

论著

## 乳腺癌组织cystatin M基因的表达及其临床病理意义

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**摘要** 背景与目的: 探讨cystatin M基因在人乳腺癌组织中的表达及生物学意义。材料与方法: 采用半定量RT-PCR方法和免疫组织化学法检测50例乳腺癌组织和配对癌旁乳腺组织半胱氨酸蛋白酶抑制剂cystatin M mRNA和蛋白表达及其与临床病理特征的关系。结果: 乳腺癌组织cystatin M mRNA表达阳性率为62%(31/50), 其配对癌旁乳腺组织为94%(47/50), 在乳腺癌细胞系MDA-MB-435S中未见其表达。乳腺癌组织cystatin M mRNA的表达指数为 $0.412 \pm 0.021$ , 明显低于配对的癌旁乳腺组织( $0.541 \pm 0.020$ ), 二者差异有统计学意义( $P < 0.01$ )。cystatin M蛋白在乳腺癌及癌旁组织表达阳性率分别为58% (29/50)和92% (46/50); 其平均光密度值为 $0.318 \pm 0.058$ , 显著低于癌旁乳腺组织 ( $0.428 \pm 0.064$ ,  $P < 0.01$ ); cystatin M表达下调与乳腺癌淋巴结转移和临床TNM分期显著相关( $P < 0.05$ ), 而与肿瘤的大小、病理分级、ER和PR状况无关( $P > 0.05$ )。结论: 人乳腺癌组织存在cystatin M基因表达显著下调且与肿瘤的浸润和转移有关。

**关键词** [乳腺癌](#); [cystatin M](#); [基因表达](#); [转移](#)

## Clinicopathological Significance of Cystatin M Gene Expression in Human Breast Cancer

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**Abstract** **BACKGROUND & AIM:** To explore the expression of cystatin M, a major cysteine protease inhibitor, in human breast cancer and its significance. **MATERIAL AND METHODS:** A semi-quantitative reverse transcription polymerase chain reaction and immunohistochemical methods were performed to evaluate the expression of cystatin M in cancerous and noncancerous tissues of fifty pairs of human invasive ductal adenocarcinoma of breast. The relationship between the expression of cystatin M gene in human breast carcinoma and clinicopathological features was analyzed. **RESULTS:** Reduced expression level of cystatin M gene mRNA and protein has been noted in breast carcinoma cells compared to adjacent noncancerous breast tissue ( $P < 0.01$ ). The lower expression levels in breast carcinoma cells was related with clinicopathological features including lymph-node metastasis and TNM staging ( $P < 0.05$ ) but not with the histological grade nor the estrogen and progesterone receptor status ( $P > 0.05$ ). **CONCLUSION:** The expression of cystatin M gene mRNA and protein was reduced in human invasive breast carcinoma. Down-regulated expression of cystatin M in breast carcinoma might be associated with tumor invasion and metastasis.

**Keywords** [breast carcinoma](#) [cystatin M gene](#) [gene expression](#) [metastasis](#)

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