转移相关基因1在结直肠癌组织中的表达及其与临床病理特征和预后的相关性

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Title: **Expression of metastasis-associated gene 1 in colorectal carcinoma tissues and correlation with clinicopathologic characteristics and prognosis**

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摘要: 目的：探讨转移相关基因1（metastasis associated gene 1，MTA1）在结直肠癌组织中的表达情况及其与结直肠癌临床病理特征和预后的关系。方法： 选取2008年至2013年期间在我院经病理科确诊的结直肠癌患者101例，采用免疫组织化学法和实时定量PCR（RT-PCR）方法检测MTA1蛋白和mRNA在结直肠癌和癌旁组织中的表达水平，并回顾性分析其临床病理特征和预后情况。 结果：在101例结肠癌组织中MTA1蛋白的阳性表达率显著高于其相应癌旁组织（P<0.01）；MTA1蛋白表达与肿瘤分化程度、淋巴结转移、血管-淋巴管浸润、神经浸润呈正相关，与患者预后呈负相关（P<0.05），而与患者年龄、性别无关。在19例结直肠癌组织中MTA1 mRNA的表达水平高于其癌旁组织（P<0.05）。结论：MTA1在结直肠癌组织中呈相对高表达，其表达量的高低可影响患者预后，在结直肠癌的侵袭转移中可能起一定的作用。

Abstract: Objective：To investigate the expression of metastasis associated gene 1 (MTA1) and its relationship with clinicopathologic characteristics and prognosis in human colorectal carcinoma (CRC).Methods：101 samples of CRC patients were selected into the present study.All these patients were confirmed by Pathology Department of our hospital from 2008 to 2013.Immunohistochemical assay and Real time PCR were used to test the expression of MAT1 protein and mRNA in CRC tissue and its corresponding para-cancerous tissues.The relationship between MTA1 and clinicopathologic characteristics and prognosis of CRC patients was analyzed retrospectively.Results：The positive expression rate of MTA1 protein in CRC tissues was significantly higher than adjacent colorectal tissues (P<0.01).The level of MTA1 protein was positively associated with the degree of neoplasm differentiation，lymphatic metastases，vascular-lymphatic and nerve infiltration.MTA1 expression was negatively associated with the prognosis (P<0.05)，and regardless of age，gender.Furthermore，the expression level of MTA1 mRNA in CRC tissues (n=19) was also higher than its para-cancerous tissues(P<0.05).Conclusion：MTA1 was relatively highly expressed in CRC tissues，and its expression level may affect the prognosis of CRC patients.It possibly plays a significant role in the invasion and metastasis in CRC.

参考文献/REFERENCES

[1]Bray F，J Ferlay，I Soerjomataram，et al.Global cancer statistics 2018：GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries［J］.CA Cancer J Clin，2018，68(6)：394-424.
[2]Torre LA，F Bray，RL Siegel，et al.Global cancer statistics，2012［J］.CA Cancer J Clin，2015，65(2)：87-108.
[3]Toh Y，SD Pencil，GL Nicolson.A novel candidate metastasis-associated gene，MTA1，differentially expressed in highly metastatic mammary adenocarcinoma cell lines.cDNA cloning，expression，and protein analyses［J］.J Biol Chem，1994，269(37)：22958-22963.
[4]Pencil SD，Y Toh，GL Nicolson.Candidate metastasis-associated genes of the rat 13762NF mammary

adenocarcinoma［J］.Breast Cancer Res Treat，1993，25(2)：165-174.
[5]Roepman P，A de Jager，MJ Groot Koerkamp，et al.Maintenance of head and neck tumor gene expression profiles upon lymph node metastasis［J］.Cancer Res，2006，66(23)：11110-11114.
[6]Martin MD，K Fischbach，CK Osborne，et al.Loss of heterozygosity events impeding breast cancer metastasis contain the MTA1 gene［J］.Oncology letters，2001，61(9)：3578-3580.
[7]Yi S，H Guangqi，Guangqi H，et al.The association of the expression of MTA1，nm23H1 with the invasion，metastasis of ovarian carcinoma［J］.Chinese Medical Sciences Journal，2003，18(2)：87-92.
[8]Toh Y，E Oki，S Oda，et al.Overexpression of the MTA1 gene in gastrointestinal carcinomas：Correlation with invasion and metastasis［J］.International Journal of Cancer，1997，74(4)：459-463.
[9]Li Y，Zhang T，Gao H，et al.Expression of MTA1 and VEGF-C in colon cancer tissues and their relationship with lymph node metastasis［J］.Modern Medical Journal，2009，37(6)：401-404.
[10]Chen XL，Wu YJ，Lv Z，et al.Expression and significance of MTA1 and RECK in the carcinogenesis of colorectal adenoma［J］.Chinese Journal of Clinical and Experimental Pathology，2017，33(4)：432-435.
[11]Kumar R，RA Wang，R Bagheri-Yarmand.Emerging roles of MTA family members in human cancers［J］.Seminars Oncol，2003，30(5):30-37.
[12]Hofer M，A Menke，F Genze，et al.Expression of MTA1 promotes motility and invasiveness of PANC-1 pancreatic carcinoma cells［J］.British Journal of Cancer，2004，90(2)：455.
[13]Ohshiro K，SK Rayala，C Wigerup，et al.Acetylation-dependent oncogenic activity of metastasis-associated protein 1 co-regulator［J］.EMBO Reports，2010，11(9)：691-697.
[14]Kumar R，S Balasenthil，B Manavathi，et al.Metastasis associated protein 1 and its short form variant stimulates Wnt1 transcription through promoting its derepression from Six3 corepressor［J］.Cancer Research，2010,70(16):6649-6658.
[15]Kumar R，S Balasenthil，SB Pakala，et al.Metastasis-associated protein 1 short form stimulates Wnt1 pathway in mammary epithelial and cancer cells［J］.Cancer Research，2010,70(16)：6598-6608.
[16]Pakala SB，SK Rayala，RA Wang，et al.MTA1 promotes STAT3 transcription and pulmonary metastasis in breast cancer［J］.Cancer Research，2013,73(12)：3761-3770.
[17]Yan C，H Wang，Y Toh，et al.Repression of 92-kDa type IV collagenase expression by MTA1 is mediated through direct interactions with the promoter via a mechanism，which is both dependent on and independent of histone deacetylation［J］.Journal of Biological Chemistry，2003，278(4)：2309-2316.
[18]Mishra SK，Z Yang，A Mazumdar，et al.Metastatic tumor antigen 1 short form(MTA1s) associates with casein kinase I-gamma2，an estrogen-responsive kinase［J］.Oncogene，2004，23(25)：4422-4429.

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