

A new molecular marker of gastric cancer

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Gastric cancer (GC) is one of the most common malignancies in the world with a high incidence and death rate. TNM staging system is used worldwide to predict prognosis and direct therapeutic decisions of patients with GC.

However, the prognoses of patients with stage 2 and 3 GC are more heterogeneous and less predictable by staging criteria.

Therefore, finding molecular markers that are able to predict the potential of tumor recurrence and prognosis of patients is extremely important for appropriate individualized therapy. Phosphatase regenerating liver 3 (PRL-3), a member of phosphatase of regenerating liver, has aroused broad attention in the research area of tumor metastasis. A growing body of evidence has proved PRL-3 to be an important metastatic instrumental molecule. In [gastric cancer](#), PRL-3 was found to be highly expressed in tumor metastatic lymph nodes and closely associated with the peritoneal metastasis, but the prognostic impact of PRL-3 expression in gastric cancer still remains to be further investigated.

A research team led by Dr. Ji-You Li from Peking University University addressed this issue and their study will be published on March 28, 2009 in the [World Journal of Gastroenterology](#).

In their study, PRL-3 expression in paraffin-embedded tumor specimens from 293 patients with gastric cancer was studied retrospectively by immunohistochemistry. Monoclonal antibody specifically against PRL-3, 3B6, was obtained with hybridoma technique.

Positive PRL-3 expression was detected in 43.3% (127 of 293) of gastric cancer cases. High expression of PRL-3 was positively correlated with tumor size, depth of invasion, vascular/lymphatic invasion, lymph node metastasis, high TNM stage and tumor recurrence. Patients with positive PRL-3 expression had a significantly lower 5-year survival rate than those with negative expression (28.3% vs 51.9%, P and with positive prl-3 expression had a

significant shorter overall survival and disease-free disadvantage over patients with negative expression (hazard ratio of 16.7 and 16.6, respectively; p

Their result indicated that PRL-3 expression is a new independent prognostic indicator to predict the potential of recurrence and survival in patients with gastric cancer at the time of tumor resection.

More information: Dai N, Lu AP, Shou CC, Li JY. Expression of phosphatase regenerating liver 3 is an independent prognostic indicator for gastric cancer. *World J Gastroenterol* 2009; 15(12): 1499-1505
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