



Immunotherapy for Gynecological Oncology

Dear Colleagues,

In recent years, immunotherapy has been studied as a promising candidate for being the "fourth pillar" in the treatment of gynecological cancer. Unfortunately, however, no cancer vaccine therapy targeting tumor-specific antigens has yet been approved in any field, including the field of gynecological cancer, and progress in the development of such therapies has been slow. In contrast, recently developed immune checkpoint inhibitors, such as anti-cytotoxic T-lymphocyte antigen 4 antibodies and anti-programmed cell death 1 antibodies, have attracted attention because of their dramatic and long-term antitumor effects and have vitalized the development of cancer immunotherapies.

The response rates to immune checkpoint inhibitors are estimated to be up to 30% for melanoma and approximately 10%–20% for other types of cancer, except for Hodgkin's lymphoma. These drugs are expensive and may cause autoimmune adverse events. Future issues related to immune checkpoint inhibitor therapy include the selection of responders, identification of biomarkers useful for determining the optimal treatment duration and other treatment details in responders, and development of therapies for patients who do not respond to immune checkpoint inhibitors.

At present, in the field of gynecology, studies are being conducted to evaluate combinations of multiple cancer immunotherapies and combinations of cancer immunotherapy with chemotherapy, molecular-targeted drugs, or other treatments. Furthermore, personalized peptide vaccine therapy and personalized T-cell transfer therapy based on tumor-specific mutant antigens have been studied in some cancer types and histological types associated with various gene mutations. Thus, cancer immunotherapy can be regarded as a promising therapy in the field of gynecology.

The aim of this special issue of the Journal is to collect new insights on this fascinating topic.

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