SOCIAL INTELLIGENCE IN PHARMA

A Comprehensive Examination of the Alzheimer's Online Eco-system

Breaking Down the Online Commentary Related to the FDA's Approval of ADUHELM™ (aducanumab)

Ipsos Healthcare Advisory | Ipsos Healthcare Social Center of Excellence

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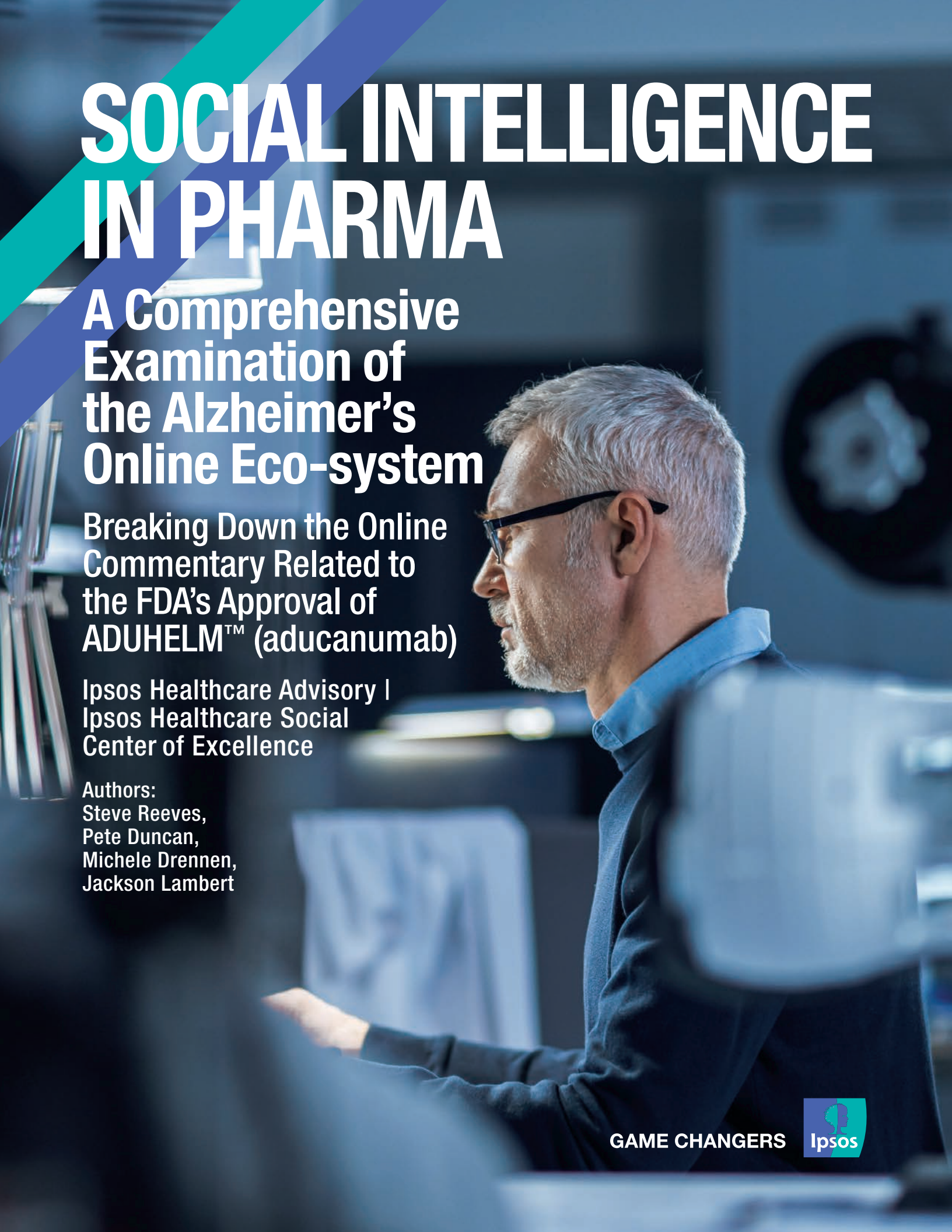


GAME CHANGERS

Ipsos

About This White Paper

With the recent approval of ADUHELM™ has come an influx of online commentary that extends across the wider Alzheimer's digital ecosystem. Ipsos Healthcare, in partnership with our Social Intelligence Center of Excellence and therapeutic area experts, developed a three-part series that examines the cumulative effect of online views and voices that have arisen as a result of this market event. This paper highlights the overall impact of the ADUHELM news on the wider AD online ecosystem.

Setting the Stage

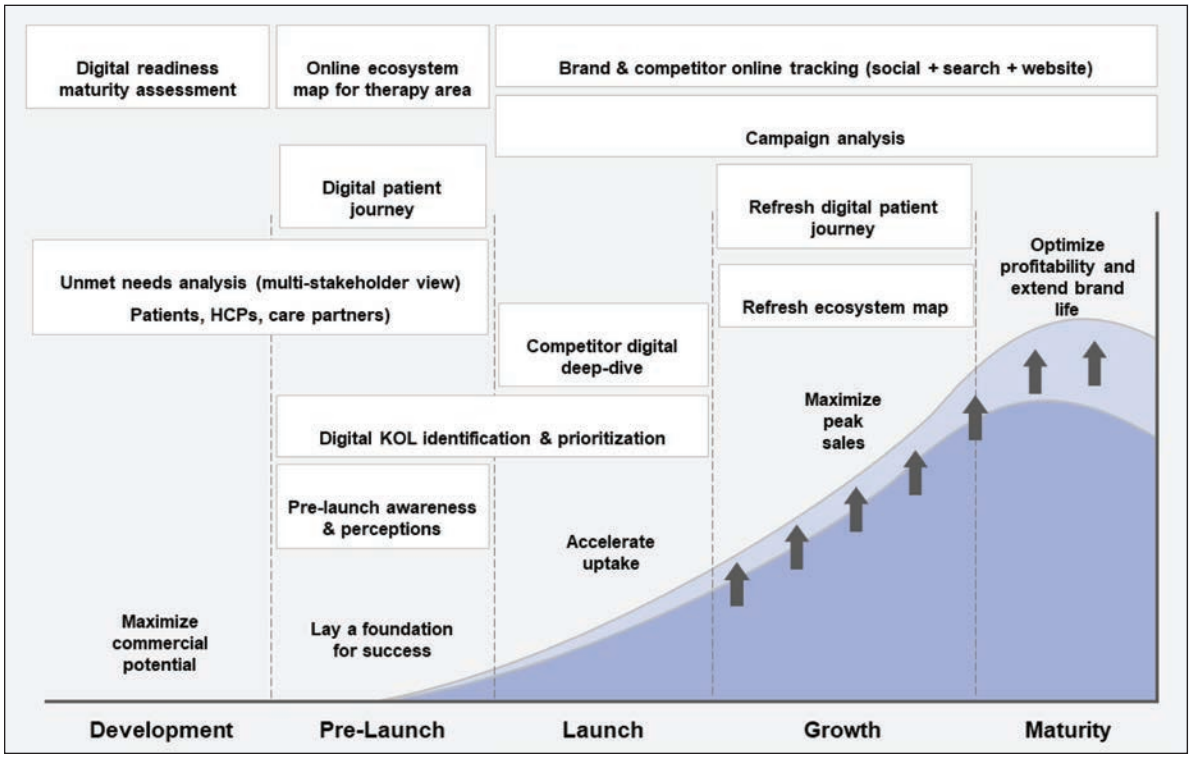
In the past several years, a sizable increase has been notable in the use of social data and online channels for research by the pharmaceutical, biotechnology and MedTech industries. At Ipsos Healthcare, we call this Social Intelligence Analytics (SIA), which is a key component of a larger set of "digital readiness" solutions.

"Digital readiness"* is defined as *"the preparation and planning a therapy area franchise or brand includes in their launch planning and commercialization strategies to reach patients, caregivers, physicians and other healthcare stakeholders online more effectively."

Social intelligence Analytics (SIA) within healthcare, is wholly about understanding the unprompted views, mindsets, decision drivers, emotional characteristics and digital behaviors of healthcare stakeholders. It's also about understanding the dynamics of the wider therapeutic category online, how healthcare information is disseminated, how it impacts decisions, and—most importantly—what organizations can do to harness this massive amount of information sometimes referred to as the world's largest focus group.

As depicted in the following chart, the utilization of social data and social intelligence frameworks is best done in a systematic, strategic fashion, in alignment with wider commercialization and launch-planning milestones.

Key Tenets of an Impactful Social Intelligence Program



Digital readiness, for which social intelligence is a key part, is the preparation and planning a therapy area franchise or brand includes in their launch-planning and commercialization strategies to reach patients, caregivers, physicians and other healthcare stakeholders online more effectively."

Steve Reeves, Vice President, Healthcare Digital Strategy & Social CoE Head—North America

Breaking Down the ADUHELM™ Launch & Mapping the Online Ecosystem

To illustrate how social data can quickly surface perspectives from a variety of healthcare stakeholders in near-real time, Ipsos Healthcare Advisory, in partnership with our Healthcare Social Intelligence Center of Excellence and Alzheimer's therapy area experts, sought to break down the online commentary regarding the recent ADUHELM approval, which we will continue to track on an ongoing basis.

"Alzheimer's disease impacts not only the patient, but all those who love and care for that individual as well. As patients lose their sense of self, caregivers lose their loved ones a little bit at a time. It's painful—and cruel—as they know it's going to get worse. For years, these multitudes have been holding on to the hope of a disease-modifying intervention. While previous treatments focused on the symptoms, the initial approval of ADUHELM™ represented the breakthrough many had been hoping and praying for."

Michele Drennen, Qualitative Strategist, Ipsos Healthcare—North America

In a landmark decision on June 7, 2021, the FDA approved the use of ADUHELM (aducanumab) for the treatment of early-onset Alzheimer's. There have been a variety of differing opinions and observations on the decision, the potential implications for future early stage Alzheimer's therapies, and the nature of the relationship that exists between pharma, the FDA and key healthcare stakeholders, like patients and patient advocacy groups.

Many of these observations revolve around the inner machinations of the drug approval. Patients and caregivers are struggling to understand "accelerated approval pathways" and "surrogate endpoints," along with what the label means for themselves or a loved one, or what cost they put on potential benefits. As a result, we're seeing that some hope may have been dampened, but not extinguished, from the early-stage online conversation.

Methodology Detail

The guiding questions behind the analysis were the following:

What is the perception of ADUHELM™ online across differing audiences, whether they be patients, physicians, advocacy groups or other HCPs? Further, what is the material impact of the ADUHELM news on the wider Alzheimer's therapeutic category online?

Methodologically, we began by utilizing our social data-gathering platform Synthesio (recently named Leader in Forrester Wave AI-Enabled Consumer Intelligence Platforms study) to harness three years of historical data on aducanumab and ADUHELM throughout a wide variety of digital channels, including Twitter, YouTube, Reddit, forums, blogs and online news sources. Additionally, we explored Alzheimer's advocacy group pages and public Alzheimer's and dementia-related forums.

In addition to a three-year historical pull of aducanumab/ADUHELM data, we also developed a broader query to harvest general Alzheimer's therapeutic category data, which were used to size the wider Alzheimer's landscape online and assess the scale and impact of the ADUHELM news on the wider community.

Lastly, we conducted a time-series analysis of highest concentration of online commentary related to ADUHELM, which occurred three weeks prior to approval, and three weeks following approval. Though the story continues to shift as time goes on, this analysis provides a solid baseline of the key trends, perceptions and prominent voices connected to the approval.

Moving from static information to insights and finally to intelligence, we utilized a proprietary set of taxonomies (think of them as lenses) that were applied to the data to isolate different stakeholder groups for further study (physicians, industry analysts, patients, patient advocacy groups and caregivers).

The total data corpus included over 185,489 mentions of aducanumab/ADUHELM across a variety of social and digital channels, and over 11 million mentions of Alzheimer's (both in clinical and lay terms) to size the overall AD therapeutic category online.

Ipsos gathered data globally across more than 25 markets, including the U.S., Germany, Italy, Canada, Spain, France, Australia, India, China, Brazil, Japan and others.

Time frame	Aducanumab Volume	Alzheimer's Volume
Last three years	N = 185,489 online mentions	N = 11,316,449 online mentions
Three weeks pre approval	N = 5,267 online mentions	N = 309,812 online mentions
Three weeks post approval	N = 76,056 online mentions	N = 464,483 online mentions

Findings:

The Global Impact

It is no surprise, given the FDA approval, that the vast majority of conversation linked to ADUHELM™ has taken place in the U.S. Over 30% of total ADUHELM conversations, though, have occurred outside the U.S., making the global impact clear. Much of this remaining conversation occurs in countries where ADUHELM is currently under review. Specifically, Canada, Japan, Australia, Brazil and European Union countries made up nearly 15% of the total ADUHELM conversation. This geographic diversity is reflected by the global variety in top influential advocacy groups and HCPs online. Six of the top seventeen most influential HCPs and four of the top ten most influential advocacy groups are located outside the U.S.

Global View—ADUHELM News

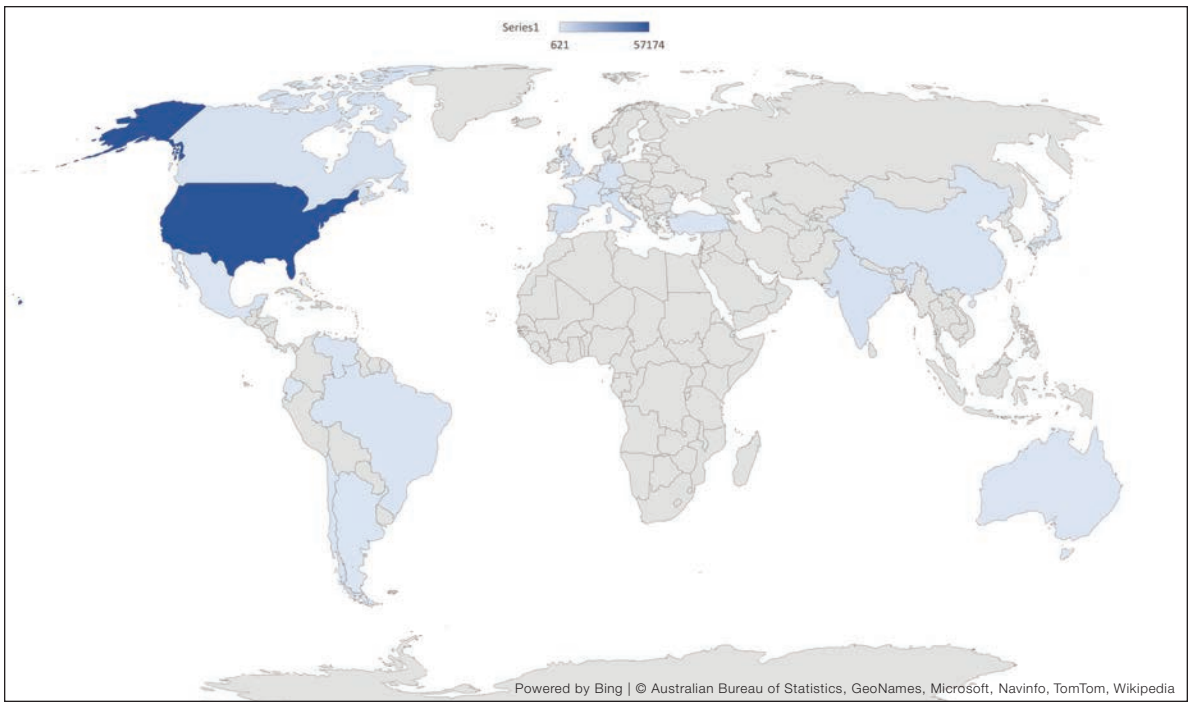


Exhibit A: Global Perspective of ADUHELM News—three weeks post approval

Despite the ADUHELM™ approval being limited to the U.S. only, the global ripples are clearly visible, with over 30% of the data coming from other countries. This speaks to the cumulative impact the announcement has had on the Alzheimer's community at large, but also to the fact that online discussion does not respect geographical borders. Patients, caregivers and HCPs are increasingly sharing their experiences and views with others worldwide, regardless of individual market contexts."

Pete Duncan, Associate Director—Global Modelling Unit, Social CoE Head ex-U.S.A.

A Long Time in the Making

As can be seen in Exhibit B, the ADUHELM™/aducanumab story began to gain traction between March and October 2019 (the timespan of when the Phase 3 trials EMERGE and ENGAGE ended because of futility; then results in EMERGE were found to actually be statistically significant). From the end of 2019 to mid-2020, coverage for aducanumab online was subdued, it picked back up briefly when the FDA accepted the BLA (Biologic License Application) and again later, when the FDA panel declined to endorse aducanumab. Finally, in May 2021, the FDA's approval of ADUHELM led to a sizable shift in the wider Alzheimer's online landscape due to the differing opinions on the ruling.

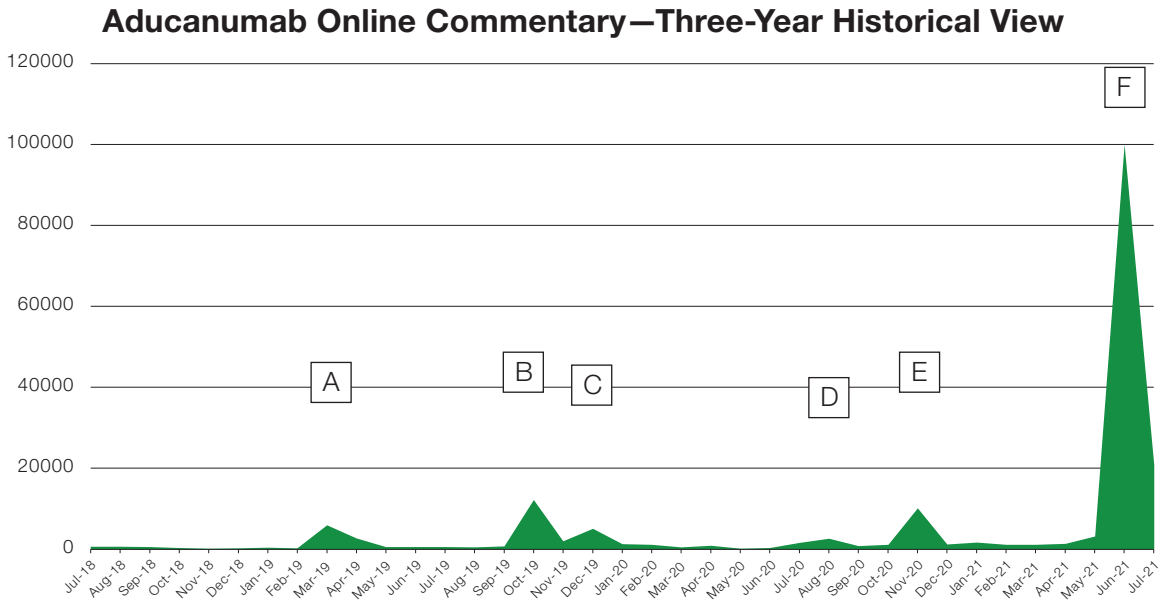


Exhibit B: Three-year historical analysis of key drivers of aducanumab/ADUHELM discussion & commentary online

A. Phase 3 trials end
B. Phase 3 trial EMERGE found to be statistically significant
C. Clinical trials on AD Conference
D. FDA accepted BLA (Biologics License Application)
E. FDA panel declines endorsement
F. FDA approval of ADUHELM

Not surprisingly, aducanumab/ADUHELM™ saw a significant increase in coverage and commentary, but what was more interesting was examining the net impact of this market event on the wider Alzheimer's online landscape and ecosystem. The FDA's approval of ADUHELM drove a 147% increase in activity amongst the wider AD community online when examining the three weeks prior to approval vs. the three weeks post-approval (see Exhibit C).

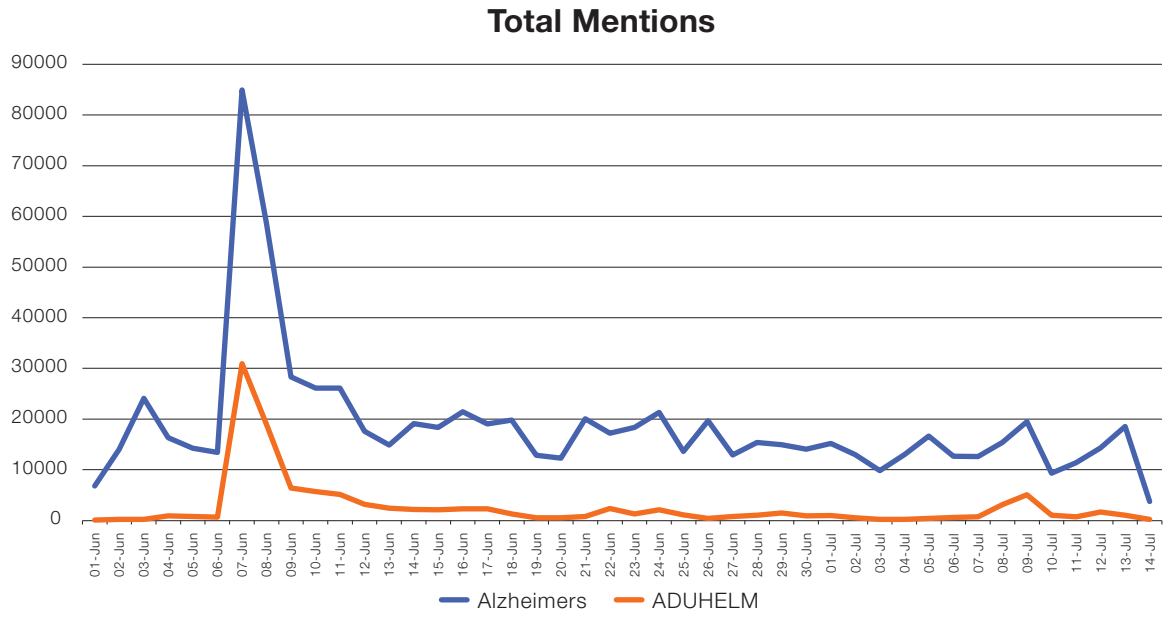


Exhibit C: Comparative view of larger Alzheimer's category discussion vs. ADUHELM

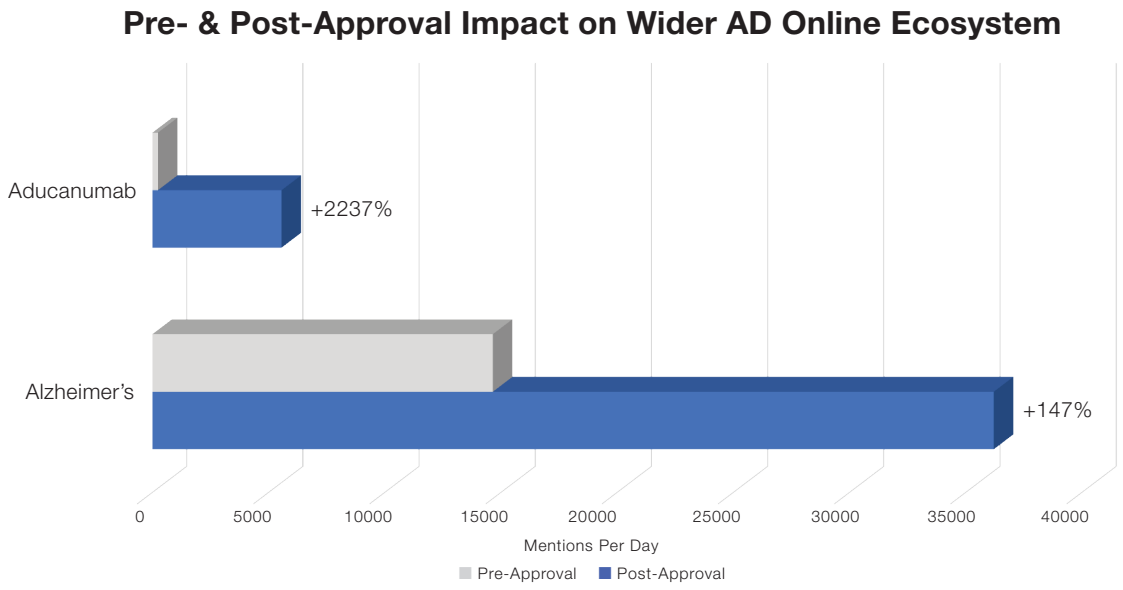


Exhibit D: Comparative view of aducanumab/ADUHELM three weeks pre-approval vs. three weeks post-approval and general Alzheimer's online discussion three weeks pre-approval vs. three weeks post-approval

The Role of Patient Advocacy Groups

The FDA's approval of ADUHELM™ spurred many conversations among advocacy groups. As expected, key advocacy groups like the Alzheimer's Association and Alzheimer's Drug Discovery Foundation have a very large influence online. Advocacy groups outside of the realm of Alzheimer's also got involved in the conversation, post-approval though. Most prominently, ALS Advocacy was the second largest voice about ADUHELM of the advocacy groups profiled, with speculation on what the news could mean for the future of ALS treatment.

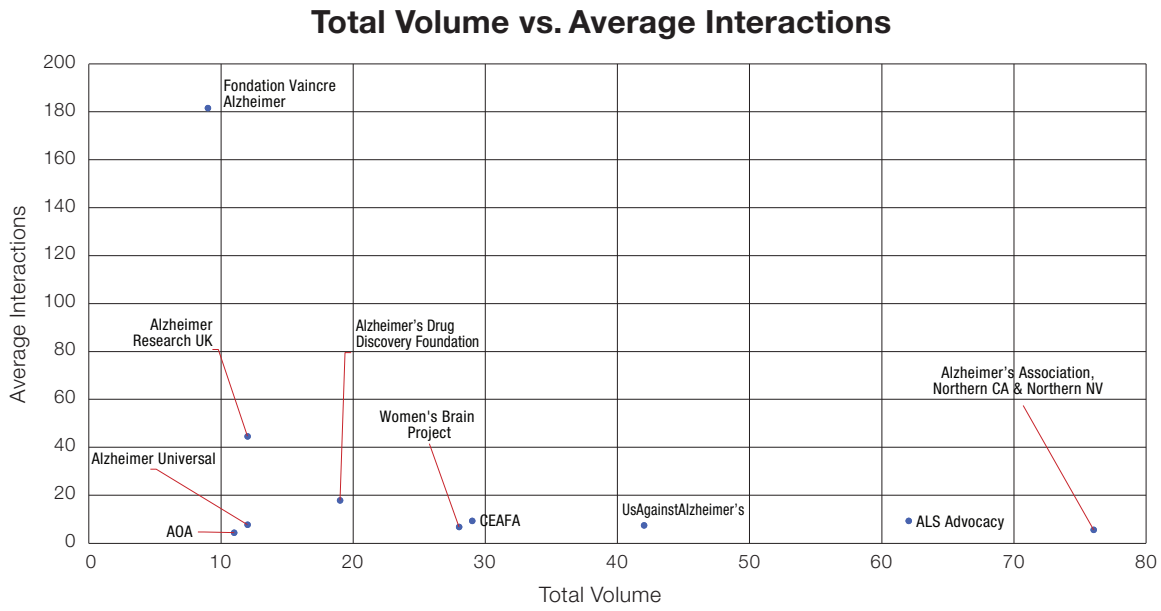


Exhibit E: Prominent Patient Advocacy Groups & Organizations discussing and sharing information on ADUHELM

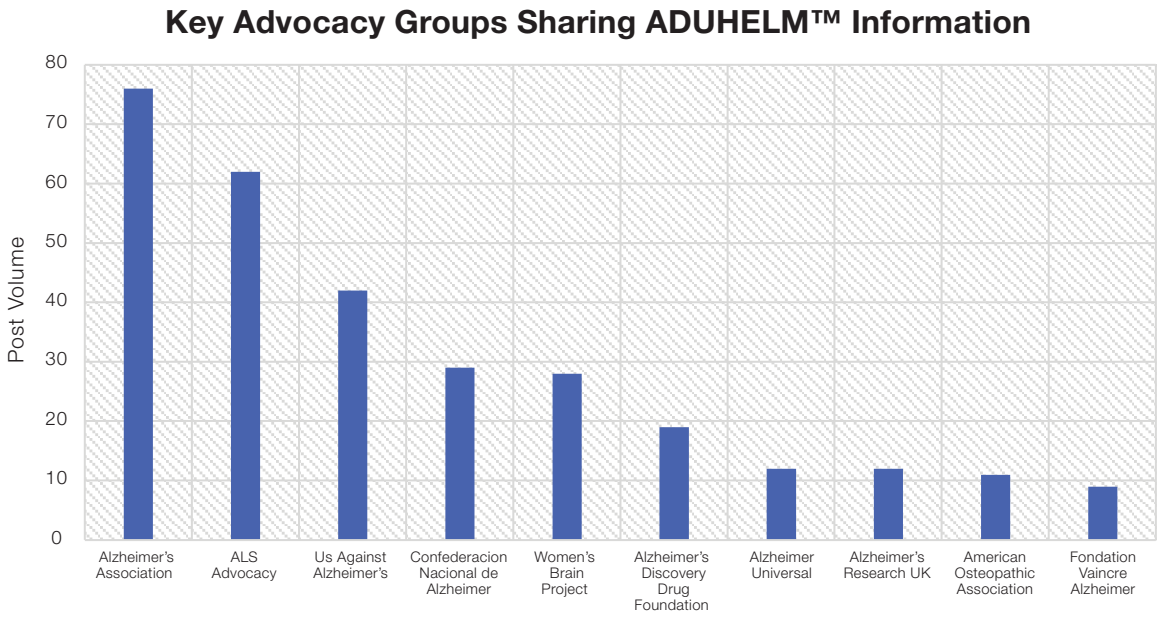


Exhibit F: Prominent Patient Advocacy Groups & Organizations by ADUHELM post volume

Implications for Competitive Pipeline Assets

What's more, the approval not only impacted the BIIB stock and online mention count positively, it also correlated with an uptick in commentary of other clinical trial assets, most notably Lilly's Phase 2 asset donanemab for early Alzheimer's disease.

Lilly's donanemab has been in the news in its own right, most recently showcasing analyses from its Phase 2 TRAILBLAZER-ALZ study. A July 29, 2021 press release touted, "Lilly releases donanemab data that demonstrated relationship between reduction of amyloid plaque and slowing of cognitive decline."

Not surprisingly, assets further out—lecanemab and gantenerumab—are not as integral to current conversations.

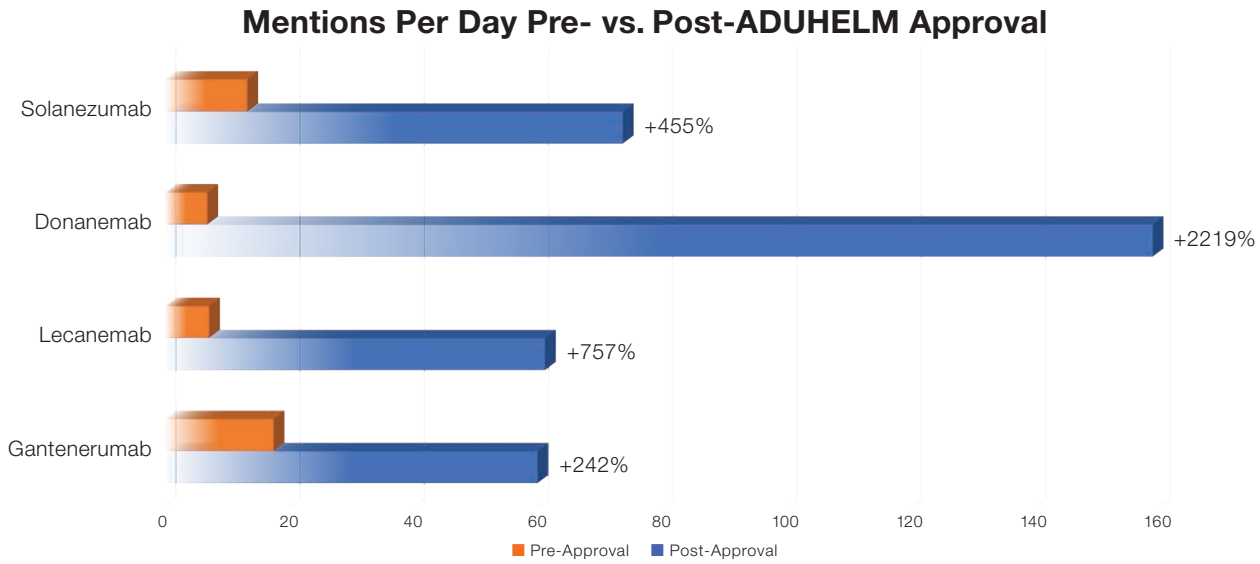


Exhibit G: Competitor mentions three weeks pre-approval vs. three weeks post-approval of ADUHELM

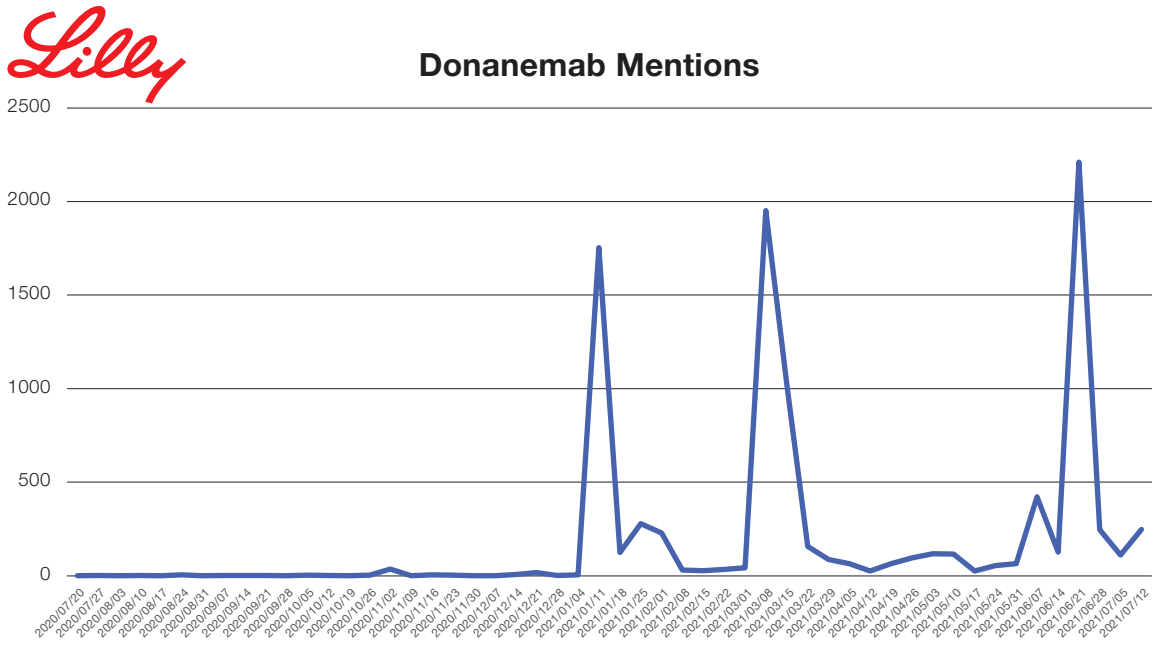


Exhibit H: Donanemab mentions over last 12-month time period (July 2020–July 2021)

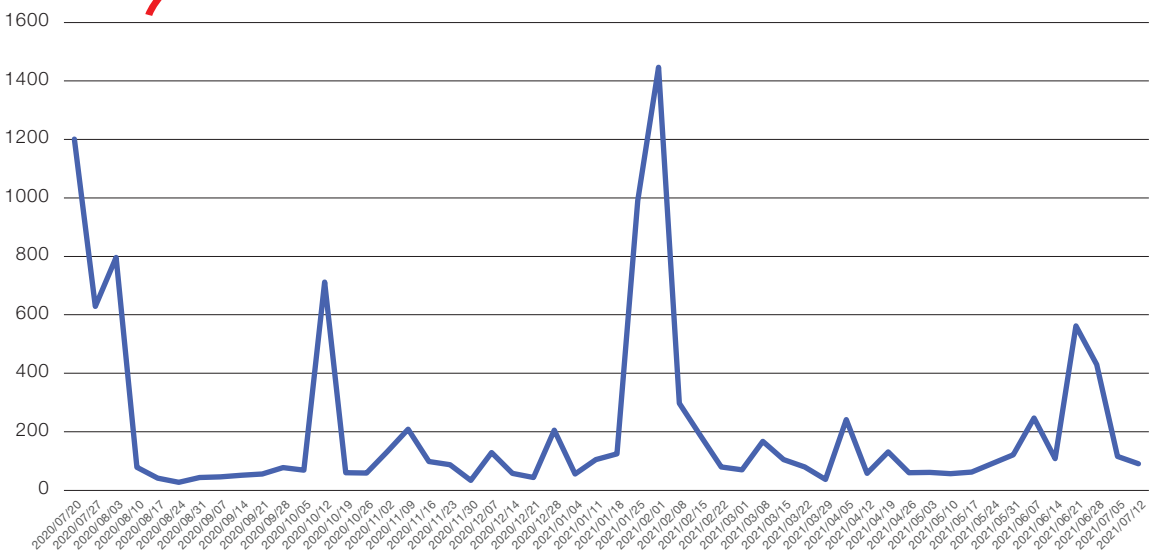


Exhibit I: Solanezumab mentions over last 12-month time period (July 2020–July 2021)

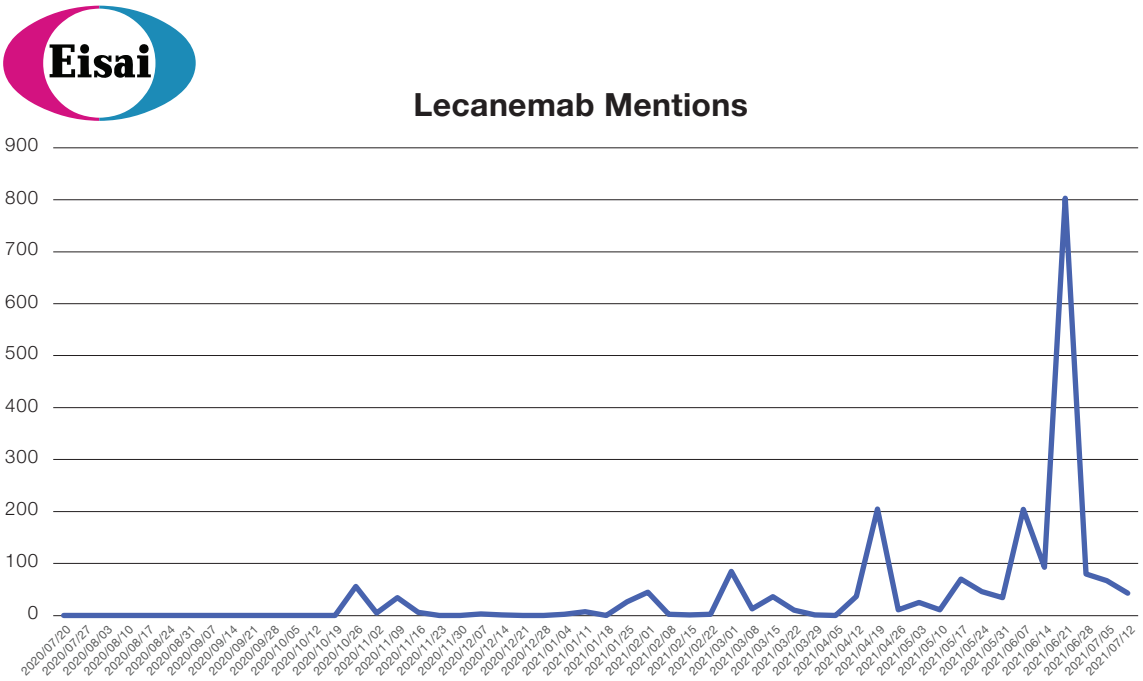


Exhibit J: Lecanemab mentions over last 12-month time period (July 2020–July 2021)

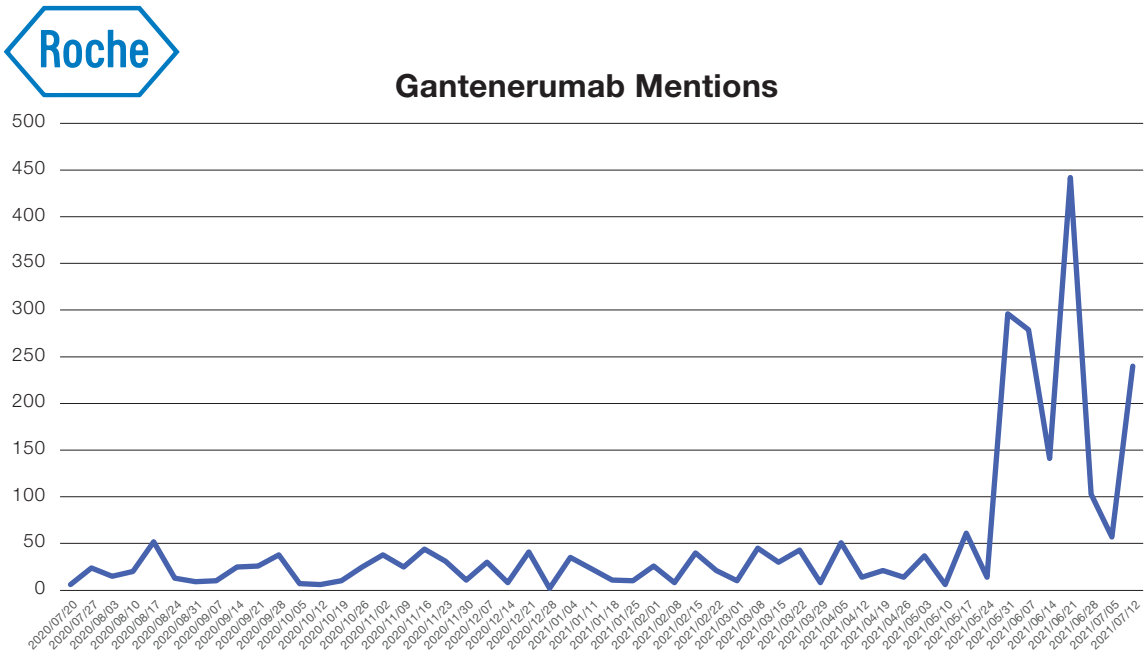


Exhibit K: Gantenerumab mentions over last 12-month time period (July 2020–July 2021)

Concluding Thoughts

The wider Alzheimer's online ecosystem is in flux right now, and with patients beginning ADUHELM™ treatments and emerging therapies potentially coming to market, we expect further changes in the AD online ecosystem. What was once a fairly normalized therapeutic area online, Alzheimer's commentary is heating up and information is beginning to be disseminated rapidly. For key players in the AD space, now is the time to be more active and prevalent online.

If interested in receiving customized social intelligence analysis, please contact Steve Reeves at steve.reeves@ipsos.com.

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