

REFERENCES

- Alexander HR, Kelsen DC, Tepper JC. *Cancer of the stomach*. 5 th ed. Philadelphia: Lippincott-Raven; 1997.
- Appleby SB, Ristimaki A, Neilson K, Narko K, Hla T. Structure of the human cyclo-oxygenase-2 gene. *Biochem J* 1994; 302(Pt 3): 723-727.
- Bakhle YS, Botting RM. Cyclooxygenase-2 and its regulation in inflammation. *mediat. inflamm.* 1996; 5: 305-323.
- Ballard-Barbash R, Schatzkin A, Albanes D, Schiffman MH, Kreger BE, Kannel WB, et al. Physical activity and risk of large bowel cancer in the Framingham Study. *Cancer Res* 1990; 50(12): 3610-3613.
- Bauer AK, Dwyer-Nield LD, Malkinson AM. High cyclooxygenase 1 (COX-1) and cyclooxygenase 2 COX-2) contents in mouse lung tumors. *Carcinogenesis (Lond.)* 2000; 21: 543-550.
- Breder CD, Dewitt D, Kraig RP. Characterization of inducible cyclooxygenase in rat brain. *J Comp Neurol* 1995; 355(2): 296-315.
- Breder CD, Saper CB. Expression of inducible cyclooxygenase mRNA in the mouse brain after systemic administration of bacterial lipopolysaccharide. *Brain Res* 1996; 713(1-2): 64-69.
- Broders AC. Carcinoma: grading and practical application. *Arch Pathol* 1926; 2:376-381.
- Bryant CE, Appleton I, Mitchell JA. Vascular endothelial growth factor up-regulates constitutive cyclooxygenase 1 in primary bovine and human endothelial cells. *Life Sci* 1998; 62: 2195-2201.
- Burkitt DP, Walker AR, Painter NS. Dietary fiber and disease. *Jama* 1974; 229(8): 1068-1074.
- Butt JH. Dysplasia and cancer in inflammatory bowel disease. *Gastroenterology* 1981; 80(4): 865-868.
- Calabresi P, Schein PS, Canellos GP. *Medical Oncology*. 2 nd ed. New York: McGraw Hill; 1993.

- Cao C, Matsumura K, Yamagata K, Watanabe Y. Endothelial cells of the rat brain vasculature express cyclooxygenase-2 mRNA in response to systemic interleukin-1 beta: a possible site of prostaglandin synthesis responsible for fever. *Brain Res* 1996; 733(2): 263-272.
- Chong JM, Fukayama M, Hayashi Y, Takizawa T, Koike M, Konishi M, et al. Microsatellite instability in the progression of gastric carcinoma. *Cancer Res* 1994; 54(17): 4595-4597.
- Cianchi F, Cortesini C, Bechi P, Fantappie O, Messerini L, Vannacci A, et al. Up-regulation of cyclooxygenase 2 gene expression correlates with tumor angiogenesis in human colorectal cancer. *Gastroenterology* 2001; 121(6): 1339-1347.
- Clarke AR, Purdie CA, Harrison DJ, Morris RG, Bird CC, Hooper ML, et al. Thymocyte apoptosis induced by p53-dependent and independent pathways. *Nature* 1993; 362(6423): 849-852.
- Correa P. Human gastric carcinogenesis: a multistep and multifactorial process-- First American Cancer Society Award Lecture on Cancer Epidemiology and Prevention. *Cancer Res* 1992; 52(24): 6735-6740.
- Correa P, Shiao YH. Phenotypic and genotypic events in gastric carcinogenesis. *Cancer Res* 1994; 54(7 Suppl): 1941-1943.
- Crofford LJ, Wilder RL, Ristimaki AP, Sano H, Remmers EF, Epps HR, et al. Cyclooxygenase-1 and -2 expression in rheumatoid synovial tissues. Effects of interleukin-1 beta, phorbol ester, and corticosteroids. *J Clin Invest* 1994; 93(3): 1095-1101.
- Cummings JH, Bingham SA. Dietary fibre, fermentation and large bowel cancer. *Cancer Surv* 1987; 6(4): 601-621.
- Danesh J. *Helicobacter pylori* infection and gastric cancer: systematic review of the epidemiological studies. *Aliment Pharmacol Ther* 1999; 13(7): 851-856.
- Dannenber AJ, Altorki NK, Boyle JO, Dang C, Howe LR, Weksler BB, et al. Cyclo-oxygenase 2: a pharmacological target for the prevention of cancer. *Lancet Oncol* 2001; 2(9): 544-551.
- Dannenber AJ, Zakim D. Chemoprevention of colorectal cancer through inhibition of cyclooxygenase-2. *Semin Oncol* 1999; 26(5): 499-504.

- DeWitt DL. Prostaglandin endoperoxide synthase: regulation of enzyme expression. *Biochim Biophys Acta* 1991; 1083(2): 121-134.
- DeWitt DL, Day JS, Sonnenburg WK, Smith WL. Concentrations of prostaglandin endoperoxide synthase and prostaglandin I₂ synthase in the endothelium and smooth muscle of bovine aorta. *J Clin Invest* 1983; 72(6): 1882-1888.
- DeWitt DL, Smith WL. Primary structure of prostaglandin G/H synthase from sheep vesicular gland determined from the complementary DNA sequence. *Proc Natl Acad Sci U S A* 1988; 85(5): 1412-1416.
- Dijkhuizen SM, Entius MM, Clement MJ, Polak MM, Van den Berg FM, Craanen ME, et al. Multiple hyperplastic polyps in the stomach: evidence for clonality and neoplastic potential. *Gastroenterology* 1997; 112(2): 561-566.
- Dimberg J, Samuelsson A, Hugander A, Soderkvist P. Differential expression of cyclooxygenase 2 in human colorectal cancer. *Gut* 1999; 45(5): 730-732.
- Dixon DA, Kaplan CD, McIntyre TM, Zimmerman GA, Prescott SM. Post-transcriptional control of cyclooxygenase-2 gene expression. The role of the 3'-untranslated region. *J Biol Chem* 2000; 275(16): 11750-11757.
- Dixon DA, Tolley ND, King PH, Nabors LB, McIntyre TM, Zimmerman GA, et al. Altered expression of the mRNA stability factor HuR promotes cyclooxygenase-2 expression in colon cancer cells. *J Clin Invest* 2001; 108(11): 1657-1665.
- Dukes CE. The relation of histology to spread in intestinal cancer. *Br J Cancer* 1950; 4: 59-62.
- Dukes CE. The classification of cancer of the rectum. *J Pathol Bacteriol* 1932; 35: 323-332.
- Eberhart CE, Coffey RJ, Radhika A, Giardiello FM, Ferrenbach S, DuBois RN. Up-regulation of cyclooxygenase 2 gene expression in human colorectal adenomas and adenocarcinomas. *Gastroenterology* 1994;107(4): 1183-1188.
- Edwards FC, Truelove SC. The cause and prognosis of ulcerative colitis. *Gut* 1964; 5: 1-22.
- Eslick GD, Lim LL, Byles JE, Xia HH, Talley NJ. Association of *Helicobacter pylori* infection with gastric carcinoma: a meta-analysis. *Am J Gastroenterol* 1999; 94(9): 2373-2379.

- Fearon ER, Vogelstein B. A genetic model for colorectal tumorigenesis. *Cell* 1990; 61(5): 759-767.
- Fisher SG, Davis F, Nelson R, Weber L, Goldberg J, Haenszel W. A cohort study of stomach cancer risk in men after gastric surgery for benign disease. *J Natl Cancer Inst* 1993; 85(16): 1303-1310.
- Fleming ID, Cooper JS, Henson DE, et al. *Manual for staging of cancer of the American Joint Committee on Cancer*. 5th ed. Philadelphia: JB Lippincott; 1997.
- Fosslien E. Molecular pathology of cyclooxygenase-2 in neoplasia. *Ann Clin Lab Sci* 2000; 30(1):3-21.
- Fuchs CS, Giovannucci EL, Colditz GA, Hunter DJ, Speizer FE, Willett WC. A prospective study of family history and the risk of colorectal cancer. *N Engl J Med* 1994; 331(25): 1669-1674.
- Fujita T, Matsui M, Takaku K, Uetake H, Ichikawa W, Taketo MM, et al. Size- and invasion-dependent increase in cyclooxygenase 2 levels in human colorectal carcinomas. *Cancer Res* 1998; 58(21): 4823-4826.
- Funk CD, Funk LB, Kennedy ME, Pong AS, Fitzgerald GA. Human platelet/erythrocyte cell prostaglandin G/H synthase: cDNA cloning, expression, and gene chromosomal assignment. *Faseb J* 1991; 5(9): 2304-2312.
- Gately S. The contributions of cyclooxygenase-2 to tumor angiogenesis. *Cancer Metastasis Rev* 2000; 19(1-2): 19-27.
- Giardiello FM. Sulindac and polyp regression. *Cancer Metastasis Rev* 1994; 13(3-4): 279-283.
- Giardiello FM, Hamilton SR, Krush AJ, Piantadosi S, Hyland LM, Celano P, et al. Treatment of colonic and rectal adenomas with sulindac in familial adenomatous polyposis. *N Engl J Med* 1993; 328(18): 1313-1316.
- Giardiello FM, Offerhaus GJ, DuBois RN. The role of nonsteroidal anti-inflammatory drugs in colorectal cancer prevention. *Eur J Cancer* 1995; 31A(7-8): 1071-1076.
- Giercksky KE. COX-2 inhibition and prevention of cancer. *Best Pract Res Clin Gastroenterol* 2001; 15(5): 821-833.

- Giovannucci E, Egan KM, Hunter DJ, Stampfer MJ, Colditz GA, Willett WC, et al. Aspirin and the risk of colorectal cancer in women. *N Engl J Med* 1995; 333(10): 609-614.
- Gong C, Mera R, Bravo JC, Ruiz B, Diaz-Escamilla R, Fontham ET, et al. KRAS mutations predict progression of preneoplastic gastric lesions. *Cancer Epidemiol Biomarkers Prev* 1999; 8(2): 167-171.
- Gridley G, McLaughlin JK, Ekblom A, Klareskog L, Adami HO, Hacker DG, et al. Incidence of cancer among patients with rheumatoid arthritis. *J Natl Cancer Inst* 1993; 85(4): 307-311.
- Gupta RA, Tejada LV, Tong BJ, Das SK, Morrow JD, Dey SK, et al. Cyclooxygenase-1 is overexpressed and promotes angiogenic growth factor production in ovarian cancer. *Cancer Res* 2003; 63(5): 906-911.
- Gustafson-Svard C, Lilja I, Hallbook O, Sjodahl R. Cyclooxygenase-1 and cyclooxygenase-2 gene expression in human colorectal adenocarcinomas and in azoxymethane induced colonic tumours in rats. *Gut* 1996; 38(1): 79-84.
- Han SL, Tang HJ, Hua YW, Ji SQ, Lin DX. Expression of COX-2 in stomach cancers and its relation to their biological features. *Dig Surg* 2003; 20(2): 107-114.
- Harris RC, McKanna JA, Akai Y, Jacobson HR, Dubois RN, Breyer MD. Cyclooxygenase-2 is associated with the macula densa of rat kidney and increases with salt restriction. *J Clin Invest* 1994; 94(6): 2504-2510.
- Harris RC, Wang JL, Cheng HF, Zhang MZ, McKanna JA. Prostaglandins in macula densa function. *Kidney Int Suppl* 1998; 67: 49-52.
- Hart AR, Mann R, Mayberry JF. Gastric and colorectal cancer in patients attending mission hospitals in rural areas of South-east Asia. *Digestion* 1993; 54(3): 173-177.
- Hempel SL, Monick MM, Hunninghake GW. Lipopolysaccharide induces prostaglandin H synthase-2 protein and mRNA in human alveolar macrophages and blood monocytes. *J Clin Invest* 1994; 93(1): 391-396.
- Herschman HR. Prostaglandin synthase 2. *Biochim Biophys Acta* 1996; 1299(1): 125-40.

- Hida T, Yatabe Y, Achiwa H, Muramatsu H, Kozaki K, Nakamura S, et al. Increased expression of cyclooxygenase 2 occurs frequently in human lung cancers, specifically in adenocarcinomas. *Cancer Res* 1998; 58(17): 3761-3764.
- Hla T, Bishop-Bailey D, Liu CH, Schaeffers HJ, Trifan OC. Cyclooxygenase-1 and -2 isoenzymes. *Int J Biochem Cell Biol* 1999; 31(5): 551-557.
- Hla T, Neilson K. Human cyclooxygenase-2 cDNA. *Proc Natl Acad Sci U S A* 1992; 89(16): 7384-7388.
- Hsing AW, Hansson LE, McLaughlin JK, Nyren O, Blot WJ, Ekblom A, et al. Pernicious anemia and subsequent cancer. A population-based cohort study. *Cancer* 1993; 71(3): 745-7450.
- Husain SS, Szabo IL, Tamawski AS. NSAID inhibition of GI cancer growth: clinical implications and molecular mechanisms of action. *Am J Gastroenterol* 2002; 97(3): 542-553.
- Hwang D, Scolladr D, Byrne J, Levine E. Expression of cyclooxygenase 1 and cyclooxygenase 2 in human breast cancer. *J. Natl. Cancer Inst. (Bethesda)* 1998; 90: 455-460.
- Isomaki HA, Hakulinen T, Joutsenlahti U. Excess risk of lymphomas, leukemia and myeloma in patients with rheumatoid arthritis. *J Chronic Dis* 1978; 31(11): 691-696.
- Jacoby RF, Marshall DJ, Newton MA, Novakovic K, Tutsch K, Cole CE, et al. Chemoprevention of spontaneous intestinal adenomas in the Apc Min mouse model by the nonsteroidal anti-inflammatory drug piroxicam. *Cancer Res* 1996; 56(4): 710-714.
- Joossens JV, Hill MJ, Elliott P, Stamler R, Lesaffre E, Dyer A, et al. Dietary salt, nitrate and stomach cancer mortality in 24 countries. European Cancer Prevention (ECP) and the INTERSALT Cooperative Research Group. *Int J Epidemiol* 1996; 25(3): 494-504.
- Kargman SL, O'Neill GP, Vickers PJ, Evans JF, Mancini JA, Jothy S. Expression of prostaglandin G/H synthase-1 and -2 protein in human colon cancer. *Cancer Res* 1995; 55(12): 2556-2559.
- Kargman S, Charleson S, Cartwright M, Frank J, Riendeau D, Mancini J, et al. Characterization of Prostaglandin G/H Synthase 1 and 2 in rat, dog, monkey, and human gastrointestinal tracts. *Gastroenterology* 1996; 111(2): 445-454.

- Karp G. Cell and molecular biology: concepts and experiments. 2 nd ed: John Wiley & Sons; 1999.
- Kashiwagi K, Watanabe M, Ezaki T, Kanai T, Ishii H, Mukai M, et al. Clinical usefulness of microsatellite instability for the prediction of gastric adenoma or adenocarcinoma in patients with chronic gastritis. *Br J Cancer* 2000; 82(11): 1814-1818.
- Kawada M, Seno H, Wada M, Suzuki K, Kanda N, Kayahara T, et al. Cyclooxygenase-2 expression and angiogenesis in gastric hyperplastic polyp--association with polyp size. *Digestion* 2003; 67(1-2): 20-24.
- Kelley JR, Duggan JM. Gastric cancer epidemiology and risk factors. *J Clin Epidemiol* 2003; 56(1): 1-9.
- Kikuchi-Yanoshita R, Konishi M, Ito S, Seki M, Tanaka K, Maeda Y, et al. Genetic changes of both p53 alleles associated with the conversion from colorectal adenoma to early carcinoma in familial adenomatous polyposis and non-familial adenomatous polyposis patients. *Cancer Res* 1992; 52(14): 3965-3971.
- Kim MS, et al. e. Microsatellite instability in the adenoma-carcinoma sequence of the stomach. *AACR Proc* 2000; 41: 510-514.
- Kinzler KW, Vogelstein B. Landscaping the cancer terrain. *Science* 1998; 280(5366): 1036-1037.
- Kinzler KW, Vogelstein B. Lessons from hereditary colorectal cancer. *Cell* 1996; 87(2): 159-170.
- Kirschnbaum A, Klausner AP, Lee R, Unger P, Yao S, Liu X. Expression of cyclooxygenase 1 and cyclooxygenase 2 in the human prostate. *Urology* 2000; 56: 671-676.
- Kobayashi K, Okamoto T, Takayama S, Akiyama M, Ohno T, Yamada H. Genetic instability in intestinal metaplasia is a frequent event leading to well-differentiated early adenocarcinoma of the stomach. *Eur J Cancer* 2000; 36(9): 1113-1119.
- Kono S, Hirohata T. Nutrition and stomach cancer. *Cancer Causes Control* 1996; 7(1): 41-55.
- Konturek SJ, Konturek PC, Hartwich A, Hahn EG. Helicobacter pylori infection and gastrin and cyclooxygenase expression in gastric and colorectal malignancies. *Regul Pept* 2000; 93(1-3): 13-19.

- Konturek SJ, Konturek PC, Plonka A, Duda A, Sito E, Zuchowicz M, et al. Implication of gastrin in cyclooxygenase-2 expression in *Helicobacter pylori* infected gastric ulceration. *Prostaglandins Other Lipid Mediat* 2001; 66(1): 39-51.
- Kraemer SA, Meade EA, DeWitt DL. Prostaglandin endoperoxide synthase gene structure: identification of the transcriptional start site and 5'-flanking regulatory sequences. *Arch Biochem Biophys* 1992; 293(2): 391-400.
- Kujubu DA, Fletcher BS, Varnum BC, Lim RW, Herschman HR. TIS10, a phorbol ester tumor promoter-inducible mRNA from Swiss 3T3 cells, encodes a novel prostaglandin synthase/cyclooxygenase homologue. *J Biol Chem* 1991; 266(20): 12866-12872.
- Kujubu DA, Reddy ST, Fletcher BS, Herschman HR. Expression of the protein product of the prostaglandin synthase-2/TIS10 gene in mitogen-stimulated Swiss 3T3 cells. *J Biol Chem* 1993; 268(8): 5425-5430.
- Kulkarni SK, Jain NK, Singh A. Cyclooxygenase isoenzymes and newer therapeutic potential for selective COX-2 inhibitors. *Methods Find Exp Clin Pharmacol* 2000; 22(5): 291-298.
- Kulkarni SK, Varghese NP. COX-2, TNF-and apoptosis: Newer strategies in inflammatory disorders. *Indian Drugs* 1998; 35(5): 245-260.
- Kune GA, Kune S, Watson LF. Body weight and physical activity as predictors of colorectal cancer risk. *Nutr Cancer* 1990; 13(1-2): 9-17.
- Kune GA, Kune S, Watson LF. Colorectal cancer risk, chronic illnesses, operations, and medications: case control results from the Melbourne Colorectal Cancer Study. *Cancer Res* 1988; 48(15): 4399-4404.
- Kurumbail RG, Stevens AM, Gierse JK, McDonald JJ, Stegeman RA, Pak JY, et al. Structural basis for selective inhibition of cyclooxygenase-2 by anti-inflammatory agents. *Nature* 1996; 384(6610): 644-648.
- La Vecchia C, Negri E, Franchescki S, al. e. A family history and the risk of stomach and colorectal cancer. *Cancer* 1992; 70: 50-55.
- Laakso M, Mutru O, Isomaki H, Koota K. Cancer mortality in patients with rheumatoid arthritis. *J Rheumatol* 1986; 13(3): 522-526.

- Laemmli UK. Cleavage of structural proteins during the assembly of the head of bacteriophage T4. *Nature* 1970; 227(259): 680-685.
- Lauren P. The two histological main types of gastric carcinoma: diffuse and so-called intestinal-type carcinoma: an attempt at a histoclinical classification. *Acta Pathol Microbiol Scand* 1965; 64: 31-49.
- Lee EC, Truelove SC. Proctocolectomy for ulcerative colitis. *World J Surg* 1980; 4(2): 195-201.
- Lee IM, Paffenbarger RS, Jr., Hsieh C. Physical activity and risk of developing colorectal cancer among college alumni. *J Natl Cancer Inst* 1991; 83(18): 1324-1329.
- Leung WK, Kim JJ, Kim JG, Graham DY, Sepulveda AR. Microsatellite instability in gastric intestinal metaplasia in patients with and without gastric cancer. *Am J Pathol* 2000; 156(2):537-543.
- Leung WK, To KF, Ng YP, Lee TL, Lau JY, Chan FK, et al. Association between cyclooxygenase-2 overexpression and missense p53 mutations in gastric cancer. *Br J Cancer* 2001; 84(3): 335-339.
- Lichtenstein P, Holm NV, Verkasalo PK, Iliadou A, Kaprio J, Koskenvuo M, et al. Environmental and heritable factors in the causation of cancer-- analyses of cohorts of twins from Sweden, Denmark, and Finland. *N Engl J Med* 2000; 343(2): 78-85.
- Lim HY, Joo HJ, Choi JH, Yi JW, Yang MS, Cho DY, et al. Increased expression of cyclooxygenase-2 protein in human gastric carcinoma. *Clin Cancer Res* 2000; 6(2): 519-525.
- Lissowska J, Groves FD, Sobin LH, Fraumeni JF, Jr., Nasierowska-Guttmejer A, Radziszewski J, et al. Family history and risk of stomach cancer in Warsaw, Poland. *Eur J Cancer Prev* 1999; 8(3): 223-227.
- Liu SF, Newton R, Evans TW, Barnes PJ. Differential regulation of cyclo-oxygenase-1 and cyclo-oxygenase-2 gene expression by lipopolysaccharide treatment in vivo in the rat. *Clin Sci (Lond)* 1996; 90(4): 301-306.
- Lohsoonthorn P, Danvivat D. Colorectal cancer risk factors: a case-control study in Bangkok. *Asia Pac J Public Health* 1995; 8(2): 118-122.

- Lynch HT, Albano WA, Lynch JF, Ruma TA. Recognition of the cancer family syndrome. *Gastroenterology* 1983; 84(3): 672-673.
- Lynch HT, Lynch PM. *Heredity and gastrointestinal tract cancer*. New York: Plenum Press; 1978.
- Macklin MT. Inheritance of cancer of the stomach and large intestine in man. *J Natl Cancer Inst* 1960; 24: 551-571.
- Mahachai V, Tangkijvanich P, Wannachai N, Sumpathanukul P, Kullavanijaya P. CagA and VacA: virulence factors of *Helicobacter pylori* in Thai patients with gastroduodenal diseases. *Helicobacter* 1999; 4(3): 143-147.
- McGregor RA, Bacon HE. Multiple cancers in colon surgery: Report of 162 cases. *Surgery* 1958; 44: 828-833.
- Miyamoto T, Ogino N, Yamamoto S, Hayaishi O. Purification of prostaglandin endoperoxide synthetase from bovine vesicular gland microsomes. *J Biol Chem* 1976; 251(9): 2629-2636.
- Miyoshi Y, Ando H, Nagase H, Nishisho I, Horii A, Miki Y, et al. Germ-line mutations of the APC gene in 53 familial adenomatous polyposis patients. *Proc Natl Acad Sci U S A* 1992; 89(10): 4452-4456.
- Mizuno H, Sakamoto C, Matsuda K, Wada K, Uchida T, Noguchi H, et al. Induction of cyclooxygenase 2 in gastric mucosal lesions and its inhibition by the specific antagonist delays healing in mice. *Gastroenterology* 1997; 112(2): 387-397.
- Molina MA, Sitja-Arnau M, Lemoine MG, Frazier ML, Sinicrope FA. Increased cyclooxygenase-2 expression in human pancreatic carcinomas and cell lines: growth inhibition by nonsteroidal anti-inflammatory drugs. *Cancer Res* 1999; 59(17): 4356-4362.
- Molloy RM, Sonnenberg A. Relation between gastric cancer and previous peptic ulcer disease. *Gut* 1997; 40(2): 247-252.
- Morita I, Schindler M, Regier MK, Otto JC, Hori T, DeWitt DL, et al. Different intracellular locations for prostaglandin endoperoxide H synthase-1 and -2. *J Biol Chem* 1995; 270(18): 10902-10908.

- Morotomi M, Guillem JG, LoGerfo P, Weinstein IB. Production of diacylglycerol, an activator of protein kinase C, by human intestinal microflora. *Cancer Res* 1990; 50(12): 3595-3599.
- Morson BC. Cancer in ulcerative colitis. *Gut* 1966; 7(5): 425-426.
- Murata H, Kawano S, Tsuji S, Tsuji M, Sawaoka H, Kimura Y, et al. Cyclooxygenase-2 overexpression enhances lymphatic invasion and metastasis in human gastric carcinoma. *Am J Gastroenterol* 1999; 94(2): 451-455.
- Nakajima T, Hamanaka K, Fukuda T, Oyama T, Kashiwabara K, Sano T. Why is cyclooxygenase-2 expressed in neuroendocrine cells of the human alimentary tract? *Pathol Int* 1997; 47(12): 889-891.
- Neugut AI, Hayek M, Howe G. Epidemiology of gastric cancer. *Semin Oncol* 1996; 23(3): 281-291.
- Nigro ND, Singh DV, Campbell RL, Sook M. Effect of dietary beef fat on intestinal tumor formation by azoxymethane in rats. *J Natl Cancer Inst* 1975; 54(2): 439-442.
- Nogueira AM, Carneiro F, Seruca R, Cirnes L, Veiga I, Machado JC, et al. Microsatellite instability in hyperplastic and adenomatous polyps of the stomach. *Cancer* 1999; 86(9): 1649-1656.
- Nomura AMY, Stemmerann GN, Chyou P-H. Gastric cancer among the Japanese in Hawaii. *Jpn J Cancer Res* 1995; 86: 916-923.
- O'Banion MK, Winn VD, Young DA. cDNA cloning and functional activity of a glucocorticoid-regulated inflammatory cyclooxygenase. *Proc Natl Acad Sci U S A* 1992; 89(11): 4888-4892.
- Onoe Y, Miyaura C, Kaminakayashiki T, Nagai Y, Noguchi K, Chen QR, et al. IL-13 and IL-4 inhibit bone resorption by suppressing cyclooxygenase-2-dependent prostaglandin synthesis in osteoblasts. *J Immunol* 1996; 156(2): 758-764.
- Oshima M, Dinchuk JE, Kargman SL, Oshima H, Hancock B, Kwong E, et al. Suppression of intestinal polyposis in Apc delta716 knockout mice by inhibition of cyclooxygenase 2 (COX-2). *Cell* 1996; 87(5): 803-809.

- Otto JC, Smith WL. Photolabeling of prostaglandin endoperoxide H synthase-1 with 3- trifluoro-3-(m-[125I]iodophenyl)diazirine as a probe of membrane association and the cyclooxygenase active site. *J Biol Chem* 1996; 271(17): 9906-9910.
- Otto JC, Smith WL. Prostaglandin endoperoxide synthases-1 and -2. *J Lipid Mediat Cell Signal* 1995; 12(2-3): 139-56.
- Otto JC, Smith WL. The orientation of prostaglandin endoperoxide synthases-1 and -2 in the endoplasmic reticulum. *J Biol Chem* 1994; 269(31): 19868-19875.
- Palli D, Galli M, Caporaso NE, Cipriani F, Decarli A, Saieva C, et al. Family history and risk of stomach cancer in Italy. *Cancer Epidemiol Biomarkers Prev* 1994; 3(1): 15-18.
- Palli D, Russo A, Ottini L, Masala G, Saieva C, Amorosi A, et al. Red meat, family history, and increased risk of gastric cancer with microsatellite instability. *Cancer Res* 2001; 61(14): 5415-5419.
- Pasinetti GM, Aisen PS. Cyclooxygenase-2 expression is increased in frontal cortex of Alzheimer's disease brain. *Neuroscience* 1998; 87(2): 319-324.
- Picot D, Loll PJ, Garavito RM. The X-ray crystal structure of the membrane protein prostaglandin H2 synthase-1. *Nature* 1994; 367(6460): 243-249.
- Potter JD, McMichael AJ. Diet and cancer of the colon and rectum: a case-control study. *J Natl Cancer Inst* 1986; 76(4): 557-569.
- Prescott SM, Fitzpatrick FA. Cyclooxygenase-2 and carcinogenesis. *Biochim Biophys Acta* 2000; 1470(2): 69-78.
- Reddy BS, Narasawa T, Weisburger JH, Wynder EL. Promoting effect of sodium deoxycholate on colon adenocarcinomas in germfree rats. *J Natl Cancer Inst* 1976; 56(2): 441-442.
- Reiger MK, DeWitt DL, Schindler MS, Smith WL. Subcellular localization of prostaglandin endoperoxide synthase-2 in murine 3T3 cells. *Arch Biochem Biophys* 1993; 301(2): 439-444.
- Rioux N, Castonguay A. The induction of cyclooxygenase-1 by tobacco carcinogen in U937 human macrophages is correlated to the activation of NF-kB. *Carcinogenesis (Lond.)* 2000; 21: 1745-1751.

- Ristimaki A, Honkanen N, Jankala H, Sipponen P, Harkonen M. Expression of cyclooxygenase-2 in human gastric carcinoma. *Cancer Res* 1997; 57(7): 1276-1280.
- Ristimaki A, Sivula A, Lundin J, Lundin M, Salminen T, Haglund C, et al. Prognostic significance of elevated cyclooxygenase-2 expression in breast cancer. *Cancer Res* 2002; 62(3): 632-635.
- Robert A. Cytoprotection of the gastrointestinal mucosa. *Adv Intern Med* 1983; 28: 325-337.
- Roth AD. Curative treatment of gastric cancer: towards a multidisciplinary approach? *Crit Rev Oncol Hematol* 2003; 46(1): 59-100.
- Sales KJ, Kate AA, Howard B, Seoters RP, Jabbour M, Jabbour HN. Cyclooxygenase-1 is up-regulated in cervical carcinomas: autocrine/paracrine regulation of cyclooxygenase-2, prostaglandin E receptors, and angiogenic factors by cyclooxygenase-1. *Cancer Res.* 2002; 62: 424-432.
- Samet JM, Reed W, Ghio AJ, Devlin RB, Carter JD, Dailey LA, et al. Induction of prostaglandin H synthase 2 in human airway epithelial cells exposed to residual oil fly ash. *Toxicol Appl Pharmacol* 1996; 141(1): 159-168.
- Sandler RS, Galanko JC, Murray SC, Helm JF, Woosley JT. Aspirin and nonsteroidal anti-inflammatory agents and risk for colorectal adenomas. *Gastroenterology* 1998; 114(3): 441-447.
- Sano H, Kawahito Y, Wilder RL, Hashiramoto A, Mukai S, Asai K, et al. Expression of cyclooxygenase-1 and -2 in human colorectal cancer. *Cancer Res* 1995; 55(17): 3785-3789.
- Sawaoka H, Tsuji S, Tsujii M, Gunawan ES, Sasaki Y, Kawano S, et al. Cyclooxygenase inhibitors suppress angiogenesis and reduce tumor growth in vivo. *Lab Invest* 1999; 79(12): 1469-1477.
- Schmassmann A, Peskar BM, Stettler C, Netzer P, Stroff T, Flogerzi B, et al. Effects of inhibition of prostaglandin endoperoxide synthase-2 in chronic gastro-intestinal ulcer models in rats. *Br J Pharmacol* 1998; 123(5): 795-804.
- Schober SE. Vitamin A, vitamin E, selenium and colon cancer risk. *Diss Abstr Int (Sci)* 1986; 46(11): 3808.

- Schottenfield D, Berg J, Vitsky B. Incidence of multiple primary cancer: II. Index cancers arising in the stomach and lower digestive system. *J Natl Cancer Inst* 1969; 43: 77-86.
- Shao J, Sheng H, Inoue H, Morrow JD, DuBois RN. Regulation of constitutive cyclooxygenase-2 expression in colon carcinoma cells. *J Biol Chem* 2000; 275(43): 33951-33956.
- Sheng H, Shao J, Dixon DA, Williams CS, Prescott SM, DuBois RN, et al. Transforming growth factor-beta1 enhances Ha-ras-induced expression of cyclooxygenase-2 in intestinal epithelial cells via stabilization of mRNA. *J Biol Chem* 2000; 275(9): 6628-6635.
- Sheng H, Shao J, Morrow JD, Beauchamp RD, DuBois RN. Modulation of apoptosis and Bcl-2 expression by prostaglandin E2 in human colon cancer cells. *Cancer Res* 1998; 58(2): 362-366.
- Shiao YH, Palli D, Buzard GS, Caporaso NE, Amorosi A, Saieva C, et al. Implications of p53 mutation spectrum for cancer etiology in gastric cancers of various histologic types from a high-risk area of central Italy. *Carcinogenesis* 1998; 19(12): 2145-2149.
- Shiao YH, Rugge M, Correa P, Lehmann HP, Scheer WD. p53 alteration in gastric precancerous lesions. *Am J Pathol* 1994; 144(3): 511-517.
- Simmons DL, XIE W., CHIPMAN J.G. , EVETT G. E. Multiple cyclooxygenase cloning of a mitogen-inducible form. NEW YORK: PLENUM PRESS; 1991.
- Sipponen P, Riihela M, Hyvarinen H, Seppala K. Chronic nonatropic ('superficial') gastritis increases the risk of gastric carcinoma. A case-control study. *Scand J Gastroenterol* 1994; 29(4): 336-340.
- Sriamporn S, Setiawan V, Pisani P, Suwanrungruang K, Sirijaichingkul S, Mairiang P, et al. Gastric Cancer: the Roles of Diet, Alcohol Drinking, Smoking and Helicobacter pylori in Northeastern Thailand. *Asian Pac J Cancer Prev* 2002; 3(4): 345-352.
- Smith PK, Krohn RI, Hermanson GT, Mallia AK, Gartner FH, Provenzano MD, et al. Measurement of protein using bicinchoninic acid. *Anal Biochem* 1985; 150(1): 76-85.
- Smith WL, Bell TG. Immunohistochemical localization of the prostaglandin-forming cyclooxygenase in renal cortex. *Am J Physiol* 1978; 235(5): 451-457.

- Smith WL, DeWitt DL, Garavito RM. Cyclooxygenases: structural, cellular, and molecular biology. *Annu Rev Biochem* 2000; 69: 145-182.
- Spencer AG, Thuresson E, Otto JC, Song I, Smith T, DeWitt DL, et al. The membrane binding domains of prostaglandin endoperoxide H synthases 1 and 2. Peptide mapping and mutational analysis. *J Biol Chem* 1999; 274(46): 32936-32942.
- Stalnikowicz R, Benbassat J. Risk of gastric cancer after gastric surgery for benign disorders. *Arch Intern Med* 1990; 150(10): 2022-2026.
- Steele GD, Jr. The National Cancer Data Base report on colorectal cancer. *Cancer* 1994; 74(7): 1979-1989.
- Stemmermann G, Heffelfinger SC, Noffsinger A, Hui YZ, Miller MA, Fenoglio-Preiser CM. The molecular biology of esophageal and gastric cancer and their precursors: oncogenes, tumor suppressor genes, and growth factors. *Hum Pathol* 1994; 25(10): 968-981.
- Strickler JG, Zheng J, Shu Q, Burgart LJ, Alberts SR, Shibata D. p53 mutations and microsatellite instability in sporadic gastric cancer: when guardians fail. *Cancer Res* 1994; 54(17): 4750-4755.
- Subbaramaiah K, Altorki N, Chung WJ, Mestre JR, Sampat A, Dannenberg AJ. Inhibition of cyclooxygenase-2 gene expression by p53. *J Biol Chem* 1999; 274(16): 10911-10915.
- Subbaramaiah K, Cole PA, Dannenberg AJ. Retinoids and carnosol suppress cyclooxygenase-2 transcription by CREB-binding protein/p300-dependent and -independent mechanisms. *Cancer Res* 2002; 62(9): 2522-2530.
- Subbaramaiah K, Dannenberg AJ. Cyclooxygenase 2: a molecular target for cancer prevention and treatment. *Trends Pharmacol Sci* 2003; 24(2): 96-102.
- Subbaramaiah K, Hart JC, Norton L, Dannenberg AJ. Microtubule-interfering agents stimulate the transcription of cyclooxygenase-2. Evidence for involvement of ERK1/2 AND p38 mitogen-activated protein kinase pathways. *J Biol Chem* 2000; 275(20): 14838-14845.
- Subbaramaiah K, Norton L, Gerald W, Dannenberg AJ. Cyclooxygenase-2 is overexpressed in HER-2/neu-positive breast cancer: evidence for involvement of AP-1 and PEA3. *J Biol Chem* 2002; 277(21): 18649-18657.

- Tahara E, Semba S, Tahara H. Molecular biological observations in gastric cancer. *Semin Oncol* 1996; 23(3): 307-315.
- Tamura G. Molecular pathogenesis of adenoma and differentiated adenocarcinoma of the stomach. *Pathol Int* 1996; 46(11): 834-841.
- Tersmette AC, Giardiello FM, Tytgat GN, Offerhaus GJ. Carcinogenesis after remote peptic ulcer surgery: the long-term prognosis of partial gastrectomy. *Scand J Gastroenterol Suppl* 1995; 212: 96-99.
- Tersmette AC, Offerhaus GJ, Tersmette KW, Giardiello FM, Moore GW, Tytgat GN, et al. Meta-analysis of the risk of gastric stump cancer: detection of high risk patient subsets for stomach cancer after remote partial gastrectomy for benign conditions. *Cancer Res* 1990; 50(20): 6486-6489.
- Thun MJ. Aspirin, NSAIDs, and digestive tract cancers. *Cancer Metastasis Rev* 1994; 13(3-4): 269-277.
- Thun MJ, Namboodiri MM, Calle EE, Flanders WD, Heath CW, Jr. Aspirin use and risk of fatal cancer. *Cancer Res* 1993; 53(6): 1322-1327.
- Tjandrawinata RR, Dahiya R, Hughes-Fulford M. Induction of cyclo-oxygenase-2 mRNA by prostaglandin E2 in human prostatic carcinoma cells. *Br J Cancer* 1997; 75(8): 1111-1118.
- Tsuji S, Kawano S, Sawaoka H, Takei Y, Kobayashi I, Nagano K, et al. Evidences for involvement of cyclooxygenase-2 in proliferation of two gastrointestinal cancer cell lines. *Prostaglandins Leukot Essent Fatty Acids* 1996; 55(3): 179-183.
- Tsujii M, DuBois RN. Alterations in cellular adhesion and apoptosis in epithelial cells overexpressing prostaglandin endoperoxide synthase 2. *Cell* 1995; 83(3): 493-501.
- Tsujii M, Kawano S, DuBois RN. Cyclooxygenase-2 expression in human colon cancer cells increases metastatic potential. *Proc Natl Acad Sci U S A* 1997; 94(7): 3336-3340.
- Uefuji K, Ichikura T, Mochizuki H. Cyclooxygenase-2 expression is related to prostaglandin biosynthesis and angiogenesis in human gastric cancer. *Clin Cancer Res* 2000; 6(1): 135-138.

- Uefuji K, Ichikura T, Mochizuki H, Shinomiya N. Expression of cyclooxygenase-2 protein in gastric adenocarcinoma. *J Surg Oncol* 1998; 69(3): 168-172.
- Valle J, Kekki M, Sipponen P, Ihamaki T, Siurala M. Long-term course and consequences of *Helicobacter pylori* gastritis. Results of a 32-year follow-up study. *Scand J Gastroenterol* 1996; 31(6): 546-550.
- Vane JR. Inhibition of prostaglandin synthesis as a mechanism of action for the aspirin-like drugs. *Nature* 1971; 231: 232-235.
- Vane JR, Bakhle YS, Botting RM. Cyclooxygenases 1 and 2. *Annu Rev Pharmacol Toxicol* 1998; 38: 97-120.
- Vasen HF. What is hereditary nonpolyposis colorectal cancer (HNPCC). *Anticancer Res* 1994; 14(4B): 1613-1615.
- Vogelstein B, Eng N, Okamoto M, et al. Loss of constitutional heterozygosity in colon carcinoma from patients with familial polyposis coli. *Nature* 1998; 331: 273-277.
- Walker AR, Walker BF, Walker AJ. Fecal ph, dietary fiber intake, and proneness to colon cancer in four South American populations. *Br J Cancer* 1986; 53(4): 489.
- Wargovich MJ, Baer AR, Hu PJ, Sumiyoshi H. Dietary factors and colorectal cancer. *Gastroenterol Clin North Am* 1988; 17(4): 727-745.
- Wargovich MJ, Felkner IC. Metabolic activation of DMH by colonic microsomes: A process influenced by type of dietary fat. *Nutr Cancer* 1983; 4: 146.
- Warren JR, Marshall BJ. Unidentified curved Bacilli on gastric epithelium in active chronic gastritis. *Lancet* 1983; 1: 1273-1275.
- Watkins WD, Peterson MB, Fletcher JR. *Prostaglandins in Clinical Practice*. New York: Raven; 1989.
- Weisburger JH. Causes, relevant mechanisms, and prevention of large bowel cancer. *Semin Oncol* 1991; 18(4): 316-336.
- Weiss NS, Daling JR, Chow WH. Incidence of cancer of the large bowel in women in relation to reproductive and hormonal factors. *J Natl Cancer Inst* 1981; 67(1): 57-60.

- Weitzman SA, Gordon LI. Inflammation and cancer: role of phagocyte-generated oxidants in carcinogenesis. *Blood* 1990; 76(4): 655-663.
- West DW, Slattery ML, Robison LM, Schuman KL, Ford MH, Mahoney AW, et al. Dietary intake and colon cancer: sex- and anatomic site-specific associations. *Am J Epidemiol* 1989; 130(5): 883-894.
- Whelton A. Nephrotoxicity of nonsteroidal anti-inflammatory drugs: physiologic foundations and clinical implications. *Am J Med* 1999; 106(5B): 13-24.
- Williams CS, Mann M, DuBois RN. The role of cyclooxygenases in inflammation, cancer, and development. *Oncogene* 1999; 18(55): 7908-7916.
- Winawer SJ, Zauber AG, Gerdes H, O'Brien MJ, Gottlieb LS, Sternberg SS, et al. Risk of colorectal cancer in the families of patients with adenomatous polyps. National Polyp Study Workgroup. *N Engl J Med* 1996; 334(2): 82-87.
- Winawer SJ, Zauber AG, Ho MN, O'Brien MJ, Gottlieb LS, Sternberg SS, et al. Prevention of colorectal cancer by colonoscopic polypectomy. The National Polyp Study Workgroup. *N Engl J Med* 1993; 329(27): 1977-1981.
- Xie W, Robertson DL, Simmons DL. Mitogen-inducible prostaglandin G/H synthase: a new target for nonsteroidal antiinflammatory drugs. *Drug Dev. Res* 1992; 25: 249-265.
- Xu XM, Tang JL, Chen X, Wang LH, Wu KK. Involvement of two Sp1 elements in basal endothelial prostaglandin H synthase-1 promoter activity. *J Biol Chem* 1997; 272(11): 6943-6950.
- Yamagata K, Andreasson KI, Kaufmann WE, Barnes CA, Worley PF. Expression of a mitogen-inducible cyclooxygenase in brain neurons: regulation by synaptic activity and glucocorticoids. *Neuron* 1993; 11(2): 371-386.
- Yamamoto H, Itoh F, Fukushima H, Hinoda Y, Imai K. Overexpression of cyclooxygenase-2 protein is less frequent in gastric cancers with microsatellite instability. *Int J Cancer* 1999; 84(4): 400-403.

- Yokoyama C, Tanabe T. Cloning of human gene encoding prostaglandin endoperoxide synthase and primary structure of the enzyme. *Biochem Biophys Res Commun* 1989; 165(2): 888-94.
- Zhang F, Subbaramaiah K, Altorki N, Dannenberg AJ. Dihydroxy bile acids activate the transcription of cyclooxygenase-2. *J Biol Chem* 1998; 273(4): 2424-2428.
- Zhang Z, Sheng H, Shao J, Beauchamp RD, DuBois RN. Posttranscriptional regulation of cyclooxygenase-2 in rat intestinal epithelial cells. *Neoplasia* 2000; 2(6): 523-530.
- Zinkin LD. A critical review of the classifications and staging of colorectal cancer. *Dis Colon Rectum* 1983; 26(1): 37-43.