# CD44$^+$/CD24$^{-/low}$在乳腺癌中的表达及其与含蒽环类药物化疗方案敏感度的关系

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## Relationship of CD44$^+$/CD24$^{-/low}$ with Responsiveness of Breast Cancer to Anthracycline-based Chemotherapy

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摘要

目的

研究乳腺癌中CD44$^+$/CD24$^{-/low}$的表达及其与含蒽环类药物化疗方案敏感度的关系。方法91例乳腺癌接受含蒽环类药物的术前新辅助化疗,2~4个疗程后进行效果评价;采用双染免疫组织化学方法检测化疗前后CD44$^+$/CD24$^{-/low}$的表达,t检验分析化疗前后CD44$^+$/CD24$^{-/low}$细胞比例的变化,$\chi^2$检验分析乳腺癌CD44$^+$/CD24$^{-/low}$表型与乳腺癌临床病理参数及化疗疗效的关系。结果乳腺癌中CD44$^+$/CD24$^{-/low}$阳性表达率为39.6%(36/91),在接受含蒽环类药物的新辅助化疗后乳腺癌中CD44$^+$/CD24$^{-/low}$细胞比例较化疗前明显增加($P$=0.028)。CD44$^+$/CD24$^{-/low}$阳性组ER阳性率明显低于CD44$^+$/CD24$^{-/low}$阴性组(25.0% $vs.$47.3%,$P$=0.033)。三阴性乳腺癌中CD44$^+$/CD24$^{-/low}$阳性率明显高于非三阴性乳腺癌(61.9% $vs.$32.9%,$P$=0.017)。CD44$^+$/CD24$^{-/low}$表型与年龄、肿瘤大小、临床分期、病理类型、组织学分级等乳腺癌临床病理参数无明显关系($P$>0.05)。CD44$^+$/CD24$^{-/low}$阳性组的总有效率高于CD44$^+$/CD24$^{-/low}$阴性组,但两组之间差异无统计学意义(75% $vs.$69.1%,$P$=0.542);CD44$^+$/CD24$^{-/low}$阳性组的病理完全缓解率明显高于CD44$^+$/CD24$^{-/low}$阴性组(38.9% vs.18.2%,$P$=0.028)。结论CD44$^+$/CD24$^{-/low}$细胞仅存在于部分乳腺癌,CD44$^+$/CD24$^{-/low}$表型与ER(-)、三阴性乳腺癌相关,CD44$^+$/CD24$^{-/low}$表型与乳腺癌对含蒽环类药物化疗方案的敏感度相关,CD44$^+$/CD24$^{-/low}$表型可能成为乳腺癌临床化疗疗效的预测指标之一。

关键词：  Breast cancer    CD44＋/CD24－/low phenotype    Triple negative    Chemosensitivity

Abstract：

Objective

To evaluate the expression of CD44$^+$/CD24$^{-/low}$ and the relationship between CD44$^+$/CD24$^{-/low}$ and the response to anthracyclines-based chemotherapy in patients with breast cancer.MethodsA total of 91 patients with breast cancer were treated with anthracycline-based neoadjuvant chemotherapy,and the clinical response to the chemotherapy was obtained after 2 to 4 cycles.Double-staining immunohistochemistry was used to detect the expression of CD44$^+$/CD24$^{-/low}$ in paraffin-embedded tissues of pre-chemotherapy and post-chemotherapy.Data was analyzed via t test and Chi-square test.ResultsThe expression rate of CD44$^+$/CD24$^{-/low}$ phenotype was 39.6%(36/91).The proportions of CD44$^+$/CD24$^{-/low}$cells were significantly increased after anthracyclines-based chemotherapy ($P$=0.028).The positive rate of ER in CD44$^+$/CD24$^{-/low}$ positive group was lower than that in CD44$^+$/CD24$^{-/low}$ negative group(25.0% $vs.$47.3%,$P$=0.033).And the expression rate of CD44$^+$/CD24$^{-/low}$ phenotype in triple negative breast cancer was higher than that in non-triple negative breast cancer(61.9% $vs.$ 32.9%,$P$=0.017).There was no significant correlation between CD44$^+$/CD24$^{-/low}$ phenotype and the other clinicopathological parameters,such as age,tumor size,TNM classification,pathological

type,histological grade and so on($P>0.05$).The overall response of $CD44^+/CD24^{-/low}$positive group was higher but had no difference compared with $CD44^+/CD24^{-/low}$ negative group (75% *vs.*69.1%,*P*=0.542),and the rate of pathological complete remission (pCR) in CD44+/CD24-/lowpositive group was higher than that in CD44+/CD24$^{-/low}$negative group (38.9% *vs.*18.2%,*P*=0.028).Conclusion$CD44^+/CD24^{-/low}$ cells are demonstrated in certain breast cancer,$CD44^+/CD24^{-/low}$ phenotype is associated with triple negative breast cancer and the responsiveness of breast cancer to anthracycline-based chemotherapy.$CD44^+/CD24^{-/low}$ phenotype may be used as one of the indicators to evaluate the clinical chemotherapeutic response of the patients with breast cancer.

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