

세미나 초록

발표주제	Discovering cancer biomarkers and research using medical big data
발표내용	<p>Hepatocellular carcinoma (HCC) has emerged as a major cause of cancer-related death. Only the multikinase inhibitor sorafenib is available for the management of advanced cases. Since the approval of sorafenib, there have been numerous failures of new agents in Phase III studies for the treatment of advanced HCC. The Accumulating evidence suggests that immunotherapy could be a promising option for treating HCC. Clinical trials are currently ongoing to evaluate the utility of antibodies against programmed cell death 1 (PD-1), programmed cell death-ligand 1 (PD-L1), and cytotoxic T-lymphocyte-associated antigen 4 (CTLA-4) as monotherapy or combination therapy in patients with HCC. We were engaged in two research projects: the first one was "Liquid biopsy (exosome, cell-free DNA) for biomarker discovery in predicting prognosis and/or treatment response in hepatocellular carcinoma". The second topic was "Tumor microenvironment in regulating the immune response in hepatocellular carcinoma". With the appreciation of the molecular diversity of HCC, clinical development of new agents in HCC will need to be targeted toward those patients who are most likely to benefit based on precision medicine.</p> <p>Ajou University Hospital Medical Big Data Center is an organization dedicated to medical big data established in March 2019 by strengthening the medical data-based AI research capability and establishing a commercialization model, data-based hospital business selection, data collection for artificial intelligence learning, and the development of data-based AI solutions. Recently, in collaboration with the Electronics and Telecommunications Research Institute (ETRI), Asan Hospital, and Dae-A Information System, we started to develop an artificial intelligence federation technology to search for the optimal treatment pathway for patients with sepsis, which enables multi-institutional collaboration, and to resolve medical imbalances between regions.</p> <p>Dr. Answer 2.0 develops AI precision medical software that supports medical care from the point of view of the entire treatment cycle, such as disease prediction/analysis, diagnosis assistance, treatment support, and prognosis prediction from hospital-based clinical verification to medical device licensing. We are now engaged in the development of AI-based software for predicting treatment response, side effects, and liver injury after medication in patients with chronic hepatitis B and drug-induced liver injury.</p> <p>Human resources refer to clinical and epidemiological information collected from human materials such as blood, tissues, cells and body fluids. The Human Resources Bank of Ajou University Hospital, which was selected again for the 4th period (2021-2025) project will collect, store, and manage the resources of liver disease patients and normal people for the next five years, and provide various clinical epidemiologic information and in-depth information. This is a project to secure and manage human resources that will be used for future health and medical research and development at the national level.</p>