conferenceseries.com

Juan Pablo Marquez Manriquez, J Cancer Sci Ther 2019, Volume 11
DOI: 10.4172/1948-5956-C1-158

32nd Euro Congress on

Cancer Science & Therapy

March 07-08, 2019 | Barcelona, Spain

Juan Pablo Marquez Manriquez

Sonora Cancer Research Center (CICS), USA

Targeting pancreatic ductal adenocarcinoma with multi-peptide immunotherapy and repurposing drugs

The immunology context, tumor stroma, active-antigen specific multi peptide immunotherapy and the use of repurposing drugs in pancreatic ductal adenocarcinoma (PDAC) clinically speaking are mainly unexplored. We first analyze retrospectively N=37 samples, median age= 47 yrs old from PDAC to study the adaptive and innate immune infiltration of CD8, Th1, Th2 and Tregs cells in tumor tissue and tumor stroma. We also evaluated by siRNA and systematic review 24 potential clinically relevant targets from biologically and clinically relevant proteins. Then we did *in vitro* using human PBMC's and tumor cells lines according to systematic reviews of 20 cancer repurposing drugs to determine, if they were able to either improve granzyme B production and/or immunogenic cell death in order to validate what we found in the systematic reviews, Finally we predict from selected proteins 20 peptides in total as they were immunogenic by granzyme B ELISPOT and IgA + IgG + IgM antigen-specific ELISA. With this proof of principle, the local ethics committee approved the enrollment of eleven PDAC patients refractory but with a Karnofsky > 80% to be treated with this treatment approach. We found that peptides VCP 7 (P=0.001), fascin 8 (p=0.0001), FAP 2 (p=0.005), ALDH1 –B (p=0.002), Beclin-1 -E (P=0.01), IL-6R 4 (p=0.0001), NF-kB 5 (p=0.001), Muc-1 (0.001) and Alpha methylacyl-CoA racemase n (p.01) were the immunogenic according with prism and STAT3 analysis. Paladin and Galectin-3 were N.S. In these pilot trial eight peptides showed immunological correlation with a PFS (median=26 months). In terms of the drugs meloxicam (p=0001), enoxaparin (p=0001), clopidogrel (p=005), bortezomib (o.0001), naproxen (o.003), ursodeoxycholic acid (p=0.001 and thalidomide (p=0001) showed clinical activity in the combo therapy without significant adverse effects not even autoimmunity. As preliminary conclusion, the future in clinical oncology is rationally combine different therapies especially for challenge tumors such as PDAC and many others. Combining immuno treatment with validated repurposing drugs is a promising and safe approach. The next step is to publish this preliminary data and then a phase I clinical trial.

Fig 1: DTH test before treatment.

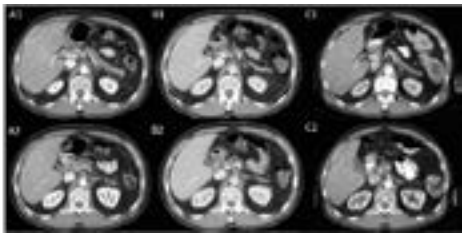

Fig 2: Clinical evolution before, during and after the treatment, PFS=18

Recent Publications

1. Juan Pablo Marquez Manriquez et al. (2018) Multi-peptide immunotherapy plus immunogenic chemotherapy in refractory cancer. Arch Cancer Res. DOI: 10.21767/2254-6081-C1-005.
2. Juan P Marquez-Manriquez, Erik Ramos and Dolores Gallardo-Rincon (2017) Chapter 14: Immuno-oncology in cervical cancer. Cervical Cancer, Springer, ISBN 978-3-319-45231-9.
3. Marquez J P, Stanton S E and Disis M L (2015) The antigenic repertoire of premalignant and high-risk lesions. Cancer Prev Res (Phila). 8(4):266-70.
4. Marquez J P, Rivera R, Kang K H, Gardner M B and Torres J V (2012) Human papillomavirus immunogen that provides protective tumor immunity and induces tumor regression. Viral Immunol. 25(2):141-52.
5. Kang K H, Yamamura Y, Carlos M P, Karvelas N, Kim I S, Sunkara D, Rivera R, Gardner M B, Anderson D E, Diaz-Mitoma F, Torres J and Marquez J P (2010) Synthetic antigens representing the antigenic variation of human hepatitis C virus. Viral Immunol. 23(5):497-508.

Biography

Juan Pablo Marquez Manriquez, M.D. is a Medical Oncologist with training in Mexico, California and Seattle, Washington. His passion for Immunology and Oncology emerged from the very early stages of his life, as he prepared in pre-medicine by studying first Clinical Pharmacy and later medicine. He is currently developing projects for the prevention of gastrointestinal cancer in the CICS USA Seattle campus. He is currently specializing in the prevention of recurrence of tumors of high clinical impact such as ovarian, triple negative breast cancer, inflammatory breast cancer, colorectal and multiple myeloma. He worked as a medical doctor at the Tumor Vaccine Group of the University of Washington. Dr. Marquez Manriquez is Binational Medical Director of the Binational Alliance in Immuno-Oncology of Seattle & Sonora, including the Cancer Research Center in Sonora (CICS Sonora) both at the Ciudad Obregon Sonora campus and at the Seattle Washington campus (CICS USA), although his based in Seattle.

jpmm@cicson.org

Notes: