Industry Spotlight

AKI Research News

Scientists are making strides in predicting occurrence of acute kidney injury (AKI) and in evaluating extensive data on patients who recover from AKI.

The Department of Veterans Affairs (VA) announced a year ago that it had signed a formal agreement with DeepMind to gather and analyze data on kidney disease and other conditions. Wired magazine caught up with the project's status recently, and noted that it drew on about 700,000 medical records from veterans. The VA has been working with DeepMind (owned by Google's parent company, Alphabet) to create software that tries to predict when patients might develop AKI.

The VA's director of predictive analytics, Christopher Nielsen, told Wired that the project has "been fairly successful in predicting AKI at an early enough stage to prevent it."

The next step may be to use live data from the VA system to evaluate the accuracy of the AKI predictive factors over time, Wired noted. Then it would be possible to introduce the system for use in a VA clinic to see if it helps improve care, a test that is at least one year away.

Dialysis and kidney care giant Fresenius also is interested in using its extensive patient data to learn more about AKI. Of 9000 patients diagnosed with AKI at Fresenius North America outpatient clinics, about one-third recovered kidney function within 90 days of beginning in-center hemodialysis, according to Fresenius.

Overall, 38% of patients recovered kidney function within 150 days of initiating outpatient therapy, the company said in a press release.

The preliminary analysis of the Fresenius data included several clinical measures, such as type of vascular access used, ultrafiltration rates, and biochemical measures during the first 90 days of outpatient dialysis therapy.

The data also suggested that 20% of patients who begin outpatient in-center hemodialysis are diagnosed with AKI, and 44% of those patients transition to ESRD within 150 days of starting outpatient hemodialysis.

"This groundbreaking data holds enormous promise for developing further insights into the treatment of acute kidney injury," said Frank Maddux, MD, chief medical officer and executive vice president for clinical and scientific affairs at Fresenius Medical Care North America.

Different Fates for two RCC Treatments

One manufacturer has decided not to file for FDA approval of its renal cell carcinoma (RCC) treatment, while another manufacturer's combination of RCC drugs has won European approval.

Aveo Oncology, based in Cambridge, MA, decided against filing a new drug application for tivozanib (brand name Fotivda) in the United States. The FDA had informed Aveo that it was unsatisfied with the drug's overall survival data, and that the data failed to improve upon initial concerns the FDA had when it rejected the drug in 2013.

In that year, the FDA questioned the drug's benefits because data showed that tivozanib failed to beat the overall survival rate of Bayer's drug, Nexavar, FierceBiotech reported. An August 2018 analysis of required data will no longer be Aveo's final analysis but rather an interim analysis as the company continues toward FDA approval. Fotivda is approved for first-line treatment of advanced RCC in Europe.

Meanwhile, an RCC treatment that consists of a drug combination was approved for European patients. Bristol-Myers Squibb (Princeton, NJ) announced that the European Commission had approved the combination of its trademarked drugs Opdivo (nivolumab) 3 mg/kg plus Yervoy (ipilimumab) 1 mg/kg ("low-dose").

The combination therapy is a first-line therapy to treat patients with intermediate- and poor-risk advanced RCC. The European approval hinged on results from the CheckMate-214 trial, a phase 3, randomized, open-label study evaluating the combination of Opdivo plus Yervoy versus sunitinib in patients with previously untreated advanced renal cell carcinoma. The FDA has already approved the combination for certain patients whose cancer has metastasized.