

AB071. P043. TLR1 predicts favorable prognosis in young pancreatic cancer patients

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Background: The link between inflammation and carcinogenesis is irrefutable. Trying to pinpoint key factors at play, cancer research has found interest in Toll-like receptors (TLRs), through which pathological molecular patterns trigger immune cell response. TLRs appear to show prognostic value in adenocarcinomas of the mouth, colon and ovaries. We set out to investigate whether the expression of Toll-like receptors 1, 3, 5, 7 and 9 could be used for prognostic evaluation in pancreatic ductal adenocarcinoma (PDAC) patients.

Methods: We collected tumor biopsies from 154 stage I–III PDAC patients who were surgically treated at Helsinki University Hospital between 2000 and 2011. We used tissue microarray and immunohistochemistry to assess the expression of TLRs 1, 3, 5, 7, and 9 in PDAC tissue, and

we matched staining results against clinicopathological parameters using Fischer's test. For survival analysis we used the Kaplan-Meier method and log-rank test, and the Cox regression proportional hazard model for univariate and multivariate analyses. Patients receiving neoadjuvant therapy were excluded from the study.

Results: High TLR1 expression was observed in 60 (39%), high TLR3 in 48 (31%), high TLR5 in 58 (38%), high TLR7 in 14 (9%), and high TLR9 in 22 (14%) patients. Overall, none of the markers associated directly with patient survival. However, univariate analysis showed high TLR1 expression to associate with better survival in patients who were under 65 years old ($P=0.019$). Also, we found noteworthy how poorly patients fared if they were scored negative in TLR1, TLR3, TLR7 and TLR9 expression.

Conclusions: We found high TLR1 expression to be of positive prognosis in patients under 65 years of age.

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