Fujisawa et al. Journal for ImmunoTherapy of Cancer 2015, 3(Suppl 2):P88
http://www.immunotherapyofcancer.org/content/3/S2/P88

Journal for ImmunoTherapy of Cancer

POSTER PRESENTATION Open Access

Analysis of interleukin-13 receptor alpha 2 expression as a prognostic biomarker in surgically resected pancreatic cancer patients

Toshio Fujisawa[1*], Takeshi Shimamura[2], Bharat H Joshi[3], Raj K Puri[3]

From 30th Annual Meeting and Associated Programs of the Society for Immunotherapy of Cancer (SITC 2015) National Harbor, MD, USA. 4-8 November 2015

Background

IL-13Rα2 is recognized as one of the candidate genes significantly associated with pancreatic cancer risk. Previously, we have demonstrated that IL-13Rα2 is over-expressed in ~70% of human pancreatic cancer samples. We have also shown that IL-13 can mediate invasion and metastasis of human pancreatic cancer cells through IL-13Rα2 both *in vitro* and in an *in vivo* tumor models. Based on these results, we hypothesized that IL-13Rα2 expression in pancreatic cancer may be related to overall survival of subjects following surgical resection.

Methods

Between 1996 and 2012 we obtained 107 samples from NTT Medical Center Tokyo and 129 samples from Yokohama City University Hospital, Japan. Immunohistochemical staining (IHC) for IL-13Rα2 was performed and the results analyzed independently by each hospital's pathologists. The level of IL-13Rα2 staining intensity (0 to 3+) was used to categorize the specimens as strong (2+ and 3+) or weak expressers (0 and 1+).

Results

By Kaplan-Meier method, subjects expressing strong IL-13Rα2 on their tumors survived significantly shorter duration compared to those with weak expression ($p = 0.024$). Further analysis demonstrated that the level of IL-13Rα2 expression was inversely correlated with survival time and invasion, but not with tumor staging and histological grade. We are currently examining the correlation between a variety of other clinical factors and IL-13Rα2 expression using Spearman's rank correlation test.

Conclusions

In summary, our preliminary results suggest that IL-13Rα2 expression has an important role in prognosis and may be critical in overall survival of pancreatic cancer patients.

Authors' details
[1]NTT Medical Center Tokyo, Department of Gastroenterology, Tokyo, Japan. [2]Yokohama City University School of Medicine, Department of Oncology, Yokohama, Japan. [3]Center for Biologics Evaluation & Research (CBER)/Food & Drug Administration (FDA), Silver Spring, MD, USA.

Published: 4 November 2015

doi:10.1186/2051-1426-3-S2-P88
Cite this article as: Fujisawa *et al.*: Analysis of interleukin-13 receptor alpha 2 expression as a prognostic biomarker in surgically resected pancreatic cancer patients. *Journal for ImmunoTherapy of Cancer* 2015 3(Suppl 2):P88.

[1]NTT Medical Center Tokyo, Department of Gastroenterology, Tokyo, Japan
Full list of author information is available at the end of the article