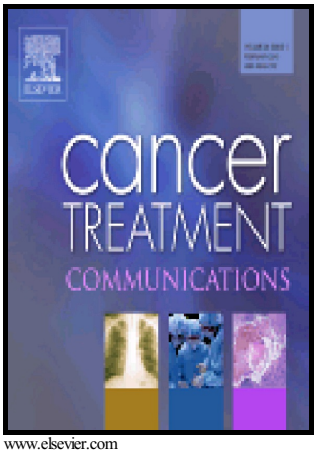

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MicroAbstract

We report the use of a novel algorithm that can increase specificity, and potentially sensitivity, of a screening test. We used this new algorithm to detect more autoantibodies to p53 in sera of patients with ovarian cancer than when we use a traditional multiplex approach, by combining p53 protein and selected confirmatory epitopes.

Abstract

Background

Measurement of autoantibodies (AAbs) to tumor associated antigens has been proposed to aid in the early detection of ovarian cancer with high specificity. Here we describe a multiplex approach to evaluate selected peptide epitopes of p53 protein, and propose a novel approach to increase specificity and potentially sensitivity for discrimination between healthy women and women with cancerous masses.

Materials and Methods

20-mer overlapping peptide epitopes of p53, generated by mapping the complete p53 sequence, were evaluated in a multiplex immunoassay for their detection of serum AAbs in patients with ovarian cancer, using Luminex technology. AAbs to the selected peptides and to p53 full length protein were then detected in a multiplex immunoassay evaluating