

Tumor autoantibodies as biomarkers for predicting ovarian cancer recurrence

Tainsky M. A, Chatterjee M, Dyson G, Levin NK, Shah JP, Morris R and Munkarah A

Wayne State University, USA

Ovarian cancer (OVCA) has a high incidence of recurrence and a high rate of mortality. We performed a pilot study to evaluate the usefulness of tumor autoantibodies to tumor associated antigens (TAA) to predict OVCA recurrence. A validation study with 56 antigens, previously identified in the initial phase of the study, along with 13 known tumor antigens on protein arrays was performed on an independent cohort of recurrent and non-recurrent OVCA patients. Statistical analyses revealed that a panel of 3 antigens predicted recurrence at a median time of 9.07 months prior to clinical recurrence in a study population, where majority of patients had CA125 values less than 35 U/ml, with an average sensitivity, specificity and accuracy of 94.7%, 86.7% and 93.3% respectively. One of the top 3 antigens has been associated with the development of polymyositis (PM) which has been shown in some cases to precede the occurrence of ovarian carcinoma. Our results indicate that these 3 antigens have potential for predicting recurrence at an early time and may have better prognostic utility than CA125 alone for early therapeutic intervention. These biomarkers could guide us to identify those patients that could benefit most from maintenance or consolidation therapy.

tainskym@karmanos.org