

# Scientific research process

**Name of Journal:** *World Journal of Gastroenterology*

**ESPS Manuscript NO:** 33152

**Manuscript Type:** Original Article

**Title:** Clinical Significance of the Neutrophil-Lymphocyte Ratio (NLR) as an Early Predictive Marker for Adverse Outcomes in Patients with Acute Pancreatitis

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## 1. What did this study explore?

In this study, we demonstrated the usefulness of the neutrophil-lymphocyte ratio in predicting the manifestation of acute pancreatitis in the early stages in patients with acute pancreatitis. This study found the neutrophil-lymphocyte ratio to be a reliable predictor of adverse outcomes in patients with acute pancreatitis.

## 2. How did the authors perform all experiments?

We retrospectively analyzed the clinical, laboratory, and radiological data of patients diagnosed with acute pancreatitis and hospitalized at Sanggye Paik Hospital in Seoul, Korea, between March 2007 and December 2012.

## 3. How did the authors process all experimental data?

In all data of enrolled patients, up to 72 hours of data were analyzed during the course of hospitalization for each patient. Patients with missing baseline laboratory



or vital signs data (as they were transferred from a different hospital) were excluded from further analysis.

#### **4. How did the authors deal with the pre-study hypothesis?**

We predicted that neutrophil-lymphocyte ratio would be a reliable predictor of adverse outcomes in the early stages in patients with acute pancreatitis with reference to several previous studies which demonstrated of prognostic value of neutrophil-lymphocyte ratio in other benign and malignant diseases.

#### **5. What are the novel findings of this study?**

This study established the optimal cut-off value of the neutrophil-lymphocyte ratio for predicting severity of acute pancreatitis and organ failure in the early stages in patients with acute pancreatitis. In addition, we suggested that sequential changes in the neutrophil-lymphocyte ratio over time seen to reflect the progress and therapeutic response of acute pancreatitis.

Signature: Ji Young Park Date: 3/16/17