

Preface



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Guest Editor

The importance of the immune system in cancer has been recognized for over 100 years, but it has only been in the past two decades that the knowledge of the immune system's interaction (or lack thereof) with malignant cells has been characterized enough to allow for meaningful therapeutic interventions. The discipline of tumor immunology has expanded greatly over the past 20 years. A great deal of time, effort, and resources has been spent on the research of the relationship between the host immune system and altered cells of malignancy in the hopes of developing new and effective treatment options for cancer. The results of these expenditures are now coming to fruition as new immunotherapeutic treatments have been developed and, in some cases, implemented, improving disease free and overall survival for patients who have solid tumors. In addition to advances in molecular immunology, an understanding of the genetic basis of immune recognition and response to malignancy has allowed both basic scientists and clinicians to use the immune system in the diagnosis and management of cancer. Although the interactions between the immune system and tumor cell are complex and have not been completely elucidated to date, these interactions have been better characterized in many malignancies, allowing effective therapies to be developed.

This issue of *Surgical Oncology Clinics of North America* is organized as both a review for practicing surgeons as well as a current update for individuals who are well versed in immunotherapy. The first seven articles are written as a review of the basic concepts in tumor immunology. Much knowledge has been added to the domain of basic immunology over the past

two decades; therefore, the first section of the first article is included as a brief review of basic immunology for surgeons who have not had any recent exposure to the latest in basic immunologic principles. The last eight articles are written as an update of current information and immunotherapy for many of the most common disease sites of cancer. I am indebted to several of the world's leading tumor immunology authors from some of the most prominent immunotherapy centers, who have contributed to this issue to bring the reader the most current state of the art information in tumor immunology.

Though many of the steps in immune recognition and reaction to malignant cells are now better understood, there remains much to be discovered. The potential for manipulation of the immune system to better recognize and eradicate transformed cells offers much promise for an effective, long-lasting treatment option in many solid tumors. Although immunotherapy may not be appropriate for all clinical situations, better understanding of the conditions which are appropriate for an effective immune response will allow clinicians to use this valuable treatment modality in addition to current treatment options. The use of immunotherapeutic treatments, such as monoclonal antibodies, has now become a standard part of treatment regimens for some malignancies, and it is only a matter of time before other forms of immunotherapy such as vaccination become part of the standard treatment options for solid tumors. The attraction of a nontoxic, nondebilitating form of therapy, such as immunotherapy, is great.

The use of immunotherapy cannot occur without appropriate and timely clinical trials to delineate the activity and benefits of immunotherapeutic regimens in the treatment of malignancies. The surgeon's role in the investigation and implementation of immunotherapy is critical, for in many cases only surgeons can identify appropriate patients and obtain the necessary tissue specimens for the development of tumor specific immunotherapy. It is my hope that the surgical community will continue to accept and maintain the vital role that it plays in the development of this valuable weapon in the fight against malignancy.

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