

INDUSTRY OVERVIEW

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OVERVIEW OF GENE THERAPY MARKET

Overview

Gene therapy refers to a method that uses delivery vectors to transduce normal or therapeutic exogenous genes into target cells, thereby replacing or correcting disease-causing genes. Compared with other traditional treatments, gene therapy addresses diseases’ genetic roots instead of merely relieving symptoms, enabling durable or curative outcomes beyond traditional therapies’ reach.

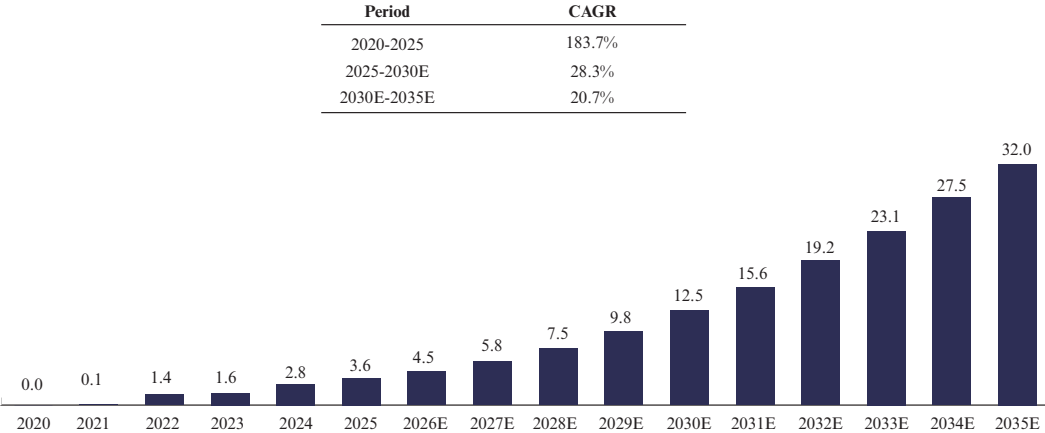
The technological evolution of viral vectors for gene therapy has advanced from integrating lentiviral vectors, to broad-spectrum but target limited wild-type AAV vectors, and now to next-generation AAV vectors engineered for precise targeting and enhanced safety. The key advantage of these innovations lies in their ability to optimize tissue-specific delivery, minimize immunogenicity and associated risks, and sustain or prolong therapeutic gene expression. According to F&S, in the nearly 20 years since the first gene therapy drug was launched, 19 gene therapy drug products have been approved for marketing worldwide. The application of gene therapies has been expanded beyond genetic diseases to include malignant tumors, chronic diseases, and infectious diseases.

Market Size of Gene Therapy

The global gene therapy market is expected to rise from approximately US\$3.6 billion in 2025 to US\$12.5 billion in 2030 with a CAGR of 28.3%, and further grow to US\$32.0 billion in 2035 representing a CAGR of 20.7% from 2030 to 2035. The diagram below sets forth the historical and projected global market size of gene therapy from 2020 to 2035:

Global Gene Therapy Market, 2020-2035E

Unit: Billion USD



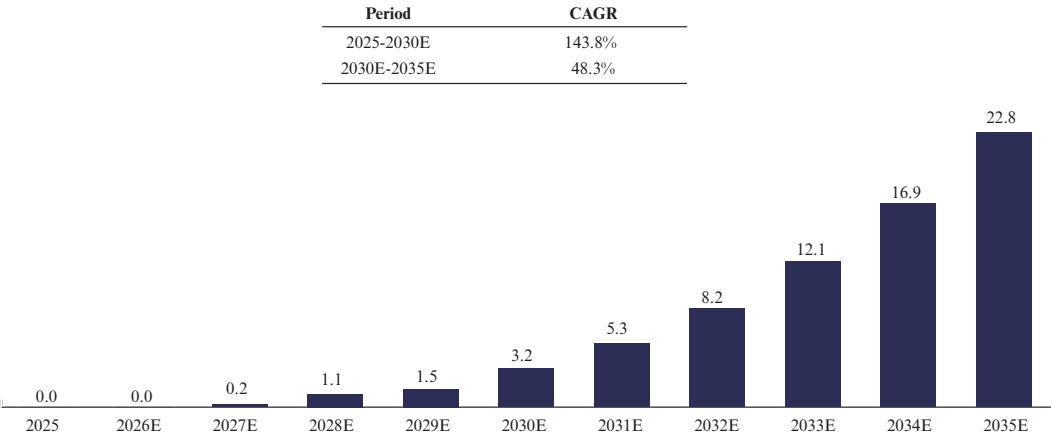
Source: F&S Analysis

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There was no gene therapy product launched in China from 2020 to 2025. The gene therapy market in China is expected to rise from approximately RMB0.0 billion in 2025 to RMB3.2 billion in 2030 with a CAGR of 143.8%, and further grow to RMB22.8 billion in 2035 representing a CAGR of 48.3% from 2030 to 2035. The diagram below sets forth the historical and projected market size of gene therapy in China from 2025 to 2035:

China Gene Therapy Market, 2025-2035E

Unit: Billion RMB



Note:

The market recorded near-zero growth from 2020 to 2024. Currently, there are no mature gene therapy products officially launched and commercially scaled.

Source: F&S Analysis

Growth Drivers and Future Trends of Gene Therapy

According to Frost & Sullivan, the growth of gene therapy has primarily been driven by the following factors:

- *Efficacy in Rare Diseases with Expansion to Common diseases.* Gene therapy has proven clinically effective for rare inherited diseases by targeting root genetic causes, with multiple regulatory approvals (e.g., for SMA, hemophilia, sickle cell disease) offering durable benefits. AAV-based therapies like Zolgensma (SMA) and Roctavian (hemophilia) have gained major-market approvals via single-administration sustained efficacy, establishing gene therapy as a disease-modifying option for rare genetic disorders. Ongoing late-stage trials (e.g., ABBV-RGX-314 and 4D-150, Phase III for wAMD) further expand its application to broader populations with unmet medical needs.
- *Advances in Viral Vector Design for Targeted Delivery via AI-Driven Platforms.* The AI-driven platforms play a significant role in advancing viral vector design. The first-generation lentiviral vector-based gene therapies often encounter limitations regarding tissue tropism, transduction efficiency in non-hematopoietic, and the potential risk of insertional mutagenesis. The next-generated vector engineering, leveraging on technologies such as high-throughput screening and AI-assisted design platforms, enhances the evolving need for vector efficiency and safety, with focuses on (i) the optimization of AAV capsids (enhancing tissue-specific transduction and reducing immunogenicity), expansion of vector packaging capacity, and modification of lentiviral integration sites (minimizing the risk of insertional mutagenesis); and (ii) the precision targeting and tissue-specific delivery via the integration of tissue-specific promoters (e.g., liver-specific albumin promoter, retina-specific promoter) and ligand-receptor mediated targeted binding.

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- *Addressing High Costs to Improve Accessibility.* High manufacturing cost has been a key barrier to the widespread adoption of gene therapy. Early commercial gene therapy products have highlighted the impact of complex vector manufacturing and limited production scale on pricing and accessibility. For example, the production cost of a single dose of an AAV-based gene therapy may exceed US\$1 million, primarily due to low product yield, high raw material costs, and substantial indirect costs associated with labor and facility utilization. Advances in scalable biomanufacturing, platform-based production and outsourcing of late-stage development are expected to progressively reduce production costs, while evolving reimbursement approaches may further improve patient access over time.
- *Policy Support and Regulation.* Governments and regulatory bodies are increasingly establishing structured frameworks and incentives to accelerate the development of gene therapies. In China, the Medical Institutions Investigator-Initiated Clinical Research Management Measures (effective October 1, 2024) support academized clinical trials. In the United States, NIH funding mechanisms and FDA “Sponsor-Investigator” regulations facilitate investigator-initiated trials (IITs). In addition to national-level policies, local government initiatives have also introduced concrete support measures for gene therapy development. Meanwhile, growing public and private investment continues to drive early-stage research and clinical translation, reducing R&D barriers and creating greater opportunities for innovative gene therapies to reach patients more efficiently.

OVERVIEW OF SPINAL MUSCULAR ATROPHY (SMA) DRUG MARKET

Overview

Spinal Muscular Atrophy (SMA) is an autosomal recessive lower motor neuron disease, characterized by progressive proximal muscle weakness and skeletal muscle atrophy. SMA is caused by mutations in the SMN1 gene. The normal SMN1 gene encodes the survival motor neuron (SMN) protein. Mutated SMN1 fails to produce functional SMN protein, leading to skeletal muscle atrophy and impairing movement, swallowing, and respiration in SMA patients. SMN2 also encodes SMN protein, but a specific synonymous mutation causes approximately 90% of its pre-mRNA to skip exon 7 during splicing, generating unstable, degradable $\Delta 7$ truncated protein that lacks full physiological function. For the year ended December 31, 2025, the incidence rate of SMA was 2.69/100,000 and 2/100,000 in China and globally, respectively. SMA can be classified into different types in terms of age of onset and maximum motor function achieved. SMA Type 1 typically has an onset before six months of age.

SMA Type 1 accounts for approximately 60% of SMA diseases.

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Current Treatment Regimen and Limitations

The current treatment options for SMA fall into three main categories: adeno-associated virus (AAV)-based gene therapy, antisense oligonucleotide (ASO), and small-molecule therapies. The key marketed products are Zolgensma® (onasemnogene abeparvovec, an AAV9-based gene therapy), Spinraza® (nusinersen, an intrathecally administered ASO), Evrysdi® (risdiplam, an oral small-molecule splicing modifier) and ITVISMA (an intrathecally administered AAV-based gene therapy). These four products are approved for the treatment of SMA in multiple major markets worldwide. The table below compares different treatment options for SMA in five aspects: modality & mechanism, efficacy, safety, administration and convenience:

	Nusinersen (Spinraza®)	Risdiplam (Evrysdi®)	ZOLGENSMA	ITVISMA
Modality & Mechanism	<ul style="list-style-type: none"> ASO Modulates SMN2 splicing 	<ul style="list-style-type: none"> Oral small molecule Modulates SMN2 splicing 	<ul style="list-style-type: none"> Gene therapy Delivers functional SMN1 gene 	<ul style="list-style-type: none"> Gene therapy Delivers functional SMN1 gene
Efficacy	<ul style="list-style-type: none"> Improves motor function in certain patients Delays disease progression 	<ul style="list-style-type: none"> Improves respiratory and swallowing function Reduces risk of permanent ventilation 	<ul style="list-style-type: none"> Demonstrates significant improvements in survival and motor milestones Sustained long-term clinical benefit 	<ul style="list-style-type: none"> Demonstrates improvements in motor function and survival across SMA types Sustained SMN protein expression supports long-term disease control
Safety	<ul style="list-style-type: none"> Risks related to lumbar puncture (headache, back pain, infection) 	<ul style="list-style-type: none"> Overall well tolerated long-term; serious adverse events comparable to nusinersen or lower in some studies 	<ul style="list-style-type: none"> Potential systemic risks include hepatotoxicity and thrombocytopenia Safety profile is considered manageable 	<ul style="list-style-type: none"> Reduced systemic exposure compared with intravenous gene therapy Lower risk of systemic adverse effects
Administration	<ul style="list-style-type: none"> Intrathecal injection via lumbar puncture Requires multiple loading and maintenance doses 	<ul style="list-style-type: none"> Oral daily administration at home, convenient for long-term use 	<ul style="list-style-type: none"> One-time dosing No repeated treatments required 	<ul style="list-style-type: none"> One-time dosing No repeated treatments required Enables direct delivery to the central nervous system
Convenience	<ul style="list-style-type: none"> Lifelong treatment required Repeated hospital lumbar punctures 	<ul style="list-style-type: none"> Continuous daily dosing required 	<ul style="list-style-type: none"> Single administration with durable clinical effect No repeated dosing 	<ul style="list-style-type: none"> Reduces long-term healthcare resource utilization Simplifies long-term disease management

Source: Literature Review, F&S Analysis

Currently the treatment of SMA faces the following core challenges: (i) insufficient adherence: SMA requires long-term medication and lifelong management. Treatment adherence, a comprehensive behavior influenced by multiple factors including formulation characteristics, patients’ functional capacity, care costs, administration methods, and drug tolerability, tends to decline over time; (ii) limited neuronal SMN targeting: The current SMA gene therapy, particularly Zolgensma, shows uneven SMN protein distribution, with excessive expression in peripheral tissues (such as the liver and heart) but insufficient levels in motor neurons. This limits functional recovery and increases systemic toxicity and immune-related risks; and (iii) high treatment costs: Zolgensma, an approved gene therapy, costs over US\$2 million per single treatment. In contrast, other relatively lower-priced therapies such as Spinraza and Evrysdi require lifelong administration. This results in high treatment costs, heavy medical burdens, and poor adherence for patients.

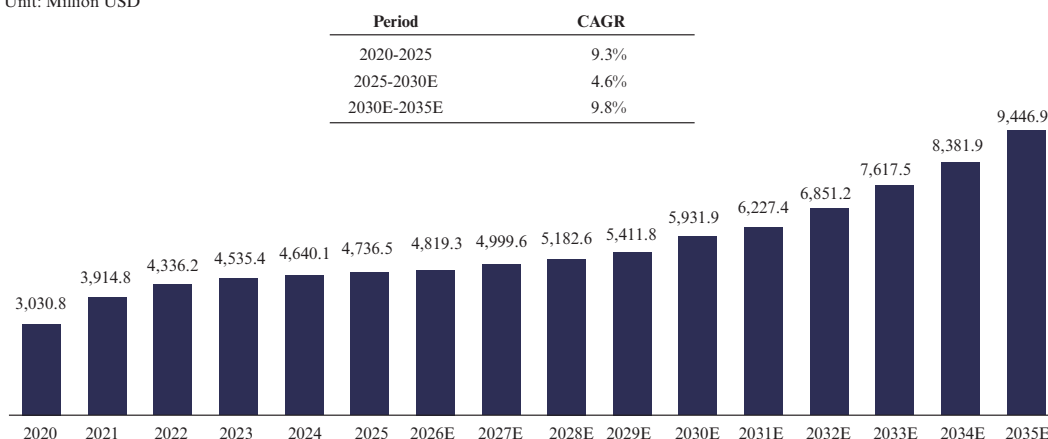
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Market Size of SMA Drugs

The global SMA drug market rose from US\$3,030.8 million in 2020 to US\$ 4,736.5 million in 2025 with a CAGR of 9.3%, and is expected to further increase to US\$5,931.9 million in 2030 with a CAGR of 4.6% from 2025, and US\$9,446.9 million in 2035 with a CAGR of 9.8% from 2030 to 2035. The diagram below sets forth the historical and projected global market size of SMA drugs from 2020 to 2035:

Global SMA Drug Therapy Market, 2020-2035E

Unit: Million USD

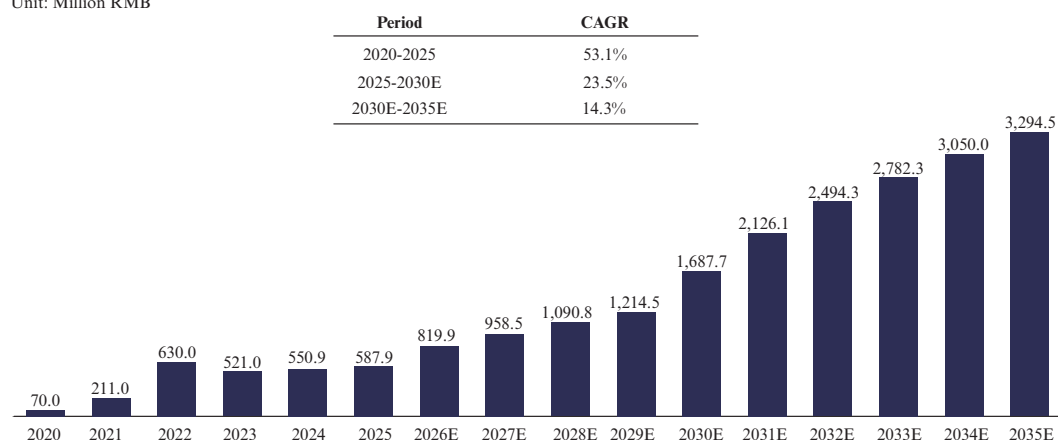


Source: F&S Analysis

The SMA drug market in China rose from RMB70.0 million in 2020 to RMB587.9 million in 2025 with a CAGR of 53.1% and is expected to increase to RMB1,687.7 million in 2030 with a CAGR of 23.5% from 2025, and further grow to RMB3,294.5 million in 2035 with a CAGR of 14.3% from 2030 to 2035. The diagram below sets forth the historical and projected market size of SMA drugs in China from 2020 to 2035:

China SMA Drug Therapy Market, 2020-2035E

Unit: Million RMB



Source: F&S Analysis

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Competitive Landscape of SMA Drugs Pipeline

As of the Latest Practicable Date, there were four approved SMA drugs globally and two SMA drug candidates under clinical development globally. The following diagrams set forth the global marketed and clinical-stage SMA drugs globally:

Global Approved SMA Drugs

Brand Name	Generic Name	Modality	Route of Administration	Treatment Line	Company	Indication	First Approval Date	Annual Cost (2024)/ Reimbursement
SPINRAZA	Nusinersen	ASO	Intrathecal Injection	First-line	Biogen	Spinal Muscular Atrophy (SMA)	2016/12/23	~USD 750K
ZOLGENSMA	Onasemnogene Apeparvovec-xioi	Gene Therapy	Intrathecal Injection	First-line	Novartis	Spinal Muscular Atrophy (SMA)	2019/5/24	~USD 340K-375K
EVRYSDI	Risdiplam	Small Molecule	Oral	First-line	Genentech	Spinal Muscular Atrophy (SMA)	2020/8/7	~2,100-2,300 K
ITVISM	Onasemnogene Apeparvovec-brve	Gene Therapy	Intrathecal Injection	Not disclosed	Novartis	Spinal Muscular Atrophy (SMA)	2025/11/24	2,590 K

Notes:

1. The industry information is as of 2026/08/23.
2. First approval date refers to the date on which the study record was first available on FDA.
3. Only includes originator, excluding generic drugs and compound drugs.

Source: FDA, Company website, Literature research, F&S Analysis

Global Clinical-stage SMA Drugs

Pipeline	Company	Modality	Route of Administration	Proposed Treatment Line	Clinical Stage	Indication	Safety and Efficacy	First Posted Date
ANB-004	Biocad	Gene Therapy	Intrathecal Injection	Not specified*	Phase I/II	Spinal Muscular Atrophy (SMA)	Not disclosed	2023/2/17
GB221	Gemma Biotherapeutics	Gene Therapy	Intra-cisterna magna (ICM) injection	Not specified	Phase I/II	Spinal Muscular Atrophy (SMA) Type 1	Not disclosed	2025/7/17

Notes:

1. The industry information is as of 2026/08/23.
2. First posted date refers to the date on which the study record was first available on Chinadrugtrials.org.cn or Clinicaltrials.gov.
3. The clinical stage refers to the latest clinical trials as well as the first posted date.
4. Only includes pipelines active within the past three years.
5. Only include clinical trials that are above Phase I. Excluding drug candidates for SMA Types 2 and 3.

Source: F&S Analysis

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As of the Latest Practicable Date, there were two approved SMA drugs in China and four SMA drug candidates under clinical development in China. The following diagrams set forth the global marketed and clinical-stage SMA drugs in China:

China Approved SMA Drugs

Brand name	Generic name	Modality	Route of Administration	Treatment Line	Company	Indication	First Approval Date	Annual Cost (2024)/ Reimbursement
Spinraza	Nusinersen	ASO	Intrathecal Injection	First-line	Biogen	Spinal Muscular Atrophy (SMA)	2019/2/22	~RMB198 K/ Included in NRDL
艾滿欣	Risdiplam	Small Molecule	Oral	First-line	Roche	Spinal Muscular Atrophy (SMA)	2021/6/16	~RMB 1,380-1,400 K/ Included in NRDL

Notes:

- The industry information is as of 2026/08/23.
- First approval date refers to the date on which the study record was first available on NMPA.
- Only includes originator, excluding generic drugs and compound drugs.

Source: NMPA, Company website, Literature research, F&S Analysis

Clinical-stage SMA Drugs in China

Pipeline	Company	Modality	Route of Administration	Proposed Treatment Line	Clinical Stage	Indication	Safety and Efficacy	First Posted Date
OAV101 IT	Novartis	Gene Therapy	Intrathecal Injection	Not specified*	BLA	Spinal Muscular Atrophy (SMA)	HFMSE +2.39 vs placebo (P=0.0074); AEs mostly mild-moderate; no SAEs observed	2025/8/2
GC101	GeneCradle	Gene Therapy	Intrathecal Injection	Not specified	III	Spinal Muscular Atrophy (SMA) Type 2	Not disclosed	2025/5/16
EXG001-307	Exegenesis Bio	Gene Therapy	Intravenous/ Intrathecal Injection	Not specified	I/II*	Spinal Muscular Atrophy (SMA) Type 1	All treated children had significant head control within 6 months (some ≥3s in 1 month); 100% of patients with >3m follow-up achieved independent sitting, some in 1 month	2022/9/29
SKG0201	Lanyue Biotech	Gene Therapy	Injection	Not specified	I/II	Spinal Muscular Atrophy (SMA) Type 1	Not disclosed	2026/06/08

Notes:

- The industry information is as of 2026/08/23.
- First posted date refers to the date on which the study record was first available on Chinadrugtrials.org.cn or Clinicaltrials.gov.
- The clinical stage refers to the latest clinical trials as well as the first posted date.
- Only includes pipelines active within the past three years.
- Only include clinical trials that are above Phase I. Excluding drug candidates for SMA Types 2 and 3.
- * Completed Phase I/II in Type 1 SMA; plan to discuss pivotal Phase III design with regulators in H2 2026.

Source: CDE, Company website, Literature research, F&S Analysis

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Growth Drivers and Future Trends of SMA Treatment Market

According to Frost & Sullivan, the growth of SMA treatment market has primarily been driven by the following factors:

- *Scientific Breakthroughs and Unmet Needs.* Represented by Zolgensma, gene therapies have achieved significant breakthroughs. Even with the availability of current therapies that have significantly improved survival and motor outcomes, SMA, especially its severe forms, still lacks optimal treatments. Existing options face limitations in efficacy, durability, delivery, and safety, highlighting the need for more effective and safer therapeutic approaches. This unmet rigid medical demand provided core rationality support for the subsequent market access, medical insurance negotiation breakthroughs, and acceptance by the payment system of high-priced innovative drugs.
- *Policy and Payment Environment.* Major global regulatory authorities have established expedited review pathways for SMA therapies, significantly shortening the time to market and enabling products to reach patients faster. The National Healthcare Security Administration (NHSA) has included some rare disease drugs in the reimbursement scope through dynamic adjustments to the National Reimbursement Drug List (NRDL). Despite high prices, innovative payment schemes such as pharmaceutical company negotiations, medical insurance access, and installment payments have improved drug accessibility, becoming a key driver of market expansion.
- *Growing Awareness and Early Identification.* Growing awareness of SMA among physicians and the public, coupled with the popularization of genetic testing, has shortened the diagnosis time. This has enabled more patients to be identified and initiated on treatment pathways. In addition, strong patient organizations have raised social awareness of the disease. They actively promote policy reforms, drug accessibility, and R&D progress, serving as a key driver for market development.

According to Frost & Sullivan, the future trends of SMA treatment market are as follows:

- *Advancement of Gene Therapy Strategies.* Advancement of gene therapy strategies will focus on (i) superior AAV capsids: novel capsids with higher central nervous system (CNS) tropism are expected to improve therapeutic efficacy, while reduced liver transduction may lower hepatotoxicity and enhance safety, and the ability to evade existing neutralizing antibodies may improve treatment eligibility among SMA Type 1 patients; (ii) promoter engineering: adoption of tissue-specific or cell type-specific promoters to precisely regulate SMN gene expression and enhance safety; and (iii) transition to more targeted and safer gene replacement designs: although current gene replacement therapies such as Zolgensma have established the treatment paradigm for SMA, further improvements in safety and efficacy are still needed.
- *Innovation in Payment and Accessibility.* Innovations in payment and accessibility are mainly reflected in (i) deepening of innovative payment models: to address exorbitant treatment costs, outcome-based payment agreements, long-term installment plans, and insurance actuarial models will become more prevalent. These models aim to share risks for payers, improve drug accessibility, and ensure pharmaceutical companies' returns; and (ii) global market expansion and localization: companies may adopt strategies like localized production and differential pricing to achieve growth in these price-sensitive yet high-potential markets.

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- *Manufacturing Scale-up and Cost optimization.* Manufacturing scale-up and cost optimization mainly include three aspects: (i) process intensification and optimization: adoption of more efficient upstream and downstream processes, such as suspension cell systems, improved purification methods, and higher-productivity bioreactors, to enhance consistency and reduce batch-to-batch variability; and (ii) cost reduction through technological innovation: implementation of automation, modular manufacturing, and analytics-driven process control to lower production costs and support sustainable long-term pricing models; and (iii) enhanced supply chain reliability: strengthening global supply chains and raw material sourcing to ensure uninterrupted availability, particularly for therapies requiring chronic or recurrent dosing.

OVERVIEW OF FUNDUS NEOVASCULARIZATION DISEASE DRUG MARKET

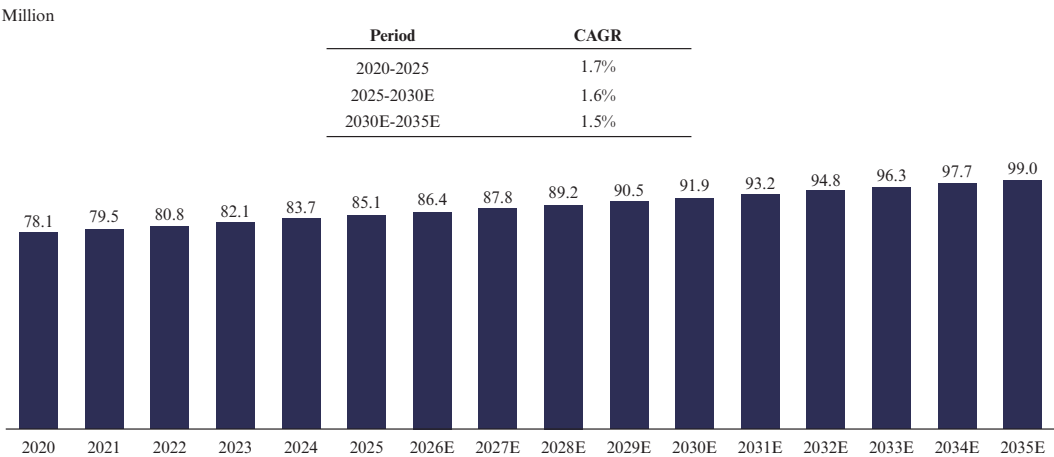
Overview

Fundus neovascularization disease refers to a group of eye disorders that affect vision due to pathological changes in the back of the eye, such as hemorrhage, exudation, and hyperplasia caused by neovascular growth. Currently, the pathogenesis of fundus neovascularization is not fully understood. Both environmental and genetic factors play major roles, with additional risk factors including diabetes, hypertension, and aging. Major fundus neovascularization diseases include wet age-related macular degeneration (wAMD), Diabetic macular edema (DME), and Retinal vein occlusion (RVO). For the year ended December 31, 2025, the incidence rate of fundus neovascularization disease was 1.42% and 1.03% in China and globally, respectively.

Prevalence of Fundus Neovascularization Disease

In 2025, the global prevalence of fundus neovascularization disease reached 85.1 million, with a CAGR of 1.7% from 2020 to 2025. It is estimated that the global prevalence of fundus neovascularization disease will reach 91.9 million by 2030, with a CAGR of 1.6% from 2025 to 2030 and is expected to further grow to 99.0 million in 2035 with a CAGR of 1.5% from 2030 to 2035. The following chart illustrates the historical and projected global prevalence of fundus neovascularization disease:

Global Prevalence of Fundus Neovascularization Disease, 2020-2035E

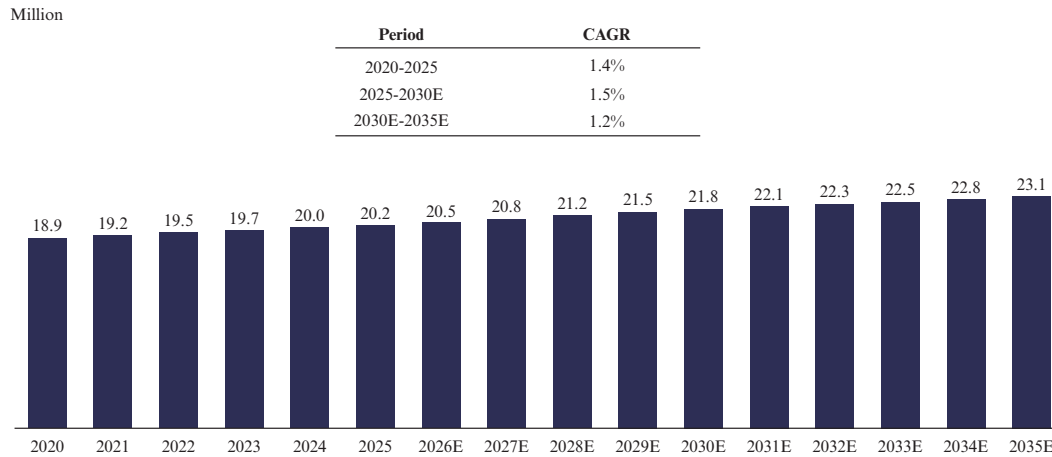


Source: F&S Analysis

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In 2025, the prevalence of fundus neovascularization disease in China reached 20.2 million, with a CAGR of 1.4% from 2020 to 2025. It is estimated that the prevalence of fundus neovascularization disease in China will reach 21.8 million by 2030, with a CAGR of 1.5% from 2025 to 2030 and is expected to further grow to 23.1 million in 2035 with a CAGR of 1.2% from 2030 to 2035. The following chart illustrates the historical and projected prevalence of fundus neovascularization disease in China:

China Prevalence of Fundus Neovascularization Disease, 2020-2035E

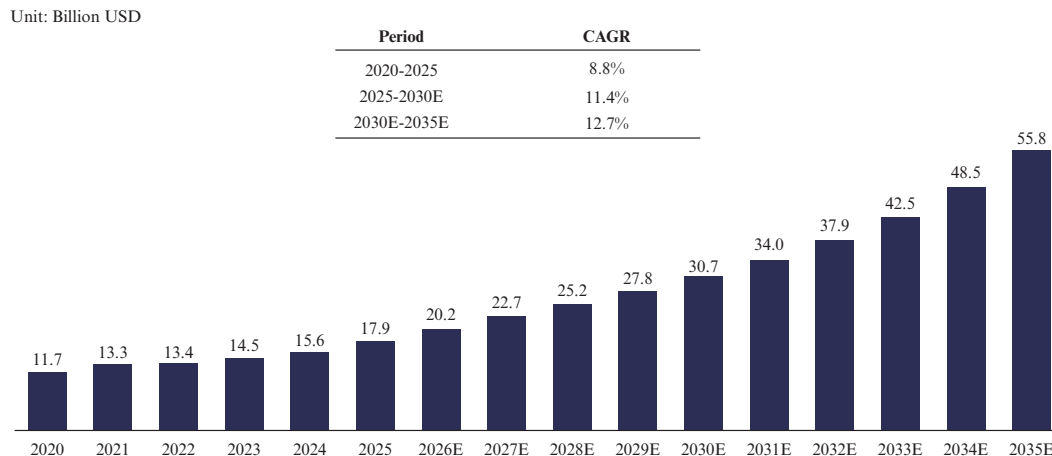


Source: F&S Analysis

Market Size of Fundus Neovascularization Disease Drugs

The global fundus neovascularization disease drug therapy market has expanded significantly in the past and is projected to further grow. It is expected to rise from approximately US\$17.9 billion in 2025 to US\$30.7 billion in 2030 with a CAGR of 11.4%, and is expected to further grow to US\$55.8 billion in 2035 with a CAGR of 12.7% from 2030 to 2035. The diagram below sets forth the historical and projected global market size of fundus neovascularization disease drugs from 2020 to 2035:

Global Fundus Neovascularization Disease Drug Therapy Market, 2020-2035E



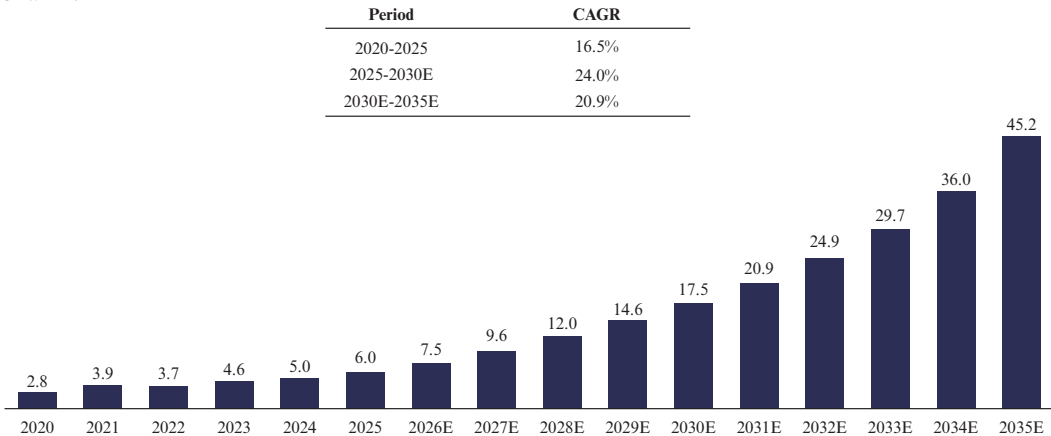
Source: F&S Analysis

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The fundus neovascularization disease drug therapy market in China is expected to rise from approximately RMB6.0 billion in 2025 to RMB17.5 billion in 2030 with a CAGR of 24.0%, and is expected to further grow to RMB45.2 billion in 2035 with a CAGR of 20.9% from 2030 to 2035. The diagram below sets forth the historical and projected market size of fundus neovascularization disease drugs in China from 2020 to 2035:

China Fundus Neovascularization Disease Drug Therapy Market, 2020-2035E

Unit: Billion RMB



Source: F&S Analysis

Overview of wAMD

Age-related macular degeneration (AMD), also known as senile macular degeneration, is an eye disease that causes severe visual impairment or even blindness in the elderly. Patients are mostly over 50 years old, with the condition affecting both eyes simultaneously or sequentially. Based on pathological changes, AMD can be classified into two types: “wet” and “dry”. Wet AMD, also referred to as neovascular AMD (nAMD), accounts for approximately 10% to 15% of all AMD patients, but its damage to vision is far greater than that of dry AMD.

wAMD is characterized primarily by pathological features such as choroidal neovascularization (CNV) or retinal neovascularization in the macular area. It may also be accompanied by retinal edema, as well as retinal exudation, hemorrhage, scarring, and other changes. Currently, its pathogenesis remains unclear, and it may be associated with multiple factors including age, environment, genetics, oxidative stress, lipid metabolism, and immune response.

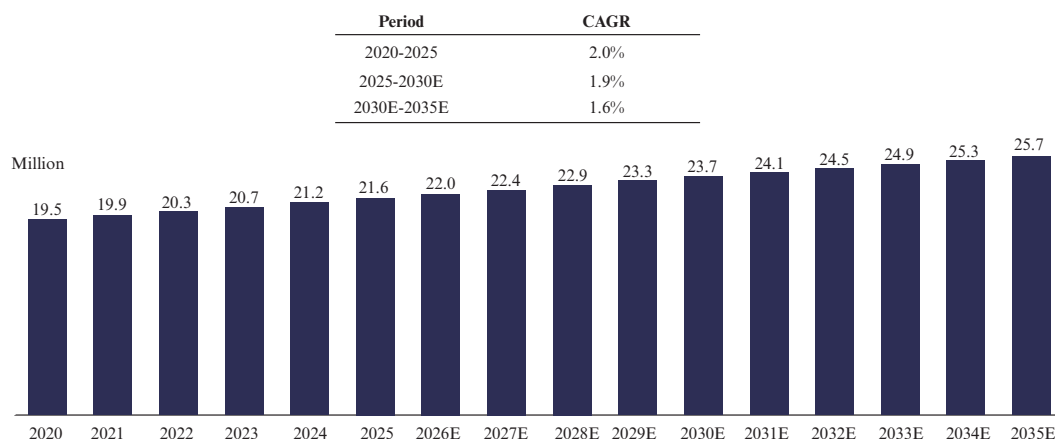
wAMD is synonymous with macular neovascularization (MNV) and can be categorized into three types (type 1, 2, 3). Type 1 MNV includes former occult choroidal neovascularization and PCV as a subtype, type 2 corresponds to classic choroidal neovascularization and type 3 equals retinal angiomatous proliferation (RAP). All MNV types involve abnormal vascular growth in the choroid or retina, leading to retinal edema, hemorrhage, exudation, and subsequent significant vision loss.

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Prevalence of wAMD

In 2025, the global prevalence of wAMD reached 21.6 million, with a CAGR of 2.0% from 2020 to 2025. It is estimated that the global prevalence of wAMD will reach 23.7 million by 2030, with a CAGR of 1.9% from 2025 to 2030 and is expected to further grow to 25.7 million in 2035 with a CAGR of 1.6% from 2030 to 2035. The following chart illustrates the historical and projected global prevalence of wAMD:

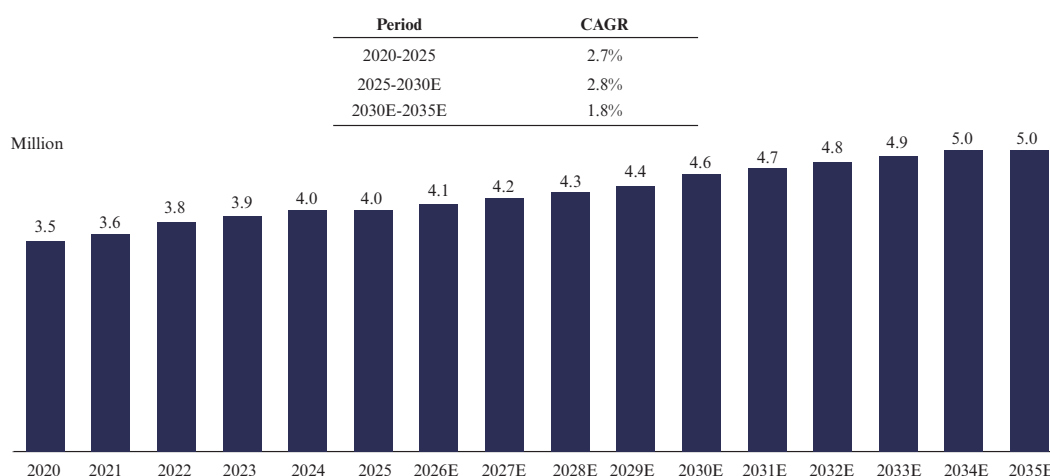
Global Prevalence of wAMD, 2020-2035E



Source: F&S Analysis

In 2025, the prevalence of wAMD in China reached 4.0 million, with a CAGR of 2.7% from 2020 to 2025. It is estimated that the prevalence of wAMD in China will reach 4.6 million by 2030, with a CAGR of 2.8% from 2025 to 2030 and is expected to further grow to 5.0 million by 2035, with a CAGR of 1.8% from 2030 to 2035. The following chart illustrates the historical and projected prevalence of wAMD in China:

The Prevalence of wAMD in China, 2020-2030E



Source: F&S Analysis

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Current Treatment Regimen for Fundus Neovascularization Disease

There are currently three main treatment regimens for fundus neovascularization disease on the market: antibody (for example, Ranibizumab), fusion protein (for example, Aflibercept) and gene therapy. The table below illustrates the comparison of these three key treatment regimens in terms of treatment approach, dosing frequency, efficacy profile, safety profile, treatment burden and treatment paradigm:

Category	Antibody Drugs	Fusion Protein	Gene Therapy
Treatment Approach	Repeated intravitreal injections	Repeated intravitreal injections with extended intervals	Single intravitreal administration
Dosing Frequency	Every 4-8 weeks	Every 8-12 weeks	One-time treatment
Efficacy Profile	Well-established efficacy across major retinal diseases	Comparable efficacy with improved durability	Designed to provide long-term anti-VEGF expression
Safety Profile	Well characterized with injection-related risks	Similar to antibody drugs	Long-term safety under clinical evaluation
Treatment Burden	High due to frequent injections and clinic visits	Moderate due to reduced injection frequency	Potentially low by minimizing repeated interventions
Treatment Paradigm	Chronic disease management	Chronic disease management with improved durability	Shift toward long-acting or one-time intervention

Source: Literature Review, F&S Analysis

Competitive Landscape of Fundus Neovascularization Disease Drugs

As of the Latest Practicable Date, there were four approved Fundus Neovascularization Disease drugs globally and eight wAMD drug candidates under clinical development globally. The following diagrams set forth the global marketed and clinical-stage Fundus Neovascularization Disease drugs globally:

Global Approved Fundus Neovascularization Disease Drugs

Brand name	Generic name	Target	Company	Modality	Indication	First Approval Date	2024 Global Sales (USD Billion)
LUCENTIS . .	Ranibizumab	VEGF-A	Genentech	Antibody	<ul style="list-style-type: none">wAMDRVODMEDRmCNV	June 30, 2006	1.0
EYLEA	Aflibercept	VEGF-A/B, PlGF	Regeneron	Fusion protein	<ul style="list-style-type: none">wAMDRVODMEDRROP	November 18, 2011	5.97

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Brand name	Generic name	Target	Company	Modality	Indication	First Approval Date	2024 Global Sales (USD Billion)
BEOVU	Brolucizumab-dbl	VEGF-A	Novartis	Antibody	• wAMD • DME	October 7, 2019	N/A
VABYSMO . .	Faricimab-svoa	VEGF-A, Ang2	Genentech	Antibody	• wAMD • DME • RVO	January 28, 2022	3.9

Notes:

1. The industry information is as of 2026/08/23.
2. First approval date refers to the date on which the study record was first available on FDA.
3. Only includes originator, excluding generic drugs and compound drugs.

Source: FDA, Company website, Literature research, F&S Analysis

Global Clinical-stage Fundus Neovascularization Disease Drugs

Target	Drug Name/Code	Company	Clinical Stage	Indication	First Posted Date
VEGF	ABBV-RGX-314	AbbVie	Phase II/III	nAMD	2021/1/12
			Phase II	DME	2025/4/16
VEGF	Ixoberogene Soroparovec	Adverum Biotechnologies	Phase III	nAMD	2025/3/4
VEGF-A/B/C, PlGF	4D-150	4D Molecular Therapeutics	Phase III	nAMD	2025/3/7
			Phase II	DME	2023/7/5
VEGF-A	NG101	Neuracle Genetic	Phase I/II	nAMD	2023/8/9
VEGF-A/B/C/D, ANG2, PlGF	EXG202	Exegensis Bio	Phase I/II	wAMD	2025/9/17
VEGF-A/B/C/D, ANGPT2, PlGF	EXG102-031	Exegensis Bio	Phase I	wAMD	2023/6/6
VEGF	KH631	Kanghong Pharmaceutical	Phase I	nAMD	2022/12/10
VEGF	KH658	Kanghong Pharmaceutical	Phase I	nAMD	2025/2/8

Notes:

1. The industry information is as of 2026/08/23.
2. First posted date refers to the date on which the study record was first available on Chinadrugtrials.org.cn or Clinicaltrials.gov.
3. The clinical stage refers to the latest clinical trials as well as the first posted date.
4. Only includes pipelines active within the past five years.

Source: Clinicaltrials.gov, Company website, Literature research, F&S Analysis

INDUSTRY OVERVIEW

As of the Latest Practicable Date, there were five approved fundus neovascularization disease drugs in China and 19 fundus neovascularization disease drug candidates under clinical development in China. The following diagrams set forth the marketed and clinical-stage fundus neovascularization disease drugs in China:

China Approved Fundus Neovascularization Disease Drugs

Brand Name	Generic Name	Target	Company	Modality	Indication	First Approval Date
諾適得	Ranibizumab	VEGF-A	Novartis	Antibody	<ul style="list-style-type: none"> • wAMD • DME • DR • RVO • CNV 	2011/12/31
朗沐	Conbercept	VEGF-A/B, PlGF	Kanghong Pharmaceutical	Fusion Protein	<ul style="list-style-type: none"> • nAMD • pmCNV • DME • RVO 	2013/11/29
艾力雅	Aflibercept	VEGF-A/B, PlGF	Bayer	Fusion protein	<ul style="list-style-type: none"> • nAMD • DME 	2018/2/2
羅視佳	Faricimab-svoa	VEGF-A, Ang2	Roche	Antibody	<ul style="list-style-type: none"> • DME • nAMD • RVO 	2023/12/13
倍優適	Brolucizumab-dbl	VEGF-A	Novartis	Antibody	<ul style="list-style-type: none"> • DME 	2025/5/28

Notes:

1. The industry information is as of 2026/08/23.
2. First approval date refers to the date on which the study record was first available on NMPA.
3. Only includes originator, excluding generic drugs and compound drugs.

Source: NMPA, Company website, Literature research, F&S Analysis

INDUSTRY OVERVIEW

Clinical-stage Fundus Neovascularization Disease Drugs in China

Target	Drug Name/Code	Company	Route of Administration	Proposed Treatment Line	Clinical Stage	Indication	Safety and Efficacy	First Posted Date
VEGF	AL-001	Anlong Bio	Suprachoroidal (SCS)	Not disclosed	Phase II	Wet age-related macular degeneration (wAMD)	Early clinical data indicate acceptable tolerability	2025/2/18
VEGFR2	HX9428	Fujian Haixi Pharmaceuticals	Oral Administration	Not disclosed	Phase II	wAMD	Not disclosed	2026/07/30
VEGF	LX102	Innostellar Biotherapeutics	Subretinal Injection	Not disclosed	Phase III	Neovascular (wet) age-related macular degeneration (nAMD)	Not disclosed	2026/01/24
VEGF	KH631	Kanghong Pharmaceutical	Subretinal Injection	Not disclosed	Phase I/II	Neovascular (wet) age-related macular degeneration (nAMD)	Not disclosed	2023/2/2
VEGF	FT-003	Frontera Therapeutics	Subretinal Injection	Not disclosed	Phase I/II	Neovascular (wet) age-related macular degeneration (nAMD)	Not disclosed	2023/8/21
VEGF-A/B/C/D, ANGPT2, PlGF	EXG102-031	Exegensis Bio	Subretinal Injection	Anti-VEGF-responsive patients	Phase I/II	Wet age-related macular degeneration (wAMD)	Not disclosed	2023/10/12
VEGF	FT-003	Frontera Therapeutics	Subretinal Injection	Not disclosed	Phase I/II	Diabetic macular edema (DME)	Not disclosed	2023/10/27
VEGF	RRG001	RRGENER Therapeutics	Subretinal Injection	Not disclosed	Phase I/II	Neovascular (wet) age-related macular degeneration (nAMD)	Not disclosed	2023/11/21
VEGF-A	SKG0106	Skyline Therapeutics	Subretinal Injection	Not disclosed	Phase I/II	Neovascular (wet) age-related macular degeneration (nAMD)	Not disclosed	2023/12/27
ANGPT2, VEGF-A	XMVA09	Starry Gene	Intravitreal Injection	Not disclosed	Phase I/II	Wet age-related macular degeneration (wAMD)	Not disclosed	2024/4/12
VEGF	JWK001	Genevector	Subretinal Injection	Not disclosed	Phase I/II	Neovascular (wet) age-related macular degeneration (nAMD)	Not disclosed	2024/5/30
VEGF	KH658	Kanghong Pharmaceutical	Suprachoroidal Injection	Prior anti-VEGF-treated patients	Phase II	Neovascular (wet) age-related macular degeneration (nAMD)	Early clinical evaluation shows acceptable tolerability	2026/7/7
NA	IVB103	InnoVec Bio	Intravitreal	Not disclosed	Phase I/II	Neovascular (wet) age-related macular degeneration (nAMD)	Not disclosed	2024/11/29
CYP4V2	NGGT007	Next Generation Gene Therapeutics	Subretinal Injection	Not disclosed	Phase I/II	Neovascular (wet) age-related macular degeneration (nAMD)	Not disclosed	2025/1/16
VEGF-A/B/C/D, ANGPT2, PlGF	EXG202	Exegensis Bio	Intravitreal Injection	Not disclosed	Phase I/II	Wet age-related macular degeneration (wAMD)	Not disclosed	2025/9/18
VEGF	CRG-B191	CorreGe	Subretinal Injection	Not disclosed	Phase I/II	Wet age-related macular degeneration (wAMD)	Not disclosed	2025/11/6
VEGF	YP004	Yuanpu Biotechnology	Intravitreal Injection	Not disclosed	Phase I	Neovascular (wet) age-related macular degeneration (nAMD)	Not disclosed	2026/7/17
–	QBR202	Quaerite Biopharm	Intravitreal Injection	Not disclosed	Phase I	Diabetic macular edema (DME)	Not disclosed	2026/2/12
VEGF/Ang-2	GB10	Kexing	Intravitreal Injection	Not disclosed	Phase I	Neovascular (wet) age-related macular degeneration (nAMD)	Not disclosed	2026/1/26

Notes:

- The industry information is as of 2026/08/23.
 - First posted date refers to the date on which the study record was first available on Chinadrugtrials.org.cn or Clinicaltrials.gov.
 - The clinical stage refers to the latest clinical trials as well as the first posted date.
 - Only includes pipelines active within the past three years.
- Source: CDE, Company website, Literature research, F&S Analysis*

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Growth Drivers and Future Trends of Fundus Neovascularization Disease Treatment Market

According to Frost & Sullivan, the growth of fundus neovascularization disease treatment market has primarily been driven by the following factors:

- *Increasing Patient Population.* Demographic shifts, including population aging and the rising prevalence of chronic systemic diseases (e.g., diabetes and cardiovascular disorders), are driving sustained growth in the patient population across major retinal vascular diseases, including wAMD, DME and RVO. Lifestyle changes and improved survival of chronic disease patients are contributing to increasing disease incidence and long-term treatment demand. Enhanced screening programs, broader access to retinal imaging, and improved disease awareness are leading to higher diagnosis rates and earlier intervention, further expanding the treated patient pool. Global prevalence of fundus neovascularization diseases (wAMD/DME/RVO) increased from approximately 78.1 million in 2020 to 85.1 million in 2025, and is projected to reach 91.9 million by 2030 and 99.0 million by 2035, representing a sustained growth trajectory over time.
- *Long-Acting and Innovative Therapeutic Modalities.* Extended-durability biologics address key unmet needs in fundus neovascularization diseases including wAMD, by reducing injection frequency, improving adherence, enhancing patient quality of life, and streamlining clinic workflow, making them highly attractive to clinicians and payers. Longer-acting agents also broaden the eligible patient population by benefiting individuals who struggle with frequent visits or exhibit suboptimal response to traditional anti-VEGF therapies. Technologies that meaningfully extend dosing intervals or provide continuous therapeutic exposure are becoming major focal points for R&D, partnerships, and investment, positioning them as a primary engine of market growth.
- *Reimbursement and Policy Support.* Continued expansion of national and regional reimbursement coverage for retinal diseases is expected to improve patient access to innovative therapies and reduce long-term financial burden across wAMD, DME, and RVO. Policy initiatives encouraging innovation in treatments for chronic ophthalmic diseases support the approval, adoption, and uptake of advanced biologics and novel therapeutic modalities. Enhanced reimbursement mechanisms and patient assistance programs promote earlier treatment initiation and sustained disease management, increasing overall treatment penetration and market growth.

According to Frost & Sullivan, the future trends of fundus neovascularization disease treatment market are as follows:

- *Longer-Acting and Sustained-Release.* Continued development of agents with extended durability to reduce injection frequency and improve patient adherence. Gene therapies may reduce or eliminate lifelong intravitreal injections, improving patient adherence and quality of life. For example, AAV-based anti-VEGF gene therapy in clinical trials has shown sustained protein expression, significantly reducing the need for repeated injections. Extended durability can lower healthcare burden and clinic visits, offering advantages over conventional anti-VEGF therapies.
- *Multi-Target and Combination Approaches.* Growing interest in therapies that address multiple pathways involved in neovascularization (for example, VEGF, ANG2, PlGF pathways). Combination regimens and multi-target biologics aim to overcome resistance or suboptimal responses to anti-VEGF monotherapies. Novel multi-pathway targeting agents aim to stabilize disease in a greater proportion of patients while reducing the risk of macular atrophy.

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- *Minimally Invasive and Novel Delivery.* In the future, wAMD treatment aims to improve patient comfort, reduce procedure-associated complications, and expand accessibility to advanced treatments. Exploration of less invasive delivery routes, including intravitreal and suprachoroidal dosing routes to enhance tissue penetration and reduce procedural risk. Achieving a noninvasive dosing route will require the development and engineering of novel vectors capable of efficiently delivering functional therapeutics.

OVERVIEW OF FABRY DISEASE DRUG MARKET

Overview

Fabry disease (FD) is an X-linked recessive lysosomal storage disorder. Fabry disease can affect both males and females, but symptoms in females tend to be more variable, ranging from no to severe symptoms. It is caused by mutations in the GLA gene (located at Xq22.1), leading to a deficiency in α -galactosidase A (α -Gal A) activity. This results in the accumulation of the glycosphingolipid substrate globotriaosylceramide (Gb3) and its derivative lyso-Gb3 in tissues. Accumulation of Gb3/lyso-Gb3 triggers lysosomal dysfunction, inflammation, oxidative stress, vascular smooth muscle proliferation, and cell death, ultimately causing fibrosis and ischemia in multiple organs, including the heart and kidneys. For the year ended December 31, 2025, the incidence rate of fabry disease was 1/69,400 and 1.5/100,000 in China and globally, respectively.

Competitive Landscape of Fabry Disease Drugs

As of the Latest Practicable Date, there were three approved Fabry disease drugs globally and three Fabry disease drug candidates under clinical development globally. The following diagrams set forth the global marketed and clinical-stage Fabry disease drugs globally:

Global Approved Fabry Disease Drugs

Brand Name	Generic Name	MOA	Company	Indication	First Approval Date	2024 Global Sales (USD Million)
Fabrazyme	Agalsidas	Exogenous α -Gal A enzyme (ERT)	Sanofi B.V.	Fabry disease	2003-04-24	1,098
Galafold	Migalastat Hydrochloride	α -Gal A stabilizer (Chaperone)	Amicus Therapeutics	Fabry disease	2018-08-10	458.1
Elfabrio	Pegunigalsidase Alfa-iwxj	Exogenous α -Gal A enzyme (ERT, longer half-life)	Chiesi Farmaceutici Spa	Fabry disease	2023-05-09	N/A*

Notes:

1. There is another drug that also can be used to treat Fabry Disease, known as Replagal, which firstly approved by EMA on 2001/08/03.
2. The industry information is as of 2026/08/23.
3. First approval date refers to the date on which the study record was first available on FDA.
4. Only includes originator, excluding generic drugs and compound drugs.

*: In 2024, Protalix generated \$29.3 million from sales of Elfabrio to Chiesi.

Source: FDA, Company website, Literature research, F&S Analysis

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Global Clinical-stage Fabry Disease Drugs

Pipeline	Company	Modality	Clinical Stage	Indication	First Posted Date
ST-920	Sangamo Therapeutics	GLA	BLA	Fabry disease	2025-11-21
AMT-191	UniQure biopharma	GLA	Phase I/II	Fabry disease	2024-02-21
HM15421	GC Biopharma	GLA	Phase I/II	Fabry disease	2025-03-05

Notes:

1. The industry information is as of 2026/08/23.
2. First posted date refers to the date on which the study record was first available on Chinadrugtrials.org.cn or Clinicaltrials.gov.
3. The clinical stage refers to the latest clinical trials as well as the first posted date
4. Only includes pipelines active within the past three years

Source: Clinicaltrials.gov, Company website, Literature research, F&S Analysis

As of the Latest Practicable Date, there were two approved Fabry disease drugs in China and three Fabry disease drug candidates under clinical development in China. The following diagrams set forth the marketed and clinical-stage Fabry disease drugs in China:

Approved Fabry Disease Drugs in China

Brand Name	Generic Name	Modality	Company	Indication	First Approval Date
Fabrazyme 法布贊* (注射用阿加糖酶β)	Agalsidase Beta	Exogenous α-Gal A enzyme (ERT)	Sanofi B.V.	Fabry disease	2019-12-18
Replagal 瑞普佳*	Agalsidase Alfa Concentrated Solution	Exogenous α-Gal A enzyme (ERT)	Takeda	Fabry disease	2025-05-19

Notes:

1. The industry information is as of 2026/08/23.
2. First approval date refers to the date on which the study record was first available on NMPA.
3. Only includes originator, excluding generic drugs and compound drugs

Source: NMPA, Company website, Literature research, F&S Analysis

Clinical-stage Fabry Disease Drugs in China

Pipeline	Company	Modality	Clinical Stage	Indication	First Posted Date
AL 01211*	AceLink	GCS	Phase II	Fabry disease	2023-10-28
ZS805	Sichuan Real&Best Biotechnology	GLA	Phase I/II	Fabry disease	2024-12-16
EXG110	Exegenesis Bio	GLA	Phase I/II	Fabry disease	2025-01-26

Notes:

1. The industry information is as of 2026/08/23.
2. First posted date refers to the date on which the study record was first available on Chinadrugtrials.org.cn or Clinicaltrials.gov.
3. The clinical stage refers to the latest clinical trials as well as the first posted date
4. Only includes pipelines active within the past three years

*: AL 01211 is a small-molecule drug.

Source: CDE, Company website, Literature research, F&S Analysis

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OVERVIEW OF OLIGONUCLEOTIDE-BASED DRUG MARKET

Overview

Oligonucleotides are a class of single- or double-stranded small synthetic nucleic acid polymers (≈ 20 -mer) that can be used to modulate gene expression, oligonucleotide-based drugs represent a class of therapeutics that target disease-related RNA at the molecular level, offering sequence-specific precision in modulating gene expression. Major oligonucleotides include siRNA, ASO, Aptamer and AOCs. As of the Latest Practicable Date, approximately eight siRNA drugs, Eleven ASO drugs, and one aptamer drug have been approved by major regulatory agencies worldwide.

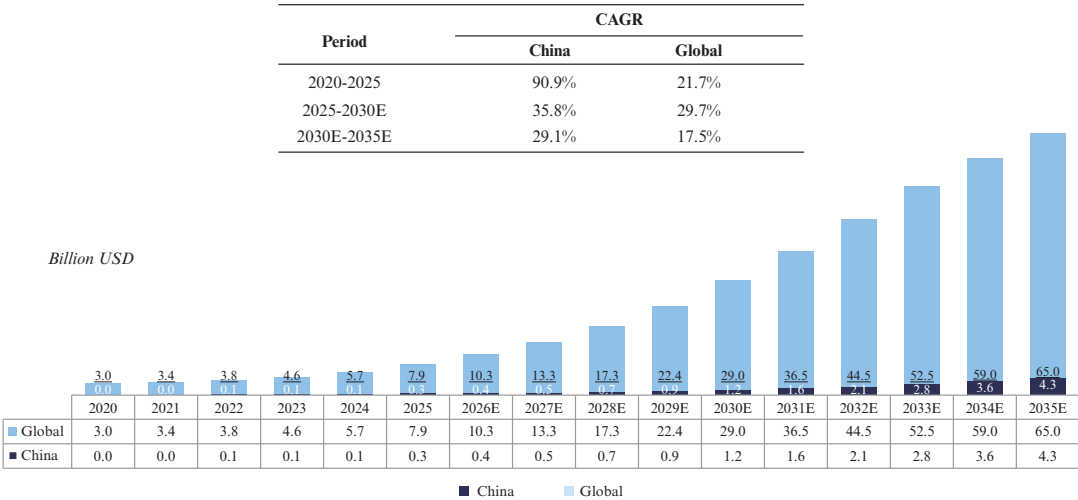
Market Size of Oligonucleotide-based Drugs

The global oligonucleotide drug market increased from USD 3.0 billion in 2020 to USD 7.9 billion in 2025, with a CAGR of 21.7%. It is projected to reach USD 29.0 billion and 65.0 billion by 2030 and 2035, growing at a CAGR of 29.7% and 17.5%. In China, the market has reached USD 0.3 billion in 2025. By 2030, the Chinese market is expected to grow to USD 1.2 billion, with a CAGR of 35.8 %, and will further increase to USD 4.3 billion by 2035 with a CAGR of 29.1%.

In terms of therapeutic areas, oligonucleotide-based drugs for the treatment of neurological diseases increased from 12.8% in 2020 to 18.7% in 2025, reflecting a significant shift toward neurological indications.

The diagram below sets forth the historical and projected global and China market size of oligonucleotide-based drug market from 2020 to 2040:

Global and China Oligonucleotide Drug Market Size, 2020–2035E



Source: Frost & Sullivan Analysis

Global Oligonucleotide-based Drugs Pipeline

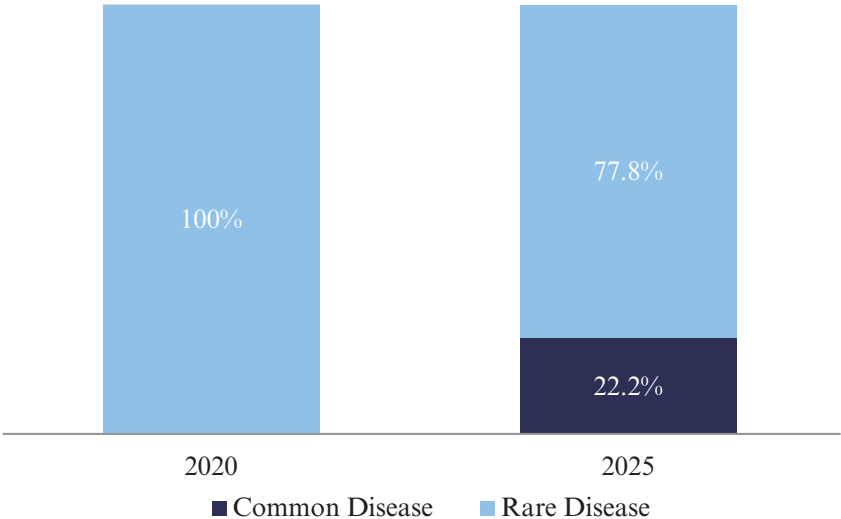
More than 300 oligonucleotide-based drugs have entered the clinical pipeline worldwide, of which only approximately 10.5% have entered clinical phase III, most of which are in clinical phase II or below. A key trend in the current therapeutic pipeline is the expansion of oligonucleotide-based drugs beyond liver-targeted disorders, such as neurological diseases. This shift reflects a growing focus on the largely unmet needs in neurological conditions, enabled by advances in technology and delivery methods that are making such therapies possible.

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In terms of therapeutic areas, oligonucleotide-based drugs for the treatment of neurological disorders increased from 12.8% in 2020 to 18.7% in 2025, reflecting a significant shift toward neurological indications.

In the oligonucleotide drugs R&D pipeline for neurological disorders, the proportion of common diseases is rising significantly, increasing from 0.0% in 2020 to 22.2% in 2025. This trend clearly indicates that oligonucleotide drugs technology is breaking through its traditional focus on rare diseases and accelerating its expansion into common neurological disorders, which have larger patient populations. The diagram below sets forth the percentage of oligonucleotide-based drugs by disease type from 2020 to 2025:

Composition of the Neurological Oligonucleotide Drugs Pipeline



Source: Clinicaltrials, Frost & Sullivan Analysis

Growth Drivers and Future Trends of Oligonucleotide-based Drug Market

According to Frost & Sullivan, the growth of oligonucleotide-based drug market has primarily been driven by the following factors:

- *Technological Breakthroughs.* Recent advances in oligonucleotide-based therapeutics have significantly expanded their clinical potential and market attractiveness. Improvements in chemical modifications and backbone chemistry have enhanced the stability of antisense oligonucleotides (ASOs), siRNAs, and other oligonucleotide modalities, enabling longer in vivo half-life and more predictable pharmacokinetics. In addition, innovations in delivery technologies, ranging from advanced conjugates to receptor-mediated and tissuespecific targeting, have enabled efficient distribution beyond the liver, thereby expanding applicability to a broader range of tissues and disease indications. Furthermore, progress in manufacturing platforms has increased scalability, product quality, and cost-efficiency, supporting reliable production of clinical- and commercial-grade oligonucleotides. Together, these technological breakthroughs have lowered development barriers, improved therapeutic efficacy, and expanded the addressable market for oligonucleotidebased drugs.

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- *Expansion of Target Indications.* Oligonucleotide-based drugs (ASOs, siRNAs, and AOCs) focused primarily on rare genetic disorders where single-gene mutations could be precisely targeted, such as Duchenne Muscular Dystrophy (DMD) and Spinal Muscular Atrophy (SMA), but the field is now undergoing a significant paradigm shift to chronic diseases. AOCs aim to combine the tissue-targeting specificity of monoclonal antibodies with the sequence-selective gene-modulating capacity of oligonucleotides, particularly for diseases driven by dysregulated gene expression. The indication research of AOCs spans from oncology and neuromuscular disorders to metabolic diseases.
- *Rising demand for precision medicine & targeted therapies.* Oligonucleotide-based drugs enable highly specific modulation of gene expression, offering the ability to address disease mechanisms at the molecular level. This makes them very attractive for genetic disorders, cancer, neurological diseases, and other complex diseases where traditional small molecules or biologics might fail. Due to the significant growth in the demand of precision medicine globally, the demand for oligonucleotide-based drugs will also increase.
- *Capital and Policy Support.* China’s government policies foster a favorable environment for oligonucleotide-based drug R&D and commercialization. Key policies like the “14th Five-Year Plan” explicitly prioritize novel delivery systems and nucleic acid therapeutics, supported by tax incentives and R&D subsidies. Priority review pathways at the NMPA significantly accelerate approval timelines for innovative drugs, including oligonucleotide-based drugs. These policies reduce R&D risks and costs, incentivizing both domestic and global companies to advance oligonucleotide drug development and market entry in China.

According to Frost & Sullivan, the future trends of oligonucleotide-based drug market are as follows:

- *The Expansion into Prevalent Diseases.* Initially confined to treating rare genetic disorders, oligonucleotide-based drugs are now poised for a strategic expansion into more common and widespread diseases. Future development will prioritize high-prevalence disorders with large market opportunities, such as neurodegenerative, cardiovascular, metabolic, and oncological diseases. This strategic shift is enabled by advanced delivery systems that unlock new target organs and is accelerated by the validation of existing oligonucleotide therapeutics. By addressing large patient populations, these new indications will significantly broaden market demand, attract substantial investment, and establish a robust commercial foundation for the technology.
- *Next-Gen Delivery & Development.* The next wave of oligonucleotide-based therapeutics integrates novel designs with advanced targeting techniques, enabling the systemic overcoming of key delivery barriers. Through computational optimization of ligand engineering, linker stability, and oligonucleotide payloads, researchers can now predictively design conjugates that enable precise delivery to previously hard-to-reach tissues, including the CNS, muscle, and tumors. This intelligent platform convergence is expanding the applications of oligonucleotide-based therapeutics efficiently into common disease areas like neurodegeneration and oncology.
- *Growth through Globalization and Improved Access.* The field’s maturation is driving a dual focus on global market expansion and patient accessibility. While the US and EU lead, China’s emergence as a major force, fueled by strategic policy, funding, and fast-follow development, is intensifying competition and accelerating global innovation. Concurrently, success in crowded mainstream markets will necessitate optimizing the product profile through convenient dosing (e.g., quarterly injections), cost-effective manufacturing, and competitive pricing to secure reimbursement and broaden patient access.