

**POSTER PRESENTATION**

**Open Access**

# Efficacy of intralesional injection with PV-10 in combination with co-inhibitory blockade in a murine model of melanoma

Shari Pilon-Thomas\*, Hao Liu, Krithika Kodumudi, Amy Weber, Ellen Moore, Amod A Sarnaik

From Society for Immunotherapy of Cancer 29th Annual Meeting  
National Harbor, MD, USA. 6-9 November 2014

PV-10 is a 10% solution of Rose Bengal that is currently being examined as a novel cancer therapeutic. We have previously shown that intralesional (IL) injection of PV-10 into a single subcutaneous B16 melanoma tumor led to regression of both the injected tumor and uninjected B16 lung lesions. Tumor regression correlated with the induction of systemic anti-melanoma T cell immunity. In melanoma patients, IL injection of PV-10 has led to regression of treated lesions as well as untreated bystander lesions. In this study, we have examined whether IL PV-10 and co-inhibitory blockade could improve anti-tumor immunity and regression of melanoma. B16 cells were injected into C57BL/6 mice to establish one subcutaneous tumor. Treatment of this lesion with a single IL injection of PV-10 alone led to partial regression of the injected B16 lesion. Systemic administration of anti-CTLA-4 or anti-PD1 antibodies in combination with IL PV-10 resulted in increased tumor regression and improved survival in this model. Treatment with PV-10 also led to the induction of T cells that produced IFN- $\gamma$  ( $495 \pm 198$  pg/ml) in response to B16 cells but not to irrelevant MC-38 cells. Combination therapy with IL PV-10 and anti-CTLA-4 led to increased IFN- $\gamma$  responses to B16 ( $1235 \pm 191$  pg/ml,  $p < 0.05$ ). In another experiment simulating heavy tumor burden using a bilateral model, systemic administration of anti-PD-L1 antibodies in combination with IL PV-10 led to regression of the injected B16 lesion as well as a bystander subcutaneous lesion on the opposite flank ( $p < 0.01$  compared to mice treated with anti-PD-L1 antibodies or IL PV-10 alone). Together, these studies support the induction of increased tumor-specific immunity after co-inhibitory blockade in combination with IL PV-10 therapy.

Published: 6 November 2014

doi:10.1186/2051-1426-2-S3-P120

**Cite this article as:** Pilon-Thomas et al.: Efficacy of intralesional injection with PV-10 in combination with co-inhibitory blockade in a murine model of melanoma. *Journal for ImmunoTherapy of Cancer* 2014 **2**(Suppl 3):P120.

**Submit your next manuscript to BioMed Central  
and take full advantage of:**

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at  
[www.biomedcentral.com/submit](http://www.biomedcentral.com/submit)



Moffitt Cancer Center, Tampa, FL, USA



© 2014 Pilon-Thomas et al.; licensee BioMed Central Ltd. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated.