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## Preface

Osteonecrosis usually affects adults younger than 50 years and frequently leads to collapse and subsequent osteoarthritis. It is becoming more prevalent because of increasing use of steroids in the management of organ transplantation and adjuvant therapy for leukemia and other myelogenous diseases. In the United States, 10,000–20,000 people are affected with osteonecrosis of the femoral head annually, which accounts for up to 10 % of total hip arthroplasties performed each year. In nationwide surveys from Japan and Korea, the annual prevalence was more than 10,000. In Taiwan, about half of the total hip arthroplasties were done due to femoral head osteonecrosis. Thus, osteonecrosis leads to increasing socioeconomic burden worldwide.

However, the pathogeneses by the various etiologic factors are still unclear and the recommendations for treatment remain controversial.

Since the first meeting in 1973, Association Research Circulation Osseous (ARCO) has been the only international society to continuously bring together basic scientists and clinicians to discuss bone circulation and osteonecrosis. The ARCO histological criteria for diagnosis and staging system of osteonecrosis are used worldwide. In 1998, a textbook *Osteonecrosis: Etiology, Diagnosis and Treatment* was published, which was virtually the first textbook on this subject.

During the last 15 years, there has been enormous amount of investigations on osteonecrosis. We update new knowledge on the basic science, epidemiology, etiology, pathophysiology, diagnosis, imaging, and treatment.

We hope the information in this book will help scientists and physicians in their research on osteonecrosis and in their clinical practice.

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