

# STAT3 SNP与结直肠癌生物学行为的相关性

《现代肿瘤医学》[ISSN:1672-4992/CN:61-1415/R] 期数: 2019年06期 页码: 1028-1031 栏目: 论著 (消化·泌尿系肿瘤) 出版日期: 2019-02-08

**Title:** Polymorphism in STAT3 SNP and its association with biological behavior of colorectal cancer

**作者:** 孙永臣<sup>1</sup>; 陈志刚<sup>2</sup>

1.商丘市第一人民医院肿瘤科,河南 商丘 476100 2.苏州大学附属第二医院肿瘤科,江苏 苏州 215006

**Author(s):** Sun Yongchen<sup>1</sup>; Chen Zhigang<sup>2</sup>

1.Department of Oncology,Shangqiu First People's Hospital,Henan Shangqiu 476100,China; 2.Department of Oncology,the Second Affiliated Hospital of Soochow University,Jiangsu Suzhou 215006,China.

**关键词:** 信号转导和转录活化因子3; 单核苷酸多态性; 结直肠癌; 肿瘤生物学行为

**Keywords:** STAT3; SNP; colorectal cancer; tumor biological behavior

**分类号:** R735.3+5; R735.3+7

**DOI:** 10.3969/j.issn.1672-4992.2019.06.030

**文献标识码:** A

**摘要:** 目的:探讨信号转导和转录活化因子3(signal transducer and activators of transcription 3, STAT3)单核苷酸多态性(single nucleotide polymorphisms,SNP)与结直肠癌生物学行为之间的关系。方法:采用SYBR GREEN PCR方法检测118例结直肠癌患者外周血STAT3 SNP(rs4796793),利用SPSS 16.0统计分析该SNP基因型以及等位基因与结直肠癌生物学行为之间的关系。结果:含有G等位基因的CG+GG基因型相对于CC基因型,脉管/神经侵犯发生率差异显著(P=0.009)。脉管/神经侵犯因素中,C、G等位基因频率具有显著差异(P=0.001)。结论:STAT3 SNP(rs4796793)与结直肠癌脉管/神经侵犯相关,其中携带G等位基因的患者神经/脉管侵犯风险高。

**Abstract:** Objective:To examine the relationship between signal transducer and activators of transcription 3(STAT3) SNP(rs4796793) and biological behaviors in colorectal cancer.Methods:Genotyping of rs4796793 was carried out by single-tube SYBR GREEN PCR with Tm-shift primers.Genotypes were analyzed in 118 colorectal cancer patients by SPSS 16.0.Results:Stratified analysis indicated that an elevated risk of vessel/nerve invasion was observed in patients who carried at least G allele (CG or GG) compared with CC genotype (P=0.009) and also a significant difference was found in alleles between C and G(P=0.001).Conclusion:Among these pathological parameters concerned,STAT3 SNP was associated with vessel/nerve invasion.G allele indicates high risk of vessel/nerve invasion.

## 参考文献/REFERENCES

- [1] Morikawa T,Baba Y,Yamauchi M,et al.STAT3 expression,molecular features,inflammation patterns,and prognosis in a database of 724 colorectal cancers [J] .Clinical Cancer Research,2011,17(6):1452-1462.
- [2] Liang C,Xu Y,Ge H,et al.Clinicopathological significance and prognostic role of p-STAT3 in patients with hepatocellular carcinoma [J] .OncoTargets and Therapy,2018,11:1203-1214.
- [3] Cui X,Jing X,Yi Q,et al.Systematic analysis of gene expression alterations and clinical outcomes of STAT3 in cancer [J] .Oncotarget,2018,9(3):3198-3213.
- [4] Gordziel C,Bratsch J,Moriggl R,et al.Both STAT1 and STAT3 are favourable prognostic determinants in colorectal carcinoma [J] .British Journal of Cancer,2013,109(1):138-146.
- [5] Yakata Y,Nakayama T,Yoshizaki A,et al.Expression of p-STAT3 in human gastric carcinoma:Significant correlation in tumour invasion and prognosis [J] .Int J Oncol,2007,30(2):437-442.
- [6] Liu Y,Huang J,Li W,et al.Meta-analysis of STAT3 and phospho-STAT3 expression and survival of patients with breast cancer [J] .Oncotarget,2018,9(16):13060-13067.
- [7] Ito N,Eto M,Nakamura E,et al.STAT3 polymorphism predicts interferon-alfa response in patients with metastatic renal cell carcinoma [J] .J Clin Oncol,2007,25(19):2785-2791.
- [8] Wang J,Chuang K,Ahluwalia M,et al.High-throughput SNP genotyping by single-tube PCR with Tm-shift primers [J] .Biotechniques,2005,39(6):885-893.
- [9] Huang Y,Wang J,Cao F,et al.SHP2 associates with nuclear localization of STAT3:Significance in progression and prognosis of colorectal cancer [J] .Scientific Reports,2017,7(1):17597-17603.

- [10] Liu Y,Gong W,Yang ZY,et al. Quercetin induces protective autophagy and apoptosis through ER stress via the P-STAT3 / Bcl-2 axis in ovarian cancer [J] .Apoptosis, 2017,22(4): 544-557.
- [11] Wang G, Jing Y, Cao L, et al. A novel synthetic Asiatic acid derivative induces apoptosis and inhibits proliferation and mobility of gastric cancer cells by suppressing STAT3 signaling pathway [J] . OncoTargets Therapy,2017,10: 55-66.
- [12] Zhong B,Liu Q,Liu Y,et al.Expressions of STAT3,p-STAT3 and E-cadherin in colorectal cancer and clinical implications [J] .Chinese Journal of Gastrointestinal Surgery,2014,17(6):594-597.
- [13] Kortylewski M,Yu H.Stat3 as a potential target for cancer immunotherapy [J] .J Immunother,2007,30(2):131-139.
- [14] Wang SW,Sun YM.The IL-6/JAK/STAT3 pathway:potential therapeutic strategies in treating colorectal cancer (review) [J] .International Journal of Oncology,2014,44(4):1032-1040.
- [15] Siveen KS,Sikka S,Surana R,et al.Targeting the STAT3 signaling pathway in cancer:role of synthetic and natural inhibitors [J] .Biochimica et Biophysica Acta,2014,1845(2):136-154.
- [16] Han C,Sun B,Zhao X,et al.Phosphorylation of STAT3 promotes vasculogenic mimicry by inducing epithelial-to-mesenchymal transition in colorectal cancer [J] .Technology in Cancer Research & Treatment,2017,16(6):1209-1219.

---

**备注/Memo:** 苏州市科教兴卫基金 (编号: KJXW2013017)

---

更新日期/Last Update: 1900-01-01