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Sarepta Therapeutics – “Fake” news provides an opportunity

Sarepta Therapeutics, a significant position in the Healthcare M&A certificate, announced that an adverse reaction report was “erroneously” submitted to the FDA’s adverse event reporting system (FAERs) regarding its ongoing study of its gene therapy on DMD (Duchenne Muscular Dystrophy).

According to this report, a patient enrolled in the study was hospitalized in February because he developed a case of rhabdomyolysis. The company stated that this report was not sent by the company or the study's principal investigator.

Rhabdomyolysis occurs when massive amounts of muscle fibers break down and release their myoglobin (a muscle protein) into the blood. This syndrome could lead to severe complications such as kidney failure. In DMD, the fragile membrane surrounding the muscle fibers makes them more vulnerable to degradation. Dehydration or increased activity could also trigger this condition. The boy was hospitalized for observation as he had dark urine and high levels of creatine kinase - two marks of Rhabdomyolysis, but no other symptoms. The boy was discharged the following day after test results returned to normal.

We believe that this event is not a significant concern for Sarepta since the patient could have received the placebo, and Rhabdomyolysis is a common risk associated with DMD. Indeed, Sarepta and its principal investor are blinded during the study. They don’t know if the patient was in the arm receiving the drug or in the arm receiving the placebo. Furthermore, genes therapies can cause harsh immune reactions, especially at higher doses, something that we saw notably with Pfizer.

The Drug Safety Monitoring Committee, after reviewing this issue (this committee is unblinded), suggested that the study should continue.

DMD gene therapy is a three-horse race right now, with Pfizer, Sarepta, and Solid Biosciences all in clinical studies. In June, Pfizer reported that two of the six patients had significant side effects making Sarepta’ position in this area even stronger. Besides, Sarepta’s compound showed better results in its initial study than Pfizer.

Pfizer and Solid’s gene therapies use a recombinant AAV9 capsid to deliver a shortened version of human dystrophin (mini-dystrophin) to treat Duchenne muscular dystrophy (DMD). Sarepta uses AAVrh74 vector. This vector has a robust affinity for muscle cells, making it an ideal choice for delivering the micro-dystrophin transgene. AAVrh74 also has a relatively low level of pre-existing immunity.

As we said in the Healthcare M&A’s June factsheet, Sarepta has an edge in timing and safety issues, but Pfizer has an advantage in manufacturing (2,000-liter bioreactors) which is a big plus for the FDA. With all patients of the study enrolled (the last one of the 24 got infused in June 2019) and the study going on for almost one year (48 weeks), we believe that this kind of “fake” news is likely to resurface as there are many shorts (18% of Sarepta’s floating is short) in the name.

We keep on thinking that as the time of the study advance, so are the chances of the company to be on the target list from the likes of Biogen, Sanofi, etc.

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Duchenne Muscular Dystrophy

Duchenne is caused by a genetic mutation that prevents the body from producing dystrophin, a protein that muscles need to work properly. Without dystrophin, muscle cells become damaged and weaken. It is a rare and 100% fatal disease. It affects primarily males. It occurs in 1 in 3,500 to 5,000 males born worldwide. The average lifespan is mid-to-late 20s and diagnosed between ages 4-5. Sarepta already has a treatment in the market, Exondys 51 (RNAi), the first-ever FDA-approved therapy for some form of the disease.