

AB040. P011. Prognostic and diagnostic value of REG4 serum and tissue expression in pancreatic ductal adenocarcinoma

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Background: Expression of regenerating islet-derived protein 4 (REG4), a secretory protein involved in cell differentiation and proliferation, is upregulated in inflammatory bowel diseases and in many gastrointestinal malignancies. The prognostic significance of its expression in pancreatic ductal adenocarcinoma (PDAC) is unknown. Our aim was to investigate tumor tissue and serum REG4 expression in PDAC patients. We also evaluated as a control the diagnostic value of serum REG4 level in patients with chronic pancreatitis (CP).

Methods: Immunohistochemical expression of REG4 was evaluated in 154 surgical specimens and serum

REG4 level in 130 samples from PDAC patients treated at Helsinki University Hospital, Finland, in 2000–2011. REG4 tissue and serum expression was assessed in relation to clinicopathological parameters and patient survival. A CP control group comprised 34 patients who underwent pancreatic resection because of suspicion of malignancy.

Results: Significant survival differences were detectable in subgroups: in tumor stages IA–IIA, high serum REG4 level predicted worse survival ($P=0.046$). In patients with grade I tumor, positive tissue REG4 expression predicted better survival ($P=0.006$). In multivariate analysis, neither tissue nor serum REG4 expression were independent prognostic factors. Serum REG4 levels were higher in PDAC than in CP ($P=0.002$), with diagnostic sensitivity of 45% and specificity of 91%. In logistic regression analysis, a multivariate model with REG4, CA 19-9, and age provided sensitivity of 82% and specificity of 79%.

Conclusions: REG4 tissue expression is a prognostic marker in subgroups of PDAC patients. Serum REG4 level might be useful in differential diagnosis between PDAC and CP.

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