Cyclooxygenase-2 and epidermal growth factor receptor: pharmacologic targets for chemoprevention.


Source

Vanderbilt-Ingram Cancer Center, 691 Preston Research Building, 2300 Pierce Avenue, Nashville, TN 37232-6838, USA.

Abstract

Understanding the mechanisms underlying carcinogenesis provides insights that are necessary for the development of therapeutic strategies to prevent cancer. Chemoprevention, the use of drugs or natural substances to inhibit carcinogenesis, is a rapidly evolving aspect of cancer research. Evidence is presented that cyclooxygenase-2 (COX-2) and epidermal growth factor receptor (EGFR) are potential pharmacologic targets to prevent cancer. In this paper, we review key data implicating a causal relationship between COX-2, EGFR, and carcinogenesis and possible mechanisms of action. We discuss evidence of crosstalk between COX-2 and EGFR in order to strengthen the rationale for combination chemoprevention, and review plans for a clinical trial that will evaluate the concept of combination chemoprevention targeting COX-2 and EGFR.

PMID:15637389