Oxaliplatin exerts potent in vitro cytotoxicity in colorectal and pancreatic cancer cell lines and liver metastases.

Kornmann M, Fakler H, Butzer U, Beger HG, Link KH.

Department of General Surgery, University of Ulm, Germany.

BACKGROUND: Oxaliplatin displays potent activity in advanced colorectal cancer. The aim of this study was to estimate the potential efficacy of oxaliplatin for hepatic arterial infusion (HAI) chemotherapy. MATERIALS AND METHODS: The anti-proliferative effects of oxaliplatin in human HT29 and NMG64/84 colon and COLO-357 Mia PaCa-2 and PMH2/89 pancreatic cancer cell lines and in fresh liver metastases from patients with colorectal and pancreatic cancer were investigated using the human tumor colony forming assay. RESULTS: Oxaliplatin significantly inhibited the colony formation in all cell lines in a concentration- and time-dependent manner. All liver tumors displayed a significant concentration-dependent inhibition of colony formation after exposure to oxaliplatin for 2 hours. The IC50 of oxaliplatin of 9 of the 10 tumors was < 10 micrograms/ml. CONCLUSION: Oxaliplatin is suitable for HAI therapy phase II studies. Due to the low IC50 values of most tumors we suggest that patients with colorectal or pancreatic liver metastases may benefit from HAI with oxaliplatin.