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## Characterizing the Mutational Landscape of TP53 and CDH1 in Gastric Cancer: Implications for Diagnostic and Therapeutic Strategies

### Abstract:

Gastric cancer, one of the most challenging malignancies globally, demands a deeper understanding of its genetic basis to improve diagnosis and treatment. Our study focused on the pivotal tumor suppressor genes, TP53 and CDH1, known for their significant roles in cancer development. Through high-throughput sequencing of a cohort of gastric cancer patients, we identified prevalent mutations in these genes and examined their correlation with clinical outcomes, including treatment response and survival rates. The findings reveal distinct mutational patterns with specific TP53 mutations linked to a poor chemotherapy response, and CDH1 mutations associated with earlier disease onset and increased metastatic risk. These insights highlight the importance of mutational screening, which can provide crucial prognostic information and help tailor personalized treatment plans. By integrating genetic profiling into routine clinical practice, we can enhance diagnostic accuracy and therapeutic efficacy, paving the way for personalized medicine in the management of gastric cancer. This approach promises to transform patient care by aligning therapeutic strategies more closely with the genetic profiles of individual tumors.

### Biography

**Yan Jiao** has completed his PhD at the age of 27 years from Jilin University. He is a surgeon of Department of Hepatobiliary and Pancreatic surgery in First Hospital of Jilin University. He has published more than 50 papers in reputed journals and has been serving as an editorial board member of *repute.by* MHC class I with LMP2-deficient mice, under the cooperation of Dr. Susumu Tonegawa (Nobel Laureate, M.I.T.). He identifies diagnostic biomarkers, LMP2 and Cyclin E, for malignant tumor, i.e. uterine leiomyosarcoma, current research focus: molecular approach of tumorigenesis of uterine leiomyosarcoma and ovarian cancer.