Merkel cell carcinoma (MCC) is a rare but highly aggressive human skin cancer; patients with this cancer are usually treated by palliative radiation therapy of single lesions within 2 weeks after a new lesion is diagnosed. Despite successes a significant proportion of MCC patients do not respond or relapse during anti-PD-L1 antibody therapy, prohibiting further avelumab treatment. Excluded: Palliative radiation therapy of single lesions within 2 weeks after a new lesion is diagnosed. Avelumab is provided by Merck KGaA, Darmstadt, Germany; and is part of an alliance between Merck KGaA and Pfizer Inc, New York, NY, USA. UO, PR and FH are full time employees of 4SC. European Journal of Cancer, 14(1), 40-48. doi:10.1016/j.ejca.2016.11.013