Industry Spotlight

Pharma News

The National Institute for Health and Care Excellence (NICE) in the United Kingdom (UK) has published draft guidelines for a new renal cell carcinoma treatment. The guidelines support the use of EUSA Pharma's (Hemel Hempstead, England) Fotivda (tivozanib) as a first-line treatment option for advanced renal cell carcinoma. NICE provides national evidence-based guidance and quality standards to practitioners in the National Health Service.

In clinical trials, patients treated with Fotivda experienced longer progression-free survival—11.9 versus 9.1 months—in the overall population compared with those taking Bayer's Nexavar (sorafenib). The drug also reduced side effects: 14% of patients on Fotivda compared with 43% of patients on Nexavar needed a dose reduction due to adverse events, noted EUSA Pharma. The company said it plans to pursue FDA approval.

In other news, AstraZeneca said it expects an FDA decision about its drug ZS-9, a candidate to treat hyperkalemia, during the first half of 2018.

The company noted that problems uncovered at a manufacturing facility in Texas that resulted in the FDA's suspending the drug's approval process have been ameliorated.

Third, Bizjournals.com reported that a drug that may help the immune system's chances of slowing progression of several different cancers has placed Nektar Therapeutics in the path of a potential $3.6 billion deal with Bristol-Myers Squibb (BMS) (New York, NY). Nektar's value to BMS is the potential for its investigational drug NKTR-214 to be used in combination with other BMS drugs to stimulate the immune system and fight renal and other cancers. NKTR-214 is believed to stimulate the immune system into producing a protein called PD-1.

Nektar (San Francisco, CA) is being eyed for a trial with Opdivo and also a three-drug combination trial with Opdivo and Yervoy, which bind to PD-1. Early results from a collaboration the companies started in fall 2016 showed that NKTR-214 and Opdivo together could generate a response in more than half of patients, including those with cancers in which PD-1 is not expressed.

Studies in renal cell carcinoma and melanoma are expected to begin in mid-2018, reports ClinicalLeader.com.

And Danish in vitro diagnostics firm BioPorto announced in February 2018 a deal with Roche for the global distribution of a neutrophil gelatinase-associated lipocalin (NGAL) test for use on the Cobas c 501 and Cobas c 502 clinical analyzers, according to GenomeWeb.

NGAL is a diagnostic biomarker that alerts clinicians to acute kidney injury within a few hours. BioPorto's NGAL test has the European CE mark of approval.

The company is conducting research to generate data ahead of potential approval by the US Food and Drug Administration, potentially later this year.

Legal News Round-up

Dialysis companies have found themselves settling lawsuits recently. Fresenius Medical Care North America (FMCNA) disclosed breaches of protected electronic health information and settled with a federal agency, while American Renal Associates (ARA), without admitting wrongdoing, settled with shareholders.

In early February 2018, FMCNA, a major dialysis provider, settled with the Department of Health and Human Services Office of Civil Rights (OCR).

The settlement involved patient privacy breaches that occurred in 2012, including computers stolen during a break-in, a hard drive on a desktop taken out of service and removed from a facility without a report to the corporate risk manager, a laptop and passwords stolen from a car at an employee's home, a USB drive stolen from a facility parking lot, and computers stolen from a facility.

Besides paying $3.5 million to OCR, the company, whose parent company FMC is based in Bad Homburg, Germany, must implement more effective policies to protect patients through device and media controls, encryption, and secure facility access.

"The number of breaches, involving a variety of locations and vulnerabilities, highlights why there is no substitute for an enterprise-wide risk analysis for a covered entity," OCR Director Roger Severino said.

In the shareholder lawsuit, ARA settled to pay shareholders who alleged they lost money because the company failed to disclose a "scheme before the company went public in April 2016," the *Salem (MA)* News wrote. The stock price fell substantially when news of an investigation into ARA practices was reported.

ARA, based in Beverly, MA, which operates in 25 states through approximately 217 dialysis clinics, settled for $4 million to shareholders, but still faces a lawsuit from insurer United Healthcare.

ARA was alleged to have made commercial insurance plans attractive by agreeing to pay co-pays or deductible amounts, the *Salem News* noted. Premiums were to be paid out of funds for lower-income patients provided by the American Kidney Fund.

The insurer claims that ARA failed to tell patients that the coverage through the premium assistance program only covered dialysis and would not cover transplant care, for example. United Healthcare also said ARA's earmarked donations to the kidney fund to pay premiums violated anti-kickback laws, the *New York Times* reported in 2016.

Lupus Nephritis Educational Website Launched

Among the approximately 500,000 people in the United States affected by lupus nephritis each year, most are women. The disease appears in people with systemic lupus erythematosus (SLE).

Aurinia (Victoria, British Columbia) recently launched an educational campaign about lupus nephritis, called ALL IN, to increase support and awareness of the disease. The company's first offering is a website for patients and families, www.allinforlupusnephritis.com, which provides a community support page, information about lupus nephritis and its management, and other resources. To date, no therapy specifically for lupus nephritis has been approved by the US Food and Drug Administration (FDA).

Aurinia is in phase 3 clinical trials with an immunosuppressant therapy called Voclosporin, an investigational drug that is a novel calcineurin inhibitor. The trial includes clinical data for over 2400 patients, across indications including lupus nephritis, nephrotic syndrome, and dry eye syndrome.

The current standard of care is to use mycophenolate mofetil or low-dose intravenous cyclophosphamide plus glucocorticoids as the initial treatment for patients with class III–IV disease.

Voclosporin has the potential to improve near- and long-term outcomes in lupus nephritis when added to mycophenolate mofetil, the company notes on its website. The drug provides a latching section on its molecule that forms a complex with cyclophilin A that then binds to and inhibits calcineurin. The binding affinities of Voclosporin and cyclosporine A for cyclophilin are comparable; however, upon binding, the ethynyl side chain of Voclosporin induces structural changes in calcineurin that may result in increased immunosuppressive activity compared to cyclosporine A, Aurinia reports on its website.

New Technologies Detect Kidney Irregularities

Two companies are offering products that use artificial intelligence (AI) to help improve kidney conditions.

AI start-up Medial EarlySign (Kfar Malal, Israel) has shown how the combination of AI and electronic health record (EHR) data can facilitate early detection and treatment of kidney problems and can help slow or even help prevent progression to end stage renal disease. AI refers to the concept of machines being able to carry out tasks in a manner considered to be "smart, while Machine Learning is an application of AI based on the idea that we should give machines access to data and let them learn for themselves," notes Forbes magazine contributor Bernard Marr.

Medial EarlySign's machine learning–based model analyzes information available in EHRs to predict which patients may be at high risk of experiencing renal dysfunction in the coming year. The technology assesses a combination of laboratory test results, demographics, medications, diagnostic codes, and other factors to predict the risk of renal dysfunction within the next year.

By isolating less than 5% of the 400,000 patients with diabetes selected among the company's database of 15 million patients, the algorithm was able to identify 45% of patients who would progress to significant kidney damage within a year, prior to their becoming symptomatic. This represents 25% more patients than would have been identified by commonly used clinical tools and judgment, the company says.

The AI firm DeepMind (London, UK) has been expanding into healthcare. The Google-owned company's app, Streams, is being used in the Royal Free, a London teaching hospital. One of Streams' first uses is to rapidly alert clinicians to potential cases of acute kidney injury (AKI) in patients, reports ZDNet.The company noted that the Streams app is not strictly AI. "The more time we spent with the clinicians at the Royal Free, the more it became obvious that … their core challenge was in how you actually implement an algorithm to change the way care is delivered in practice," not necessarily the most perfected algorithm.

Streams allows AKI to be detected in several hours, rather than a day or two, ZDNet wrote. A low hemoglobin and elevated urea might point to blood loss, while an elevated white cell count might result from an infection.

DeepMind hopes that in the future the Streams app could be used to study the performance of clinical teams—recording how long it takes to respond to an AKI alert, for example—and patient outcomes related to certain clinical activities.