

Does Carbonic Anhydrase IX Expression Affect Prognosis and Survival in Renal Cell Carcinoma?

Introduction and Objectives: Recently studies of Carbonic anhydrase IX (CAIX) expression and clinical significance in renal cell carcinoma (RCC) have been reported; however, there are many disagreements in the usefulness of CAIX as a prognostic factor. The purpose of this study was to evaluate the association between CAIX expression and clinical factors in RCC.

Materials and Methods: Between January 2000 and December 2007, The medical record of 172 RCC patients in our hospital were reviewed retrospectively. All patients were divided into high expression group (109 cases) and low expression group (63 cases) according to CAIX expression. We evaluated the association between CAIX expression and age, body mass index (BMI), renal neoplasm type, tumor stage, nuclear grade, metastasis after surgery and tumor-specific survival rate.

Results: The mean age of high expression group and low expression group respectively was 56 years, 54 years, The mean BMI of high expression group and low expression group respectively was 24.2kg/m^2 , 24.5kg/m^2 . In CAIX expression between clear cell RCC and non clear cell RCC, CAIX was significantly expressed in clear cell RCC. There was no significant difference between high expression clear cell RCC and low expression clear cell RCC in age, BMI, nuclear grade, metastasis after surgery and tumor-specific survival rate ($p=0.237$, $p=0.802$, $p=0.382$, $p=0.551$). But in clear cell RCC, CAIX expression was significantly expressed in patients who higher T or N stages ($p=0.015$, 0.033)

Conclusions: CAIX was significantly expressed in clear cell RCC and was significantly lower expressed in patients who higher T stage or N stage.