

and induced changes in number and activation of tumor-infiltrating lymphocytes (TILs). In conclusion, our cellular vir-therapy shows antitumor activity based on the activation of the immune system.

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Use of Placental MSCs and their exosomes as theragnostic agents for cancer treatment and diagnostic

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INTRODUCTION: The Na/ I symporter gene (hNIS) is expressed in the thyroid and allows the accumulation of iodine from the diet, to form T3 and T4 hormones. Moreover, it is widely used (i) as a reporter gene for molecular imaging (when the positron emitter isotope is I124 for PET or Tc99 for SPECT) or (ii) as a therapeutic gene for cancer therapy, mediated by the accumulation of I131. An unresolved challenge is how to direct this gene specifically to the tumoral area. Previously, our group demonstrated the migratory capacity of placental mesenchymal stem cells (MSCs), carrying an adenovirus-hNIS to tumors, with good results as theragnostic tool. However, as hNIS is expressed at the placental tissue (because transfers iodine to the foetus from the maternal blood), here we decided to study whether placental MSCs and their exosomes (1) express hNIS endogenously and therefore transfers the imaging and therapeutic potentials when administered with radioactive iodine (2) are capable to reach tumoral areas when they are intravenously injected due to the tumoral tissues extravasation. **RESULTS/ SUMMARY** We proved that human placenta MSCs and their exosomes have endogenous expression of NIS, migrate specifically to the tumour and their endogenous expression of NIS is enough to image both cells or exosomes in vivo, and their accumulation caused significant therapeutic effect combined with I131. This highlight the use of endogenous NIS expression as therapy but also to trace new metastatic nodules. **FUNDING** This work has been funded by AECC, Universidad Francisco de Vitoria, ISCIII and IACS

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Combinatory therapy of the oncolytic adenovirus ONCOS-102 and checkpoint inhibitor resulted in abscopal anti-tumor effect in a humanized NOG mouse model of melanoma

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Melanoma is an aggressive type of skin cancer with incidence increasing globally. Surgery is effective in early stage

melanoma, however despite the introduction and widespread use of check point inhibitors (CPIs), melanoma patients with distant metastasis only have a 10–30% 5-year survival rate. Hence, combinations of existing and experimental anti-cancer agents are being evaluated. ONCOS-102 is an oncolytic adenovirus armed with human GM-CSF and an Ad5/3 chimeric capsid. It has shown to be well tolerated in phase I study (NCT01598129) wherein it induced antitumor immunity, infiltration of CD8+ T cells to tumors, and up-regulation of PD-L1 suggesting that ONCOS-102 could serve as an immunosensitizer in combination with CPIs. In-vivo synergism of these two immune modalities has already been demonstrated. Now we have evaluated the effect of intra tumoral ONCOS-102 in combination with intra venous pembrolizumab (CPI) on non-injected lesions in a humanized NOG (hu-NOG) mouse model. We demonstrated abscopal effect in this model with a dosing schedule beginning CPI concurrently with ONCOS-102 followed by only CPI treatment. In conclusion, the data from this study further support the therapeutic potential of ONCOS-102 in combination with checkpoint inhibitors for the treatment of malignant cancer diseases.

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Pretreatment immunoscore and an inflamed tumour microenvironment are associated with efficacy in patients with refractory large B cell lymphoma treated with axicabtagene ciloleucel in ZUMA-1

ABSTRACT WITHDRAWN