

The Role of *Helicobacter pylori* Infection in the Development of Gastric Cancer – Overview of the Literature

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Abstract

Helicobacter pylori (*H. pylori*), classified as a Group 1 carcinogen by the International Agency for Research on Cancer (IARC), is linked to gastric cancer. The progression from atrophy to metaplasia, dysplasia, and carcinoma constitutes the pathway for intestinal-type gastric carcinoma development. *H. pylori* infection significantly increases gastric cancer risk, particularly in individuals with atrophic gastritis. Virulence factors like CagA and VacA disrupt host signaling pathways, contributing to chronic inflammation and carcinogenesis. Pro-inflammatory cytokines and dysregulated tumor suppressor genes further fuel this process. Eradicating *H. pylori* reduces gastric cancer incidence, among patients diagnosed with atrophic gastritis or intestinal metaplasia (IM). However, it may not prevent cancer in those with advanced pre-neoplastic lesions. Early detection and management of *H. pylori* infection are crucial in mitigating gastric cancer risk, offering significant benefits.

Key words: *H. pylori*, gastric cancer, gastric adenocarcinoma, meta-analysis, MAPS II, eradication *H. pylori*