

# Helicobacter pylori-induced loss of the inhibitor-of-apoptosis protein survivin is linked to gastritis and death of human gastric cells

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Helicobacter pylori infects the human stomach and modifies signaling pathways that affect gastric epithelial cell proliferation and viability. Chronic exposure to this pathogen contributes to the onset of gastric atrophy, an early event in the genesis of gastric cancer associated with H. pylori infection. Susceptibility to H. pylori-induced cell death ultimately depends on the presence of protective host cell factors. Although expression of the inhibitor-of-apoptosis protein survivin in adults is frequently linked to the development of cancer, evidence indicating that the protein is present in normal gastric mucosa is also available. Thus, we investigated in human gastric tissue samples and cell lines whether H. pylori infection is linked to loss of survivin and increased cell death. Our results show that infection with H. pylori decreased survivin protein levels in the mucosa of patients with gastritis. Furthermore, survivin down-regulation correlated with apoptosis and loss of cell v