**169P - Immunomodulatory effects of RBS2418, an oral ENPP1 inhibitor in combination with pembrolizumab in checkpoint-refractory metastatic adrenal cancer**

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**Background**

ENPP1 is a type II transmembrane protein with nucleotide phosphohydrolase and phosphodiesterase enzymatic activity, and its expression is associated with poor prognosis in various cancers. RBS2418 is the only known human enzyme that can hydrolize cyclic guanosine monophosphate/di-phosphate (cGMP/GDP), which acts as a pro-inflammation cytokine to support immune response.

**Methods**

We report pharmacokinetics (PK) and immunomodulatory properties of RBS2418 in combination with pembrolizumab (pembro) in a patient with checkpoint-refractory high grade adrenal cancer with an immunode-pressed tumor phenotype.

**Results**

In the pre-clinical model, we identified a high grade, adenocortical carcinoma (a multiple round of therapy including anti-angiogenesis therapy failed prior pembrecin chemotherapy).

- Tumor measurement response was well tolerated.
- cGAMP was the most significantly upregulated mRNA marker.
- Peripheral blood immune cell subpopulations were analyzed by flow cytometry and TCR/VDJ sequencing.

**Conclusions**

- This patient had a partial response on pembrolizumab with decreased tumor size.
- cGAMP is the most significantly upregulated mRNA marker.
- Peripheral blood immune cell subpopulations were analyzed by flow cytometry and TCR/VDJ sequencing.

**References**

