**Diagnostic role of serum CA19-9 identified in colorectal tubular adenocarcinoma with poor outcome**

Zhicheng He1,4, Shudong Hu2, Jijun Chen1, Xianghai Cai1, YingYing He3, #, Shubai Liu1, #

1State Key Laboratory of Phytochemistry and Plant Resources in West China, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming, 650201 Yunnan, China;

2Department of Radiology, Affiliated Renmin Hospital of Jiangsu University, Zhen jiang, Jiangsu, China;

3School of Chemical Science & Technology, Yunnan University, Kunming, Yunnan 650091, China;

4University of Chinese Academy of Sciences, Beijing 100049, China.

# **Correspondence to:**

Dr. Shubai Liu, Mailing address: State Key Laboratory of Phytochemistry and Plant Resources in West China, Kunming Institute of Botany, Chinese Academy of Sciences, 132 Blue Black Street, Kunming, Yunnan 650201, China; Phone: (86) 871-65223309; E-mail: liushubai@mail.kib.ac.cn.

Dr. YingYing He, Mailing address: School of Chemical Science & Technology, Yunnan University, Kunming, Yunnan 650091, China; E-mail: yingying.he10@gmail.com

**Supplementary Materials**

**Figure S1.** A. Patients distribution in four different age group (<50, 50~60, 61~70, >71). B. Survival rate analysis for two different age group (<60, ≧60). C. Survival rate analysis for different adenocarcinoma types.

**Figure S2.** Correlation analysis of lymph node metastasis with overall survival (OS) and stage (A). The 5-year survival rates of patients with different number lymph node metastasis (B&C).

**Figure.S3** Correlation analysis of eight physiological indicators with CRC primary tumor site (terminal and other tumor sites) and tumor stage. Correlation analysis of eight physiological with the CRC tumor sites (A) and stage (early and advanced stage, (B). Correlation analysis of ALB and CRB with tumor site, stage and overall survival time of CRC (C).

**Figure.S4** Overall survival analysis of patients with tumor infiltration and non-infiltration colorectal cancer (n=885) (A). The distribution of patients in tubular adenocarcinoma (n=54) (B). The distribution of patients (infiltration/non-infiltration) in different CA199 levels (n=315) (C). Correlation analysis of the patient’s tumor infiltration with serum level of CA19-9 (D).

**Table.S1** Summary of eight physiological indicators in colorectal cancer cases (n=602).