

## **Overview of the treatment strategies for patients with melanoma; focusing on the difference between Western countries and Japan**

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Abstract :

The treatment strategy for patients with melanoma has dramatically changed over the past several years, especially in the metastatic setting. In addition to the combination of BRAF and MEK inhibitors, immune-checkpoint inhibitors such as anti-PD-1 antibodies and anti-CTLA-4 antibody are already used widely as a first line treatment in clinic. Those efficacious agents have also been evaluated in the adjuvant setting, and are going to evolve adjuvant therapies for resected melanoma. To achieve a longer disease control along with more rapid and higher response, the combination or sequencing of immune checkpoint inhibitors with molecularly targeted agents or other emerging therapies, such as IDO inhibitors or oncolytic viruses, are under evaluation in clinical trials.

Melanoma can arise from any part of the body in which melanocytes are located, which consist of cutaneous, mucosal, uveal, and unknown primary melanoma. According to its clinical and pathological features, cutaneous melanoma has been classically categorized into four major subgroups, which are superficial spreading, nodal, lentigo maligna, and acral lentiginous melanoma. Recent progress of molecular biology confirmed that the clinical heterogeneity of melanoma can be explained by genetically distinct subtypes, such as melanoma on skin without chronic sun-induced damage (non-CSD), melanoma on skin with chronic sun-induced damage (CSD), acral, mucosal, and uveal melanoma. The incidence of melanoma in Caucasian population is the highest mainly due to the largest number of patients with non-acral cutaneous melanoma, which is associated with exposure to ultraviolet light, and partly due to the larger number of patients with uveal melanoma, which has shared etiological risk factors with cutaneous melanoma. On the other hand, the proportion of acral or mucosal melanoma among all types of melanoma in Asian or African American is known to be higher than that in non-Hispanic Caucasian population. In addition to the difference of the proportion of BRAF-mutated melanoma, response to the immune-checkpoint inhibitors varies between non-acral cutaneous and acral or mucosal melanoma.

In this session, the current and future treatment strategies for patients with melanoma, focusing on the difference between Western countries and Japan, will be discussed.