Orphan Drugs 2023-2028: Is the shine coming off?

FEBRUARY 2023

ARTICLE

Evaluate
a norstella company

Orphan Drugs 2023-2028: Is the shine coming off?

Orphan drugs continue to march ahead. They are the fastest-growing segment of the pharma market and dominate FDA approvals.

The top ten biggest orphans will be worth $64 billion globally in 2028, by which time orphans will comprise almost a fifth of all non-generic prescription drug sales ($1.5 trillion). Over a third of global drug sales at Johnson & Johnson and AstraZeneca in 2028 will come from orphans – mostly in oncology. J&J's Darzalex (created by Genmab) holds onto the top spot with $14.5 billion; AstraZeneca's Lynparza and Calquence take fourth and fifth place with a combined $11 billion in 2028 sales.

These trends are by now familiar. Orphan drugs have out-grown their non-orphan counterparts for each of the last ten years, apart from Covid-19 boosted 2021 and 2022. Even a pandemic affecting the global population didn't fundamentally alter orphans' trajectory. These 'niche' treatments – for conditions affecting fewer than 200,000 in the US or, in Europe fewer than 5 in 10,000 – will grow two thirds faster (11.6% vs 7%) than non-orphan innovative drugs in the next five years according to Evaluate consensus. By 2028, they will be worth $300 billion.

Is orphan drug growth flattening out? There's little quantitative evidence - yet. Several legislative and technological factors have come into play, however. The US Inflation Reduction Act (IRA), signed into law in August 2022, puts the costliest Medicare drugs on course for price cuts – including orphan drugs with more than one indication. Six of 2028's forecast top ten orphans fall into that category.

What's an orphan drug?

Orphan drugs are treatments for diseases that affect fewer than 200,000 people in the US or fewer than 5 in 10,000 people in Europe.

Meanwhile, as new drug modalities mature, they're finding applications beyond their niche early testing-grounds. Commercial and/or development successes across more prevalent conditions such as migraine, obesity or cardiovascular diseases are drawing attention away from rare conditions. Big drugs for big diseases may do better filling Humira- or Keytruda-sized gaps facing big pharma this decade as several blockbusters lose exclusivity.

Pipeline clearouts underway across the industry now include rare diseases assets as well as non-rare, reflecting growing competitive and commercial pressures across the board. Pfizer, for instance, in early January announced it was cutting in-house R&D in rare neurology and cardiology indications.

By 2028 the orphan drug market will be worth $300bn.

The IRA has also prompted calls for further, orphan-specific reform. The IRA attempts to curb orphans that have outgrown the original intentions of the Orphan Drug Act, passed 40 years ago in a market dominated by small molecules. That Act granted R&D tax credits and extended market exclusivity for orphans at a time when only a handful of such products were available. Since then, FDA has approved over 600 orphan drugs. As biologics and other new technologies commanded higher prices, and genomics sliced big diseases into orphan-sized pieces, the ODA incentives started to appear over-generous.

The IRA hasn't quite got it right. By differentiating single versus multi-indication orphans, it discourages drugmakers from testing successful orphan drugs in second or third indications. Alnylam, for instance, has paused development of its ATTR therapy Amvuttra in Stargardt disease, a rare genetic eye condition, to protect the drug from price curbs down the line (it's expected to sell almost $3 billion by 2028). A potential "Orphan Drug Act 2.0" could include tiered incentives (more support for drugs in smaller populations, and no support once a certain sales threshold is reached) and higher tax credits for ultra-rare orphan drugs. It's unclear whether there is appetite for further legislation, though.

These potential headwinds won't slow orphans this decade: the net present value (NPV) of the top largest orphans in 2028 (currently in Phase 3 or filed) is over $40 billion – *three quarters* of the equivalent figure for non-orphans. ($54 bn) But as the IRA digs in, and if calls for ODA 2.0 endure, the shine may start to come off.

Evaluate

a norstella company

Evaluate provides trusted commercial intelligence for the pharmaceutical industry. We help our clients to refine and transform their understanding of the past, present and future of the global pharmaceutical market to drive better decisions. When you partner with Evaluate, our constantly expanding solutions and our transparent methodologies and datasets are instantly at your disposal, along with personalised, expert support.

Evaluate gives you the time and confidence to turn understanding into insight, and insight into action.

Evaluate Pharma offers a global view of the pharmaceutical market's past, present and future performance with best-in-class consensus forecasts to 2028, unique broker forecasts, and the application of proprietary methodologies to support highly robust, detailed and accurate analysis.

Evaluate Omnium provides a complete, dynamic view of development risk and commercial return across all phases of the clinical lifecycle – including early-phase and privately-developed drugs not covered by analysts' forecasts. With product-specific data including Predicted Peak Sales, Probability of Technical and Regulatory Success (PTRS), R&D Costs, Net Present Value, Time-to-Peak and more, Evaluate Omnium makes it easier than ever to quantify and compare risk and return across the full pipeline landscape.

Evaluate Epi is curated by epidemiology experts and delivers comprehensive, global epidemiological data in granular detail, on a highly interrogatable platform. Customers have access to impartial data for 15 therapeutic areas, and over 230 indications and 9,500 sub-populations across 27 core markets (up to 49 for some countries).

Evaluate Medtech provides a transparent and trusted source of market intelligence and consensus forecasting for the global medical device and diagnostic landscape, using the same proprietary methodologies as Evaluate Pharma. Customers can quickly understand how the market views products and portfolios – and where their opportunities, risks and priorities lie.

Evaluate Consulting & Analytics are specialists in solving unique and complex biopharma pipeline, portfolio and commercialisation challenges with best-in-class datasets, powerful analytical capabilities, and deep therapy and commercialisation expertise.

Evaluate Vantage provides award-winning, thought-provoking news and insights on current and future developments in the pharma, biotech and medtech industries, and is the only news service underpinned by Evaluate's commercial intelligence and data.

www.evaluate.com | **@Evaluate** **@EvaluateVantage**

Evaluate Headquarters
Evaluate Ltd.
3 More London
London SE1 2RE
United Kingdom
T +44 (0)20 7377 0800

Evaluate Americas
EvaluatePharma USA Inc.
60 State Street, Suite 1910
Boston, MA 02109
USA
T +1 617 573 9450

Evaluate Asia Pacific
Evaluate Japan KK
Holland Hills Mori Tower 2F
5-11-2 Toranomon, Minato-ku
Tokyo 105-0001, Japan
T +81 (0)80 1164 4754