

Aiming at establishment of immunotherapeutic approach that balance anti-tumor effect and irAE management

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Abstract

In our laboratory "Division of Clinical immunology and Cancer Immunotherapy", we are conducting researches aimed at predicting and improving the symptoms of immune-related adverse events (irAE) that are sometimes elicited by cancer immunotherapy, from the perspective of both basic bench side and clinical side. Our research goals are to further expand the versatility of cancer immunotherapy and enhance its effectiveness through optimizing the balance between anti-tumor effect and irAE management. To clarify the mechanisms underlying irAE development and to identify critical determinants for efficacy and safety of cancer immunotherapy, we examine immune responses eliciting irAE-like symptoms by utilizing currently developed experimental irAE model with tumor-bearing aged mice.

In clinical practice, our division have established a system "irAE Unit" since 2021 to support the safety of cancer immunotherapy in cancer patients, in collaboration not only with the departments directly involved in cancer treatment, but also with the departments involved in diagnosis and treatment of immune mediated inflammatory disorders in Kyoto University Hospital. Furthermore, pre-clinical research is also being developed in order to conduct comprehensive analysis of in-house clinical information on cancer immunotherapy and immunological examination of bioresources, mainly patients' specimens, in order to elucidate the etiology and pathology of irAEs.