

# Cyclooxygenase-2 expression as a predictor of outcome in colorectal carcinoma.

[Al-Maghrabi J](#), [Buhmeida A](#), [Emam E](#), [Syrjänen K](#), [Sibiany A](#), [Al-Qahtani M](#), [Al-Ahwal M](#).

## Source

Jaudah Al-Maghrabi, Eman Emam, Department of Pathology, King Abdulaziz University, Jeddah 21589, Saudi Arabia.

## Abstract

### AIM:

To correlate cyclooxygenase-2 (COX-2) expression profile with clinical and pathological variables to assess their prognostic/predictive value in colorectal carcinoma (CRC).

### METHODS:

Archival tumor samples were analyzed using immunohistochemistry for COX-2 expression in 94 patients with CRC. Patients were diagnosed and treated at the Departments of Surgery and Oncology, King Abdulaziz University Hospital, Saudi Arabia.

### RESULTS:

Fifty-six percent of the tumors showed positive cytoplasmic COX-2 expression, whereas 44% of cases were completely COX-2-negative. There were no significant correlations between COX-2 expression and sex, age, grade or tumor location. However, COX-2 expression revealed a significant correlation with tumor stage ( $P = 0.01$ ) and distant metastasis ( $P = 0.02$ ), and a borderline association with lymph node involvement ( $P = 0.07$ ). Tumors with high COX-2 expression showed a higher recurrence rate than tumors with no expression ( $P < 0.009$ ). In univariate Kaplan-Meier survival analysis, there was a significant ( $P = 0.026$ ) difference in disease-free survival between COX-2-positive and negative tumors in favor of the latter. COX-2 expression did not significantly predict disease-specific survival, which was much shorter for COX-2-positive tumors. In multivariate (COX) models, COX-2 did not appear among the independent predictors of disease-free survival or disease-specific survival.

**CONCLUSION:**

COX-2 expression seems to provide useful prognostic information in CRC, while predicting the patients at high risk for recurrent disease.