



## Preface

Cancer is second only to trauma as a cause of death in children beyond the neonatal period. The incidence of childhood cancer has been relatively stable over the past decade, but there have been consistent declines in mortality over the same time period.

The dramatic improvement in survival that has been achieved over time can be attributed to the integration of multi-modal therapy, including surgery, chemotherapy, and radiation therapy. This progress has been made possible through the creation and cooperation of multi-institutional, multi-disciplinary working groups such as the Children's Cancer Study Group (CCSG), Pediatric Oncology Group (POG), National Wilms' tumor Study Group (NTWS), and Intergroup Rhabdomyosarcoma Study (IRS) in North America and the MAKEI, SIOP, and UK CCSG in Europe. In 2000, a joint conference of the International Pediatric Surgical Oncology Group (IPSO) and North American COG was initiated at the annual meeting of the American Pediatric Surgical Association to increase international cooperative study and discussion of this important topic. These combined meetings will continue on a regular basis to foster continued sharing of knowledge and ideas in the study of childhood cancer.

In this issue of *Seminars in Pediatric Surgery*, we have focused on those subsets of pediatric cancer that have undergone recent changes in management and outcome, or areas in which controversy and study are ongoing. The management of Wilms' tumor is an excellent example of the progress made by cooperative studies. With an established record of high survival rates with surgical excision and chemotherapy, attention is now directed toward long-term reduction in morbidity. Reduction and modifications in chemotherapy have already occurred, and current interest from the surgical perspective is focused on maximizing the preservation of normal renal parenchyma in patients with bilateral tumors or limited renal reserve. Drs. Cozzi and Zani have provided a contemporary review of the indications and techniques for nephron-sparing surgical procedures in children with Wilms' tumor. The widespread use of antenatal ultrasound and the information gleaned from screening programs for neuroblastoma in Japan and elsewhere have highlighted the

incidence of neuroblastoma in the perinatal period and raised questions about the natural history of this tumor and options for treatment. Dr. Nuchtern's review outlines the biology of this disease and provides a thoughtful discussion of the potential for expectant management for this tumor in the setting of a multicenter trial. Malignant liver tumors continue to be a challenging category of childhood malignancy. Dr. von Schweinitz describes the clinical features of the major hepatic cancers and reviews the different management philosophies and treatment outcome in Europe, Japan, and the United States.

Surgical management of pulmonary metastases in childhood osteosarcoma remains a controversial area with multiple variables impacting on treatment success. Drs. Harting and Blakely review the biology of the metastatic process, the known prognostic factors, and the surgical options available for management of this challenging group of patients.

The prognosis for germ cell tumors has markedly improved over the past decade due to the acceptance of platinum-based chemotherapy introduced for adult testicular cancer. As with renal tumors, current protocols emphasize efforts to limit long term morbidity from both chemotherapy and surgical resection. Dr. Billmire's review describes the integration of surgical and chemotherapy regimens to increase chances of complete resection and limit surgical morbidity. Candidates for treatment with surgical therapy alone are also described. Gastrointestinal tumors are one of the rarest sites for neoplasia in childhood. In this review, Drs. Ladd and Grosfeld provide a thorough description of the clinical features and most recent therapeutic regimens for these unusual childhood neoplasms. Malignant adrenal tumors, including adrenocortical carcinoma and pheochromocytoma, are mainly treated with surgical therapy. The contribution by Dr. Rescorla provides a current overview of surgical management, but also describes the increasing body of information regarding the biologic and molecular features of these tumors that may aid in designing adjunctive chemotherapy protocols in the future.

The care of children with rhabdomyosarcoma parallels the advances made in other solid tumors by the cooperative treatment protocols of multidisciplinary manage-

ment. The review by Dr. Rodeberg and Paidas outlines the progressive steps in achieving the current overall survival of more than 70% for this tumor. As with the other childhood tumors discussed in this issue of *Seminars*, future treatment protocols focus on identification of genetic alterations and biologic features to define risk

groups so that therapy can be tailored to minimize toxicity and achieve maximal survival with better quality of life.

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