Drug-induced lung injury is defined as a lung injury that results from the specific use of a drug including over-the-counter drugs, herbal medicines, supplements, and illegal narcotics. Drug-induced interstitial lung disease that is one of the most common types of drug-induced lung injury occasionally causes fatal outcome. Recent anticancer drugs, such as tyrosine kinase inhibitors, immune checkpoint inhibitors and antibody drug conjugates, are not only highly effective for tumors but also common causative medications of drug induced interstitial lung disease. Pathogenetic mechanisms of drug induced interstitial lung disease have not been well known but direct toxic effects on alveolar type I epithelial cells, airway epithelial cells, or vascular endothelial cells and activation immune cells as a hapten or an antigen are suspected one of the pathogenetic mechanisms. Radiological and pathological patterns are classified based on the morphologic patterns of idiopathic interstitial pneumonia, hypersensitivity pneumonitis and sarcoidosis and so on. These patterns are not specific and different with each case. But these patterns are useful to differentiate drug induced interstitial lung disease from other lung diseases and identify diffuse alveolar damage pattern as a poor prognostic factor. In this presentation, radiological/pathological findings of drug induced pneumonitis and clinical significance of the morphologic patterns will be reviewed.
Drug-induced lung injury is defined as a lung injury that results from the specific use of a drug including over-the-counter drugs, herbal medicines, supplements, and illegal narcotics. Drug-induced interstitial lung disease that is one of the most common types of drug-induced lung injury occasionally causes fatal outcome. Recent anti-cancer drugs, such as tyrosine kinase inhibitors, immune checkpoint inhibitors and antibody drug conjugates, are not only highly effective for tumors but also common causative medications of drug induced interstitial lung disease. Pathogenetic mechanisms of drug induced interstitial lung disease have not been well known but direct toxic effects on alveolar type I epithelial cells, airway epithelial cells, or vascular endothelial cells and activation immune cells as a hapten or an antigen are suspected one of the pathogenetic mechanisms. Radiological and pathological patterns are classified based on the morphologic patterns of idiopathic interstitial pneumonia, hypersensitivity pneumonitis and sarcoidosis and so on. These patterns are not specific and different with each case. But these patterns are useful to differentiate drug induced interstitial lung disease from other lung diseases and identify diffuse alveolar damage pattern as a poor prognostic factor. In this presentation, radiological/pathological findings of drug induced pneumonitis and clinical significance of the morphologic patterns will be reviewed.