prevention, 2013, 22: 512-522.
- [5] Wakefield A, Soukupova J, Montagne A, et al. Bcl3 selectively promotes metastasis of ERBB2-driven mammary tumors [J]. Cancer Research, 2013, 73(2): 745-755.
- [6] Zheng Y, Wu CX, Zhang ML, et al. The epidemic and characteristics of female breast cancer in China [J]. China Oncology, 2013, 23(8): 561-568. [郑莹, 吴春晓, 张敏璐, 等. 乳腺癌在中国的流行状况和疾病特征 [J]. 中国癌症杂志, 2013, 23(8): 561-568.]
- [7] Chen YX, Wang YF. Recent advances in NM23 genes and lung cancer [J]. Chin J Health Lab Technol, 2004, 14: 127-128. [陈宇霞, 王一飞. NM23基因与肺癌研究进展的影响 [J]. 中国卫生检验杂志, 2004, 14: 127-128.]
- [8] Venturelli D, Martinez R, Melotti P, et al. Overexpression of DR-NM23, a protein encoded by a member of the NM23 gene family, inhibits granulocyte differentiation and induces apoptosis in 32Dc13 myeloid cells [J]. Proc Natl Acad Sci USA, 1995, 92(16): 7435-7439.
- [9] Martinez R, Venturelli D, Perrotti D, et al. Gene structure, promoter activity, and chromosomal location of the DR-NM23 gene, a related member of the NM23 gene family [J]. Cancer Research, 1997, 57: 1180-1187.
- [10] Negroni A, Venturelli D, Tanno B, et al. Neuroblastoma specific effects of DR-NM23 and its mutant forms on differentiation and apoptosis [J]. Cell Death Differ, 2000, 7: 843-850.
- [11] Qu LJ, Yang Z, Zeng L, et al. Study on the expression of DR-NM23 mRNA and protein in colorectal carcinomas [J]. The Practical Journal of Cancer, 2011, 26(2): 128-132. [曲利娟, 杨直, 曾玲, 等. DR-NM23基因及其蛋白在大肠癌组织中的表达研究 [J]. 实用癌症杂志, 2011, 26(2): 128-132.]
- [12] Yuan Y, Liang AL, Liu NN, et al. The expressions of C-erbB-2, ER, PR in breast cancer and prognostic significance [J]. Modern Oncology, 2007, 15(09): 1270-1272. [袁勇, 梁爱琳, 刘宁娜, 等. 120例乳腺癌中雌激素受体、孕激素受体及癌基因的表达与临床病理因素相关性分析 [J]. 现代肿瘤医学, 2007, 15(09): 1270-1272.]
- [13] Tokiniwa H, Horiguchi J, Takata D, et al. Topoisomerase II alpha expression and the Ki-67 labeling index correlate with prognostic factors in estrogen receptor-positive and human epidermal growth factor type-2-negative breast cancer [J]. Breast Cancer, 2012, 19(4): 309-314.
- [14] Guix M, Granja Nde M, Meszoely I, et al. Short preoperative treatment with erlotinib inhibits tumor cell proliferation in hormone receptor-positive breast cancers [J]. J Clin Oncol, 2008, 26(6): 897-906.
- [15] He Yufeng, Yang Chunhua, Ding Xi, et al. Study on the correlation between ER, PR and HER-2 expression and breast cancer bone metastasis [J]. Modern Oncology, 2017, 25 (24) : 3982-3986. [何玉峰, 杨春华, 丁玺, 等. ER、PR、HER-2表达与乳腺癌骨转移的相关性研究 [J]. 现代肿瘤医学, 2017, 25 (24) : 3982-3986.]

备注/Memo: 昆山市科技惠民项目 (编号: KS1654); 江苏大学医学临床科技发展基金项目 (编号: JLY20160041)

更新日期/Last Update: 1900-01-01