New molecular target therapies based on genome sequencing
白血病・リンパ腫におけるゲノム医療と新規分子標的治療

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Toward precision medicine in lymphoma: challenges and opportunities
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NGS による DLBCL ゲノム解析
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In recent years, certain molecular targeted drugs have achieved notable success in clinical lymphoma trials. For example, ibrutinib, one of the Bruton Tyrosine Kinase (BTK) inhibitors, has prolonged progression-free survival (PFS) in certain molecular subtypes of newly diagnosed (N/D) diffuse large B cell lymphoma (DLBCL) and N/D. mantle cell lymphoma (MCL), when combined with conventional immunochemotherapy. In addition, valemetostat tosylate, a selective dual inhibitor of histone-lysine N-methyltransferases enhancer of zeste homolog 1 and 2 (EZH1/2), has shown remarkable clinical efficacy for relapsed and refractory (R/R) adult T-cell leukemia/lymphoma (ATLL) and peripheral T-cell lymphoma (PTCL). These great success was achieved by virtue of the evolving technology for genomic analysis with next-generation sequencing (NGS), which elucidate the genomic landscape of lymphoma, paving the way toward precision medicine. However, there are some issues to overcome in achieving precision medicine such as various resistant mechanisms of lymphoma cells and serious off-target toxicity of molecular targeted drugs. In this symposium, the current status of molecular target therapy for lymphoma is reviewed and future potential application is discussed.