

中文題目：血清中SAA蛋白與胃癌的相關性。

英文題目：Correlation between Serum Protein Isoform- SAA and Gastric Cancer

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Background: Gastric cancer is a common malignancy and causes approximately 800,000 deaths worldwide per year. Previous studies have shown the overexpression of a serum protein as a potential indicator for multiple diseases. The serum protein has several genetic variations and post-translational N-terminal truncations.

Method: We reported an analytical platform integrating the nanoprobe-based affinity mass spectrometry (NBAMS) and computational feature ranking and classification methods; the preliminary results demonstrated the expression patterns of protein isoforms could be useful for gastric cancer diagnosis. A diagnostic model can be constructed by the classification of these 24 isoforms by using support vector machine (SVM).

Result: Our training and testing processes were performed on a dataset of 163 serum samples including 40 from patients with gastric cancer, 42 from patients with gastritis, and 81 from normal individuals. The sensitivity and specificity of our diagnostic model are 100% and 70%, respectively.

Conclusion: The generic platform may be further applied to reveal the expression profiles of the underestimated serum protein isoforms, which provide potential marker candidates for disease detection.