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Potentially relevant targets and prognostic proteins in sarcomas

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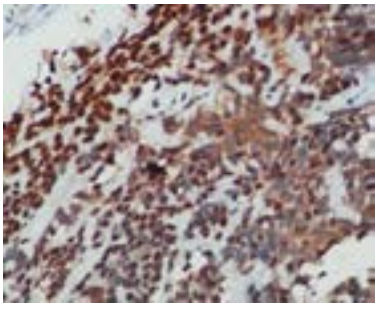
There is a lack of clinically relevant multi targets in the different subtypes of sarcomas in both adults and pediatric patients. By analyzing retrospectively by immunohistochemistry (n=20) and we found eight potential proteins such as Ape-1, Bcl-2, Survivin, Fascin-1, RCAS-1, Sox2, EGFR and VCP to be potential targeted in several subtypes of sarcomas. By measuring their percentage of expression, localization and distribution (heterogeneous or homogenous). Additionally, there is limited information about the immune infiltration in sarcomas in general, the immunecontexture it is quite different from regular carcinomas, and therefore they respond different to immunotherapies. With that in mind we also analyze by regular hematoxylin and eosin staining and by immunohistochemistry (IHC) the adaptive immune cells specifically CD8 T cells and in primary surgical removed tumors, metastasis and recurrence biopsies. We performed a systematic review using terms "sarcoma and protein overexpression and multivariate analysis". We found 8 proteins were overexpressed in those tumors. Four proteins showed significant overexpression. Fascin-1 (90%), Survivin (90%), Ape-1 (50%) and VCP (35%). Only 3% of the tumors were positive for CD8 T cells expression was variable but with low rates most of the cases (15% average). Proteins such as EGFR (0%), Sox2 (5%) and PD1 (5%). With these results encourage us to promote the immune infiltration of the right immune cells in tumors such as sarcomas which are according with several studies and our results poorly immunogenic in most of the cases (5%). In order to accomplish this, we performed in five refractory sarcoma patients one method to promote immune infiltration using modification locally of the tumor microenvironment and we found that with this approach plus targeting with active antigen specific peptides all the five patients went to remission (media PFS = 11 months). Sarcomas are a complex neoplasia's with very limited treatment options. It is important to explore potential clinical multi-targets in order to improve prognosis. Immunologically speaking little is known how the immune based therapies may benefit objectively in Sarcomas. Further we will prepare clinical correlations with this preliminary data to expand the cohort and focus on the proteins with more overexpression and which is the role of the CD8 infiltration in terms of prognosis in Sarcomas.



Biography

Dr. Jose Antonio Matute, MD is currently the Co-director, Chief pathologist and investigator from the Binational Sonora Cancer Research Center (CICS) in Seattle/Sonora. One of its main functions is to carry out; immuno-advanced cancer reports, molecular pathology and immunological studies such as ELISA, ELISPOT, T cell EXPANSION, and IMMUNOGRAM in cancer patients. In the research area develops scientific projects with Clinic relevance and performed experiments focused on patient's immune response against cancer. Dr. Matute received specialist training in pathology at the University of Monterrey. In 2014 he began his training in immuno-Oncology at the OMA/CICS group in both Seattle and Sonora, where he developed a diagnostic chart for the Immunoncopathology evaluation with prognostic and therapeutic implications.

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