Genvoya® – New Drug Approval

- On November 5, 2015, the FDA announced the approval of Gilead’s Genvoya (elvitegravir/cobicistat/emtricitabine/tenofovir alafenamide [E/C/F/TAF]), as a complete regimen for the treatment of human immunodeficiency virus-1 (HIV-1) infection in adults and pediatric patients ≥ 12 years of age who have no antiretroviral treatment history, or to replace the current antiretroviral regimen in those who are virologically-suppressed (HIV-1 RNA levels < 50 copies/mL) on a stable antiretroviral regimen for at least 6 months with no history of treatment failure and no known substitutions associated with resistance to the individual components of Genvoya.

- The Centers for Disease Control and Prevention (CDC) estimates that 1.2 million patients ≥ 13 years of age are living with HIV infection, and more than another 150,000 patients in this age range have HIV but are unaware of their infection.

- Genvoya is a complete, four-drug combination regimen containing E/C/F/TAF, an HIV-1 integrase strand transfer inhibitor, a CYP3A inhibitor, and two HIV-1 nucleoside reverse transcriptase inhibitors, respectively.
  - TAF is a novel targeted prodrug of tenofovir, which has demonstrated high antiviral efficacy similar to Viread® (tenofovir disoproxil fumarate [TDF]).
  - TAF enters cells more efficiently than TDF and provides lower levels of drug in the bloodstream, but higher levels within the cells where HIV-1 replicates. This allows TAF to be given at a lower dose and reduces some side effects, such as renal toxicity and decreases in bone density, compared to TDF-based regimens.

- Genvoya’s approval was based on four clinical trials involving 3,171 patients. Depending on the trial, patients were randomized to either Genvoya or Stribild® (E/C/F/TDF), or switched from TDF-based regimens to Genvoya.
  - In these trials, Genvoya was statistically non-inferior to Stribild and the TDF-based comparators in reducing viral load.

- Genvoya carries a boxed warning for the risk of lactic acidosis/severe hepatomegaly with steatosis and post-treatment acute exacerbation of hepatitis B.

- Co-administration of Genvoya is contraindicated with drugs that are highly dependent on CYP3A for clearance and for which elevated plasma concentrations are associated with serious and/or life-threatening events; and drugs that strongly induce CYP3A, which may lead to lower exposure of one or more components and loss of efficacy of Genvoya and possible resistance.

- Other warnings and precautions of Genvoya include patients co-infected with HIV-1 and hepatitis B virus, avoid use with other antiretroviral products, risk of adverse reactions or loss of virologic response due to drug interactions, fat redistribution, immune reconstitution syndrome, new onset or worsening renal impairment, and bone loss and mineralization defects.

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• The most common adverse reaction (≥ 10%) with Genvoya use was nausea.

• The recommended oral dose of Genvoya is 1 tablet once daily with food.

  — Patients should be tested for hepatitis B infection prior to initiation of Genvoya.

• Gilead has a patient assistance program, U.S. Advancing Access®, to help patients who are uninsured, underinsured, or need financial assistance for their medications, including Genvoya.

• Gilead launched Genvoya immediately. Genvoya is available as a fixed-dose tablet, containing 150 mg/150 mg/200 mg/10 mg of E/C/F/TAF, respectively.