

Short Course 8

Recent advances and controversies in soft tissue pathology

Chairperson: L.G. Kindblom, Sweden. **Co-chairpersons:** J.M. Meis-Kindblom, Sweden and M. Miettinen, USA.

This course on soft tissue tumor pathology has been designed with the aim to highlight some important problematic and controversial issues of clinical, diagnostic and conceptual significance. The role of the soft tissue tumor pathologist is constantly changing. Despite the increasing demands and difficulties involved in this area, soft tissue tumor pathology continues to be an irresistible challenge to many pathologists. The pathologist is not only expected to stay abreast of the ever-growing number of new soft tissue entities and their variants/subtypes, to be aware of the rapidly increasing number of ancillary diagnostic techniques, to know how to correlate tumor genetics and molecular biology with the daily practice of surgical pathology and to keep up with the constantly changing treatment protocols and their effects on tumors. He or she is also expected to be a central figure in the multidisciplinary soft tissue tumor team.

The basic problems involved in soft tissue tumor typing and their prognostication will be discussed by Dr. A. Nascimento of the Mayo Clinic, where tumor grading was born, as well as by Dr. J.M. Meis-Kindblom from Sahlgren Hospital and the Musculoskeletal Tumor Center in Göteborg, Sweden.

Dr. W. Ryd, chief of cytopathology at Sahlgren Hospital, will report his vast experience with fine needle aspiration (FNA) cytology in the preoperative diagnosis of soft tissue tumors. It is apparent that soft tissue tumor FNA poses special diagnostic problems. However, when the FNA findings are interpreted by someone with a deep knowledge of the area and in the context of a multidisciplinary approach to treatment, it is clear that FNA provides safe, fast and accurate diagnoses comparable to those obtained with coarse needle biopsies and even open surgical biopsies. Although the longest experience with FNA has been in Sweden, there is an increasing worldwide interest in the area. Dr. A. Nascimento will report the more recent experience of the Mayo Clinic with FNA.

Immunohistochemical techniques applied in the studies of soft tissue tumors have proved to be useful with regard to tumor classification as well as more basic questions regarding origin and differentiation, biological behavior, prognosis and treatment. Dr. M. Miettinen, chief of the Soft Tissue Branch at the AFIP, will give us his personal views regarding the role of immunohistochemistry in the diagnosis of soft tissue tumors and an update on new markers in this field.

Dr. J.M. Lopes of Porto, Portugal will discuss topics of general interest related to synovial sarcoma, one of the more common adult soft tissue sarcomas. Recent studies indicate that patients with synovial sarcoma (which has traditionally been viewed as a uniformly high-grade sarcoma) can be divided into favorable and unfavorable groups based on certain clinical and morphological factors in addition to certain biological markers.

With the exception of hematological-lymphoreticular neoplasms, there is hardly any other area in which tumor cytogenetics and molecular biology have been so fruitful as in the area of soft tissue tumors. Numerous tumor-specific genetic changes have been identified that are diagnostically useful. They have also helped us to understand some of the genetic-molecular biological basis of neoplastic transformation and progression. Despite these impressive advances, a traditional pathologist could argue that most of these new findings have only proven that the conclusions drawn by experienced and gifted morphologists were indeed correct. Dr. V.P. Collins of Cambridge, England, is one of those rare pathologists who embodies the traditional pathologist in the best sense and the new molecular pathologist. He will explain what the new molecular techniques can offer today and what we can expect in the future.

L.G. Kindblom

Göteborg, Sweden.

Grading of sarcomas at the Mayo Clinic 75 years after Broder

AG. Nascimento

Mayo Clinic, Rochester, Minnesota, USA.

The process of grading cancer was born at the Mayo Clinic about 80 years ago with Dr. Albert Compton Broders. Broders joined the Mayo Clinic in 1912 and later in 1920, as a consultant in surgical pathology and an instructor of pathology, he published the seminal paper

that introduced the important but controversial issue of histopathological grading of cancer.

In his initial paper, following the principle that under certain conditions of growth and environment, epithelial cells may lose all traces of their epithelial origin and may actually become indistinguishable from connective tissue elements, Broders (1) used the criteria of differentiation to grade 537 squamous cell carcinomas of the lip. According to Broders, differentiation is the phenomenon by which the product of a growth, cancerous or not, is similar to a normal epithelium and he used to give the example of the production of a "pearly body" in a squamous cell carcinoma as the ultimate step of differentiation.