Year of publication 2016

Robert Jackson, Bruce A Rosa, Sonia Lameiras, Sean Cuninghame, Josee Bernard, Wely B Floriano, Paul F Lambert, Alain Nicolas, Ingeborg Zehbe (2016 Nov 4)

**Functional variants of human papillomavirus type 16 demonstrate host genome integration and transcriptional alterations corresponding to their unique cancer epidemiology.**
*BMC genomics*: 851

**Summary**

Human papillomaviruses (HPVs) are a worldwide burden as they are a widespread group of tumour viruses in humans. Having a tropism for mucosal tissues, high-risk HPVs are detected in nearly all cervical cancers. HPV16 is the most common high-risk type but not all women infected with high-risk HPV develop a malignant tumour. Likely relevant, HPV genomes are polymorphic and some HPV16 single nucleotide polymorphisms (SNPs) are under evolutionary constraint instigating variable oncogenicity and immunogenicity in the infected host.

Franck Assayag, André Nicolas, Sophie Vacher, Catherine Dehainault, Ivan Bieche, Didier Meseure, Isabelle Aerts, Nathalie Cassoux, Claude Houdayer, François Doz, Didier Decaudin (2016 Sep 23)

**Combination of Carboplatin and Bevacizumab Is an Efficient Therapeutic Approach in Retinoblastoma Patient-Derived Xenografts.**
*Investigative ophthalmology & visual science*: 4916-4926 : [DOI : 10.1167/iovs.15-18725]

**Summary**

Retinoblastoma (Rb) is a rare childhood cancer of the retina with a survival rate of 95% in children living in high-income countries, after appropriate therapies such as chemotherapy, local ophthalmologic treatment, and radiotherapy. However, due to inactivation of the RB1 gene, all bilateral and almost 15% of unilateral retinoblastoma patients have a higher risk of secondary cancers, especially sarcomas. Hence, new nonmutagen treatments are warranted. Therefore, we investigated the efficacy of therapy using anti-VEGF antibody bevacizumab, either alone or with carboplatin, in well-characterized Rb patient-derived xenografts (PDXs).

Cristina Ghirelli, Benjamin Sadacca, Fabien Reyal, Raphaël Zollinger, Paula Michea, Philémon Sirven, Lucia Pattarini, Carolina Martinez-Cingolani, Maude Guillot-Delost, André Nicolas, Alix Scholer-Dahirel, Vassili Soumelis (2016 Sep 14)

**No evidence for TSLP pathway activity in human breast cancer.**
*Oncoimmunology*: e1178438 : [DOI : 10.1080/2162402X.2016.1178438]
Summary

Thymic stromal lymphopoietin (TSLP) is an epithelial cell-derived cytokine that primes dendritic cells for Th2 induction. It has been implicated in different types of allergic diseases. Recent work suggested that TSLP could play an important role in the tumor microenvironment and influence tumor progression, in particular in breast cancer. In this study we systematically assessed the production of TSLP at the mRNA and protein levels in several human breast cancer cell lines, large-scale public transcriptomics data sets, and primary human breast tumors. We found that TSLP production was marginal, and concerned less than 10% of the tumors, with very low mRNA and protein levels. In most cases TSLP was undetectable and found to be expressed at lower levels in breast cancer as compared to normal breast tissue. Last, we could not detect any functional TSLP receptor (TSLPR) expression neither on hematopoietic cells nor on stromal cells within the primary tumor microenvironment. We conclude that TSLP-TSLPR pathway activity is not significantly detected within human breast cancer. Taken together, these observations do not support TSLP targeting in breast cancer.


Ligand-receptor dissociated expression explains high TSLP without prognostic impact in human primary head and neck squamous cell carcinoma.

Oncoimmunology : e1179414 : DOI : 10.1080/2162402X.2016.1179414

Summary

Thymic stromal lymphopoietin (TSLP) is an interleukin (IL)-7-like cytokine expressed by epithelial cells during allergic inflammation, and activating dendritic cells (DC). Its expression and functional role in cancer remain controversial. We conducted retrospective (n = 89), and prospective studies including patients with untreated primary head and neck squamous cell carcinoma (HNSCC). We found that TSLP was overexpressed by HNSCC tumor cells, and associated with a highly differentiated status. However, no significant difference in overall and recurrence-free survival was found between patients bearing a tumor with high and low TSLP levels, respectively. Surprisingly, there was no significant association between the levels of TSLP expression, and the number of tumor-infiltrating mature DCLAMP(+) DC. In order to explain the apparent lack of TSLP-induced DC activation, we performed phenotypic and functional experiments on freshly resected tumors. Tumor-infiltrating immune cells, including DC, did not express the TSLP receptor heterodimer (TSLPR chain, IL-7Ralpha chain). Furthermore, freshly sorted blood CD11c(+) DC from healthy donors cultured with tumor-conditioned supernatant exhibited an activated profile, but this was not affected by an anti-TSLP blocking antibody, suggesting a DC activation pathway independent of tumor-derived TSLP. Overall, our results demonstrate that TSLP is overexpressed in HNSCC but its function is hampered by the lack of TSLPR-expressing cells in the tumor microenvironment. Such a
dissociated ligand-receptor expression may impact intercellular communication in other immune activation pathways, and tumor types.