Day One Biopharmaceuticals

Targeted therapies for people of all ages

January 2025

43rd Annual J.P. Morgan Healthcare Conference

Forward looking statements

This presentation and the accompanying oral commentary contain forward-looking statements that are based on our management's beliefs and assumptions and on information currently available to our management. Forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "could," "expect," "plan," anticipate," "believe," "estimate," "predict," "intend," "potential," "would," "continue," "ongoing" or the negative of these terms or other comparable terminology. Forward-looking statements include all statements other than statements of historical fact contained in this presentation, including information concerning our future financial performance, including the sufficiency of our cash, cash equivalents and short-term investments to fund our operations, business plans and objectives, timing and success of our commercialization and marketing efforts, timing and success of our planned nonclinical and clinical development activities, the results of any of our strategic collaborations, including the potential achievement of milestones and provision of royalty payments thereunder, efficacy and safety profiles of our products and product candidates, the ability of OJEMDA™ (tovorafenib) to treat pediatric low-grade glioma (pLGG) or related indications, the potential therapeutic benefits and economic value of our products and product candidates, potential growth opportunities, competitive position, industry environment and potential market opportunities, our ability to protect intellectual property and the impact of global business or macroeconomic conditions, including as a result of inflation, changing interest rates, cybersecurity incidents, potential instability in the global banking system, changes in the U.S. presidential administration, uncertainty with respect to the federal debt ceiling and budget and potential government shutdowns related thereto and global regional conflicts, on our business and operations.

Forward-looking statements are subject to known and unknown risks, uncertainties, assumptions and other factors. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. These factors, together with those that are described under the heading "Risk Factors" contained in our most recent Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (SEC) and other documents we file from time to time with the SEC, may cause our actual results, performance or achievements to differ materially and adversely from those anticipated or implied by our forward-looking statements.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this presentation, and although we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted a thorough inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

This presentation also contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

Inspired by the urgent needs of children, Day One creatively and intentionally develops new medicines for people of all ages with life-threatening diseases

Bringing life-changing medicines to patients sooner

Who we are

- Commercial-stage biopharmaceutical company
- Our goal is to develop and provide access to targeted new medicines to patients of all ages as rapidly as possible
- Focused on advancing first- or best-in-class medicines for childhood and adult diseases

2018
FOUNDED

2021
IPO

2024
OJEMDA™ APPROVAL

Nasdaq: DAWN

OJEMDA received approval in April 2024 and is indicated for the treatment of pediatric patients 6 months of age and older with relapsed or refractory pediatric low-grade glioma harboring a BRAF fusion or rearrangement, or BRAF V600 mutation.

Compelling near-term opportunities to help patients are the foundation for long-term growth and sustainability

Proven Track Record

Intentional in our approach

- Expertise developing and commercializing products
- Demonstrated ability to find and acquire first- or best-in-class medicines

Pillars to Support Growth

2024 accomplishments

- ✓ Launched OJEMDA in the U.S., delivering growing revenues
- ✓ Ex-U.S. commercial partnership with Ipsen for OJEMDA
- ✓ Acquisition of DAY301 (PTK7-targeted ADC) meaningfully expands our pipeline
- ✓ Strong balance sheet with ~$532M cash[1] as of December 31, 2024 (no debt)

Day One's Future Potential

Value creation

- Continued revenue growth from OJEMDA globally
- Indication expansion in front-line pLGG with FIREFLY-2
- Generate clinical POC data in DAY301 program
- Fund pipeline expansion
- Focused capital allocation, leveraging our efficient operating model to maintain strong financial position

[1] As used herein the term, "Cash" means our cash, cash equivalents and short-term investments (unaudited) as of December 31, 2024. Cash, cash equivalents and short-term investments as of December 31, 2024 were $531.7 million (unaudited). pLGG, pediatric low-grade glioma; POC, proof of concept; ADC, antibody-drug conjugate; PTK7, protein tyrosine kinase 7.

Day One BIOPHARMACEUTICALS

Our priorities for 2025 and beyond

Continue to drive revenue growth of OJEMDA in relapsed or refractory BRAF-altered pLGG

Invest thoughtfully in pipeline development and growth opportunities to drive future value

Maintain strong capital position, preserving independence from capital markets

OJEMDA

Relapsed or refractory

BRAF-altered pLGG

ojemda™
(tovorafenib)
for oral suspension

Nora
Living with pLGG

Pediatric low-grade glioma: The most common type of brain tumor in children

A serious and life-threatening disease

- For the majority of pLGG patients in the relapsed setting, there is no standard of care, and until recently, no approved therapies
- Up to 75% of pLGGs have a BRAF alteration*, of those ~80% are BRAF fusions and ~20% are BRAF V600 mutations[2-6]
- Despite surgery playing a significant role in treatment, the vast majority of patients still require systemic therapy[7,8]
- Due to high rate of disease recurrence, most patients will undergo multiple lines of systemic therapy over the course of their disease

pLGGs are chronic and relentless, with patients suffering profound tumor and treatment-associated morbidity that can impact their life trajectory over the long term[1]

*Incidence of BRAF alterations varies across pLGG subtypes. [1] Sievert AJ, Fisher MJ. Pediatric low-grade gliomas. *J Child Neurol*. 2009;24(11):1397-1408. doi:10.1177/0883073809342005. [2] Penman CL et al. *Front Oncol*. 2015;5:54. [3] Cohen AR., *N Engl J Med*. 2020;386(20):1922-1931. [4] Lassaletta A, et al. *J Clin Oncol*. 2017;35(25):2934-2941. [5] Faulkner C, et al. J Neuropathol Exp Neurol. 2015;74(9):867-872. [6] Packer RJ, et al. Neuro Oncol. 2017;19(6):750-761. [7] Ostrum QT et al., Neuro Oncol. 2015; 16(Suppl 10):x1-x36; [8] De Blank P. et al., Curr Opin Pediatr. 2019 Feb; 31(1):21-27.

Day One BIOPHARMACEUTICALS

Nora’s journey living with pLGG

Nora

Diagnosed with pLGG at age 7

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OJEMDA is Day One's Foundation

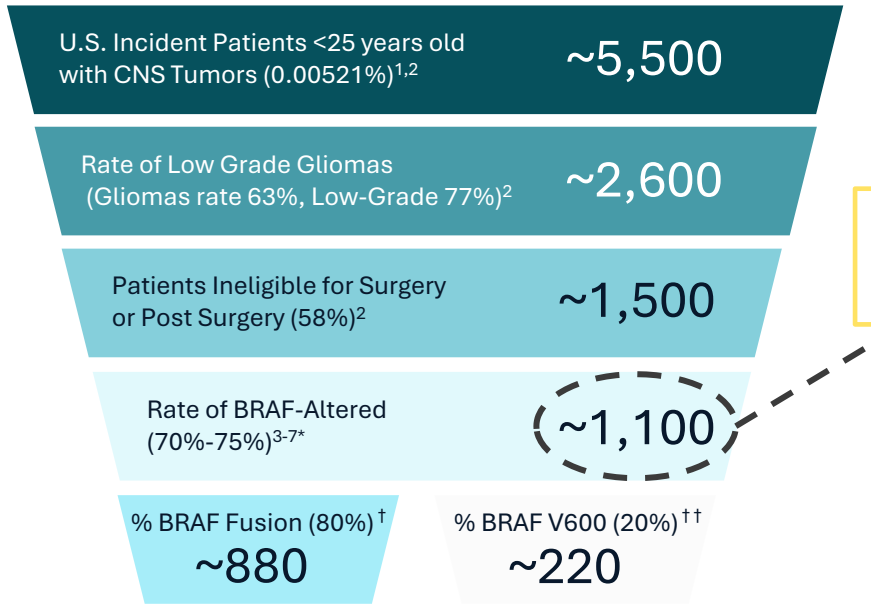
Our goal is to enable children with pLGG to live as normal of a childhood as possible, without interruptions

Key factors expected to drive OJEMDA's commercial opportunity

- Profile aligned with prescriber and patient needs
- Commercial execution driving awareness to increase breadth and depth of prescribers
- Significant growth opportunity as we strengthen market position as the standard of care in 2nd line
- Broad payer coverage established

Addressable U.S. opportunity of OJEMDA estimated to be ~2,000-3,000 patients

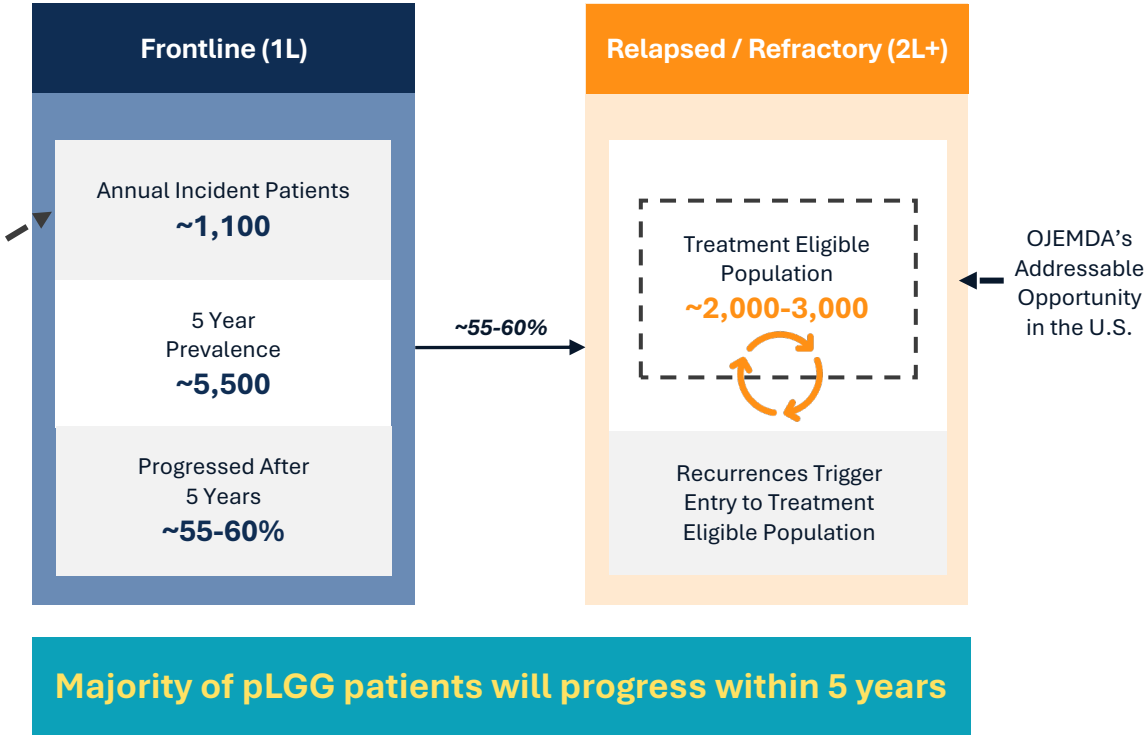
Incident Therapeutic Build for New pLGG Patients to be Treated in Frontline Setting



1L BRAF-Altered pLGG Patients Eligible for Systemic Therapy

Illustrative pLGG Patient Flow§

Prevalence of Systemically-Treated Patients Under 25 Years ~~26,000~~



Majority of pLGG patients will progress within 5 years

[1] US Census. [2] CBTRUS, Qaddoumi et al 2009, Schreck et al 2019, ClearView Analysis. [3] Penman CL et al. Front Oncol. 2015;5:54. [4] Cohen AR., N Engl J Med. 2020;386(20):1922-1931. [5] Lassaletta A, et al. J Clin Oncol. 2017;35(25):2934-2941. [6] Faulkner C, et al. J Neuropathol Exp Neurol. 2015;74(9):867-872. [7] Packer RJ, et al. Neuro Oncol. 2017;19(6):750-761. * Incidence of BRAF alterations varies across pLGG subtypes. † Predominantly seen in pilocytic astrocytomas. †† May vary across pLGG subtypes. BRAF, V-Raf murine sarcoma viral oncogene homolog B; MAPK, mitogen-activated protein kinase; pLGG, pediatric low-grade glioma. § Estimated annual incidence, estimated prevalence, estimated progression rates, and estimated recurrent/progressive total addressable opportunity are Day One calculations based on publicly available data. The estimated recurrent/progressive total addressable opportunity is based on progression free survival curves modeled from published literature and internal market research conducted by EpidStrategies, A Division of ToxStrategies, Inc. on behalf of Day One.

OJEMDA launch update by the numbers

$57.2M

2024 OJEMDA Net Product Revenues[1] (Unaudited)

$29.0M

Q4 2024 OJEMDA Net Product Revenues[1] (Unaudited)

~44%

Quarter Over Quarter Growth in OJEMDA Net Product Revenues

[1] Estimated Q4 and FY 2024 net revenues are unaudited, preliminary and based on management's estimate as of the date of this presentation and are subject to completion of the Company's financial closing procedures. OJEMDA received approval in April 2024 and is indicated for the treatment of pediatric patients 6 months of age and older with relapsed or refractory pediatric low-grade glioma harboring a BRAF fusion or rearrangement, or BRAF V600 mutation. As used herein the term, "quarter over quarter" means Q3 2024 v. Q4 2024.

OJEMDA priorities to drive revenue growth in 2025

Continue to increase breadth and depth of prescribers

Establish OJEMDA as standard of care in 2nd line relapsed or refractory BRAF-altered pLGG

Support prescribers and patients to allow for optimal duration of treatment

FIREFLY-2

Pivotal phase 3 trial of tovorafenib in front-line pLGG

Bradon

Living with pLGG since age 11

Expansion into front-line treatment represents a meaningful expansion opportunity for tovorafenib in pLGG

Disease overview

pLGG is the most common brain tumor diagnosed in children

pLGG can be diagnosed at any age in pediatric patients starting in infancy

Estimated U.S. treatment eligible incidence of ~1,100 annually

Conventional treatment options are surgery, chemotherapy, radiation or targeted therapy

High unmet need for an effective therapy for the majority of pLGG patients that is minimally disruptive to their lives

Phase 3 trial summary

Randomized, global, registrational Phase 3 trial of monotherapy tovorafenib vs SoC chemotherapy

Eligibility: Patients aged up to <25 years with LGG harboring a RAF alteration and requiring first-line systemic therapy

Primary endpoint: ORR based on RAPNO-LGG criteria, assessed by blinded independent central review

Key secondary endpoints: PFS and DoR by RAPNO criteria

Enrollment completion expected 1H 2026

DAY301

PTK7-targeted antibody-drug conjugate (ADC)

DAY301: Next generation ADC targeting PTK7

DAY301 program overview

PTK7 is clinically-validated ADC target

Novel ADC active in preclinical models, designed to maximize therapeutic window, creating a potential first-in-class asset

Substantial development and commercial potential for DAY301 as high PTK7 expression in multiple adult and pediatric tumor indications

Phase 1a/b trial summary

BOIN design for efficiency of dose escalation

Backfill active dose levels to generate additional safety data

Enroll tumor types with known high PTK7 expression

Advance two recommended dose levels to Phase 1b

Final dose optimization scheme and possible registrational path(s) pending discussions with FDA at end of dose escalation/expansion

First dose cohort cleared January 2025

BOIN, Bayesian Optimal Interval.

Day One is well positioned for sustainable growth and long-term success

Drive OJEMDA revenue growth

Execute on clinical development pipeline for FIREFLY-2 and DAY301

Leverage our development and commercialization expertise to further expand our multiple asset portfolio

Maintain strong capital position while investing in our pipeline

Q&A