In October 1998, a panel of experts in arthritis management met for the COX-2–Specific Inhibition: A New Approach in the Management of Pain and Inflammation symposium in New Orleans, La. This meeting was held in conjunction with the annual convention of the American Osteopathic Association. It was supported by an unrestricted educational grant from G.D. Searle & Co. and Pfizer, Inc. Panel members focused on evidence from clinical trials on the new class of drugs, cyclooxygenase-2 (COX-2)–specific inhibitors, which hold promise for analgesic and anti-inflammatory efficacy in arthritis with significantly fewer adverse gastrointestinal (GI) effects compared with NSAID therapy. This continuing medical education supplement, produced by the faculty, is an outcome of that symposium.

The approach to the prevention and management of NSAID-induced toxicities (GI, hematologic, hepatic, cardiovascular, and central nervous system) includes identification of patients who are at risk and early detection of adverse events. David S. James, DO, FACG, covers this subject in the first article in this supplement. He also discusses the widespread use of NSAIDs in terms of quality of life and economic impact.

In the second article, Raymond A. Adelizzi, DO, FACOI, discusses the structure, anatomic distribution, and enzymatic activity of the COX isoforms, COX-1 and COX-2. He explores prostaglandins, compounds derived from arachidonic acid via the COX pathway, and their role in various disease states (rheumatoid arthritis and osteoarthritis) and their possible role in colorectal cancer and Alzheimer’s disease in terms of emerging findings from preclinical trials using animal models.

The clinical implications of COX-2 specificity in the treatment of osteoarthritis and rheumatoid arthritis constitute the topic of the third article. Elizabeth Tindall, MD, FACR, reviews findings from preclinical and clinical trials concerning the safety and efficacy of celecoxib, a COX-2–specific inhibitor. Among the trials reviewed are comparative studies with other NSAIDs such as naproxen and with placebo. The trials involved patients with dental or arthritic pain and inflammation from rheumatoid arthritis.

In the final article, I discuss the implications for clinical practice of COX-2–specific inhibition. I provide guidelines for initiating NSAID therapy, including factors used to identify patients at risk for various side effects as well as the need for establishing baseline laboratory values and continued monitoring.

I hope that this supplement will enhance your understanding of the profound impact that COX-2–specific inhibitors will have on the management of pain and inflammation in the current clinical environment and will assist you in the treatment of musculoskeletal disorders.