Transforming growth factor-β1 and soluble co-inhibitory immune checkpoints as putative drivers of immune suppression in advanced basal cell carcinoma

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Background
- Basal cell carcinoma (BCC) is the most common cancer, occurring about 75% of all cases in non-melanoma skin cancer in the USA
- The risk factors for BCC include age, chronic sun exposure, fair skin complexion, and increased familial susceptibility
- The pathogenesis involves dysregulation of Hedgehog signaling pathways, resulting in uncontrolled keratinocyte proliferation

Methods
- The study included BCC patients and healthy controls.
- Blood samples were collected and processed for the measurement of soluble immune checkpoints.
- The immune checkpoints measured include PD-L1, TLR-2, CD80, CD40, CD28, CD27, Arginase, RANTES, TGF-β1, and CD163.

Results
- The systemic levels of soluble immune checkpoints were significantly different between BCC patients and healthy controls.
- PD-L1, TLR-2, CD80, and CD40 were upregulated in BCC patients.
- CD28, CD27, Arginase, RANTES, TGF-β1, and CD163 were downregulated in BCC patients.

Conclusions
- The study suggests that soluble immune checkpoints are potential biomarkers for BCC.
- Further studies are needed to validate these findings and explore their clinical utility.

References