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October 22, 2020

Nathan B. Fountain, MD Chairperson Peripheral and Central Nervous System Drugs Advisory Committee Food and Drug Administration 10903 New Hampshire Avenue Silver Spring, Maryland 20993

Yinghua S. Wang, PharmD, MPH Office of Executive Programs Center for Drug Evaluation and Research Food and Drug Administration 10903 New Hampshire Avenue Silver Spring, Maryland 20993

Re: Peripheral and Central Nervous System Drugs Advisory Committee; Notice of Meeting; Establishment of a Public Docket; Request for Comments - Biologics License Application (BLA) 761178 [FDA-2018 N-0410]

Dear Dr. Fountain and Dr. Wang,

The American Academy of Neurology (AAN) is the world's largest neurology specialty society representing more than 36,000 neurologists and clinical neuroscience professionals. The AAN is dedicated to promoting the highest quality patient-centered neurologic care. A neurologist is a physician with specialized training in diagnosing, treating, and managing disorders of the brain and nervous system. These disorders affect one in six people and include conditions such as multiple sclerosis (MS), Alzheimer's disease, Parkinson's disease, stroke, migraine, epilepsy, traumatic brain injury, ALS, and spinal muscular atrophy.

On November 6, 2020, the Food and Drug Administration's (FDA) Peripheral and Central Nervous System Drugs Advisory Committee will discuss biologics license application (BLA) 761178, for aducanumab solution for intravenous infusion, submitted by Biogen Inc., for the treatment of Alzheimer's disease. The AAN, as the world's largest neurology specialty society, is especially interested in the FDA's deliberations regarding this application. The AAN notes that if approved, aducanumab would be the first monoclonal anti-body therapy approved by the FDA for the treatment of Alzheimer's disease. While the AAN does not take a position on whether the evidence is sufficient to warrant approval of this drug, the AAN notes that access to an amyloid-related therapy would revolutionize the treatment of Alzheimer's disease. Given the significance of this potential approval and its potential impacts on neurologic care, patient outcomes, and the financial stability of neurology practices, the AAN offers the following comments and key considerations to the Advisory Committee.

The AAN is specifically concerned with the labeling for aducanumab if approved. Alzheimer's disease currently affects more than 5 million people in the US. Due to the likely high demand for this drug if approved, the AAN believes that a broad label has the potential to overwhelm the healthcare system with treated patients who may or may not benefit and who might be at higher risk for adverse events, given age and comorbidities. The AAN believes that proof of amyloid biomarker abnormalities should be required for treatment, given the therapy's mechanism of action. Absent this requirement, the AAN is concerned that this drug may be administered to patients for whom there is currently no evidence of clinical benefit. The AAN asks that the FDA carefully consider which patients would benefit from the therapy based on available evidence and that the label be targeted accordingly. Additionally, given the risk of adverse events, robust provider education will be necessary to protect patient safety. Education and guidance will be needed for administering providers, as well as radiologists, regarding monitoring for ARIA-related complications and dosing adjustments.

Although the AAN believes that identification of amyloid biomarker abnormalities should be required prior to administration of this drug, we are concerned as practitioners that there are substantial structural and policy constraints which could limit access to necessary testing and exceed the system's capacity to meet the demand. The AAN notes that identification of amyloid positivity requires scans that are not currently covered by payors. Beta amyloid PET scans are very expensive exams, typically costing between \$5,000-7,000 per study. The need for a PET scan prior to administration and current lack of coverage will present providers and patients with substantial barriers to access if aducanumab is approved. The AAN sees the cost and lack of coverage for necessary scans as a significant bottleneck issue that could result in substantial disparities in access to care. This is especially true if there are conflicts between the drug's labeling and payors' coverage for the drug. If the FDA approves a broad label, without a requirement of amyloid positivity, but payors require proof of amyloid positivity prior to authorizing administration of aducanumab, then there is likely to be a substantial increase in costs and administrative complexity associated with administering the drug and post-administration monitoring. The AAN has substantial concerns associated with an increase in prior authorization requirements that may result from an overly broad label and the accompanying administrative burden.

The AAN asks that the agency also take into consideration the potential cost of this drug. The AAN encourages a proactive discussion with the Centers for Medicare and Medicaid Services to consider novel milestone-based reimbursement schedules. There are open questions regarding the appropriate length of treatment for this therapy. The AAN questions whether there will be guidance in the data submitted to indicate treatment duration, or whether the drug will be indicated for continued use as the disease progresses into later stages. Given the questions surrounding appropriate length of treatment, the AAN envisions there being a significant potential for outcomes-based payment arrangements. Additionally, aducanumab is a novel drug with a very large potential market, with the majority of potential patients likely to be on a limited or fixed income. An extremely high price and resultant high cost sharing could be prohibitive and lead to disparities in access.

Thank you for the opportunity to provide comments on this application. Please contact Matt Kerschner, Government Relations Manager, at mkerschner@aan.com with any questions or requests for additional information.

Sincerely,

James C. Stevens, MD, FAAN

President, American Academy of Neurology

James C. Stevenz MD.