

Serum X-Linked Inhibitor of Apoptosis Protein (XIAP) Predictive Recurrence of Renal Cell Carcinoma after Surgery

Introduction and Objective: The X-linked Inhibitor of Apoptosis protein (XIAP) is associated with cell survival by blocking caspase-mediated apoptosis. The expression and prognostic significance of XIAP in renal cell cancer (RCC) has rarely been studied. To our knowledge, no report on the serum XIAP levels from RCC patients has been published. In this study, we examined serum XIAP levels of RCC patients and normal individuals and evaluated its utility as biomarker.

Materials and Methods: Peripheral blood samples were obtained from 84 patients (59 men and 25 women, median age; 63 years [36-85]) with RCC before surgery. All the patients underwent radical or partial nephrectomy. Blood samples were also collected from 52 healthy controls. The serum XIAP levels were measured by a sandwich enzyme-linked immunosorbent assay (Gencompare, TiterZyme). Cut off value was calculated by ROC analysis.

Results: The serum XIAP levels in patients with RCC were higher than those of normal control individuals (328.3 pg/ml vs 156.2 pg/ml, $P < 0.001$). The progression free survival rate of the RCC patients with high serum XIAP was shown to be significantly lower than that of those with low serum XIAP in Grade 1-2 group ($P < 0.05$).

Conclusions: Serum XIAP level is higher in renal cell cancers compared to normal control. High XIAP expression is not directly associated with tumor stage. These results suggest that it may be used as a novel prognosticator and a potential target for renal cell cancer diagnosis and therapy.