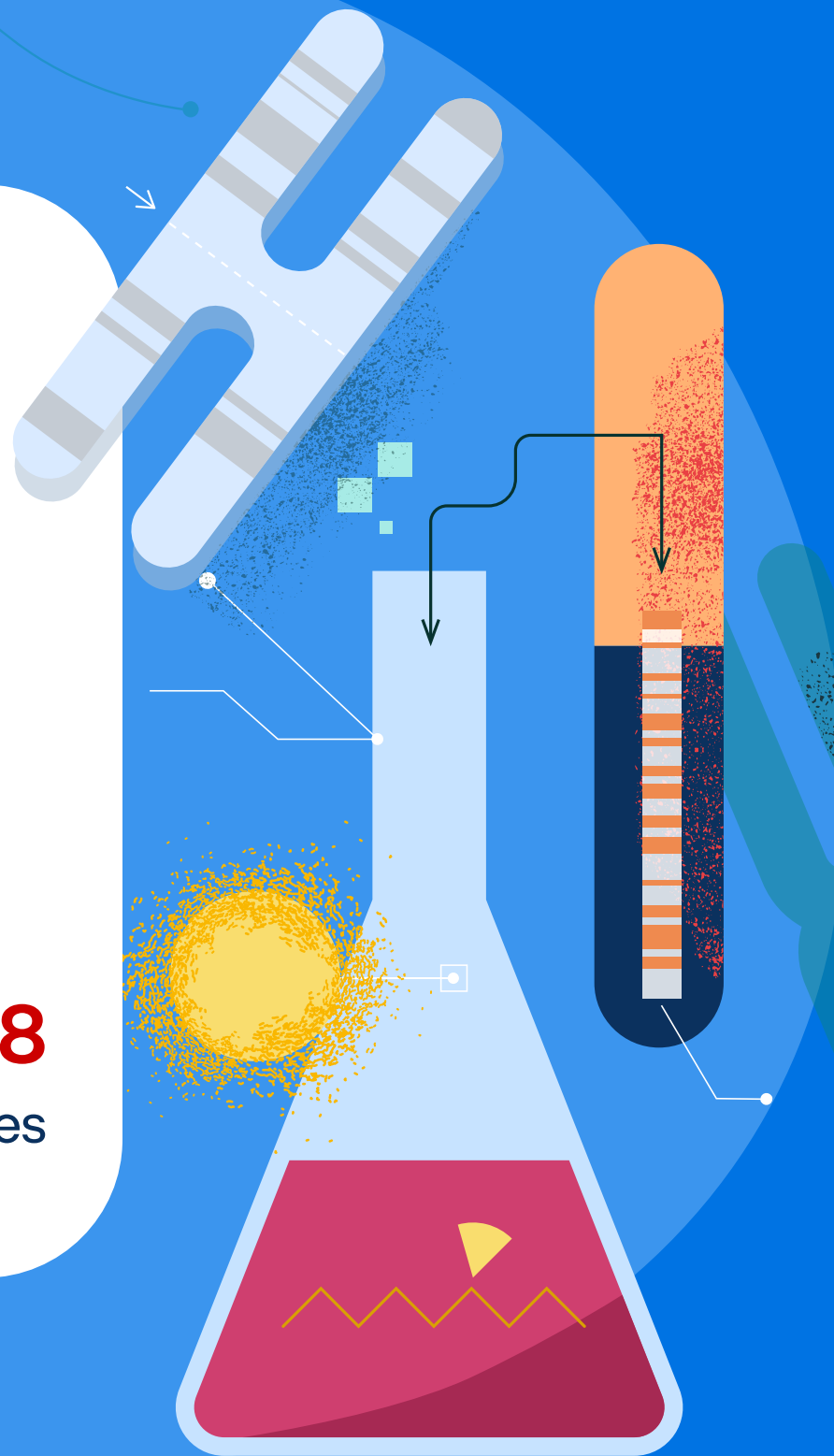


Gene Therapy Report

Q2 2025-Q1 2028

Projected Treatments and Launch Timelines



2025 PROJECTED LAUNCHES

QUARTER	THERAPY NAME	MANUFACTURER	PHASE OF DEVELOPMENT	TYPE	BREAKTHROUGH THERAPY DESIGNATION	DRUG CLASS	INDICATION	ROUTE OF ADMINISTRATION & FREQUENCY	ESTIMATED POTENTIAL U.S. CANDIDATES
3Q	vusolimogene oderparepvec	Replimune Group Inc.	Pending FDA approval 7/22/2025	New biologic	Yes	Gene therapy, in vivo	The treatment of unresectable or metastatic cutaneous melanoma after progression on anti-PD1 therapy, in combination with nivolumab (e.g., Opdivo, Opdivo Qvantig)	Injection–intratumoral, multi-dose	78,800 adult patients
3Q	rebisufligene etisparvovec	Ultragenyx Pharmaceutical	Pending FDA approval 8/18/2025	New biologic	No	Gene therapy, in vivo	The treatment of mucopolysaccharidosis type IIIA (also known as Sanfilippo syndrome type A)	Injection–IV, one-time	1,300–4,000 adult and pediatric patients
3Q	zopapogene imadenovec	Precigen	Pending FDA approval 8/27/2025	New biologic	Yes	Gene therapy, in vivo	The treatment of recurrent respiratory papillomatosis (RRP) in adults	Injection–SC, multi-dose	1,000–22,000 adult patients
4Q	clemidisogene lanparvovec	Nippon Shinyaku/RegenxBio	Pending FDA approval 11/3/2025	New biologic	No	Gene therapy, in vivo	The treatment of mucopolysaccharidosis type II (Hunter syndrome) in patients ages 5 years and younger	Injection–intracerebral, one-time	< 25 pediatric patients
4Q	etuvetidigene autotemcel	Fondazione Telethon	Pending FDA approval 11/11/2025	New biologic	No	Gene therapy, ex vivo	The treatment of Wiskott-Aldrich syndrome (WAS)	Injection–IV, one-time	400 adult and pediatric patients
4Q	Kresladi (marnetegrane autotemcel)	Rocket Pharmaceuticals	Pending FDA approval	New biologic	No	Gene therapy, ex vivo	The treatment of severe leukocyte adhesion deficiency type 1 in patients ages 3 months and older	Injection–IV, one-time	150 pediatric patients

2026 PROJECTED LAUNCHES

QUARTER	THERAPY NAME	MANUFACTURER	PHASE OF DEVELOPMENT	TYPE	BREAKTHROUGH THERAPY DESIGNATION	DRUG CLASS	INDICATION	ROUTE OF ADMINISTRATION & FREQUENCY	ESTIMATED POTENTIAL U.S. CANDIDATES
1Q	mozafancogene autotemcel	Rocket Pharmaceuticals	Phase II	New biologic	No	Gene therapy, ex vivo	The treatment of Fanconi anemia in patients ages 1–17 years	Injection–IV, one-time	< 1,000 pediatric patients
1Q	pariglasgene brecaparvovec	Ultragenyx Pharmaceutical	Phase III	New biologic	No	Gene therapy, in vivo	The treatment of glycogen storage disease type 1a in patients ages 8 years and older	Injection–IV, one-time	3,000 adult and pediatric patients
1Q	sonpiretigene isteparvovec	Nanoscope Therapeutics	Phase II	New biologic	No	Gene therapy, in vivo	The treatment of retinitis pigmentosa in adults	Injection–intraocular, one-time per eye	63,000–72,000 adult patients
1Q	Zolgensma (onasemnogene abeparvovec-xioi)	Novartis	Phase III	New formulation	No	Gene therapy, in vivo	The treatment of spinal muscular atrophy type 2 in patients ages 2–17 years	Injection–intrathecal, one-time	3,900 pediatric patients
2Q	anitocabtagene autoleucel	Arcellx, Inc./ Gilead Sciences/ Kite	Phase II	New biologic	No	Chimeric antigen receptor (CAR) T-cell therapy/ Gene therapy, ex vivo	The treatment of relapsed or refractory multiple myeloma after at least 3 prior systemic therapies in adults	Injection–IV, one-time	51,300 adult patients
2Q	bidridistrogene xeboparvovec	Sarepta Therapeutics	Phase III	New biologic	No	Gene therapy, in vivo	The treatment of limb girdle muscular dystrophy (LGMD) type 2E/R4 in ambulatory and non-ambulatory patients ages 4 years and older	Injection–IV, one-time	< 1,000 adult and pediatric patients
2Q	Breyanzi (lisocabtagene maraleucel)	Bristol-Myers Squibb	Phase II	Supplemental indication	No	Chimeric antigen receptor (CAR) T-cell therapy/ Gene therapy, ex vivo	The treatment of adults with relapsed or refractory marginal zone lymphoma	Injection–IV, one-time	11,700 adult patients

QUARTER	THERAPY NAME	MANUFACTURER	PHASE OF DEVELOPMENT	TYPE	BREAKTHROUGH THERAPY DESIGNATION	DRUG CLASS	INDICATION	ROUTE OF ADMINISTRATION & FREQUENCY	ESTIMATED POTENTIAL U.S. CANDIDATES
2Q	cretostimogene grenadenorepvec	CG Oncology	Phase III	New biologic	Yes	Gene therapy, in vivo	The treatment of high-risk, non-muscle invasive, Bacillus Calmette-Guérin-refractory bladder cancer with carcinoma in-situ with or without Ta or T1 papillary tumors	Injection–intravesical, multi-dose	27,900–55,800 adult patients
4Q	AAVAQP1	MeiraGTx	Phase II	New biologic	No	Gene therapy, in vivo	The treatment of radiation-induced late xerostomia in adults	Injection–intraparotid, one-time per gland	134,000 adult patients
4Q	DBOTO	Regeneron Pharmaceuticals	Phase I/II	New biologic	No	Gene therapy, in vivo	The treatment of congenital hearing loss due to mutations of the otoferlin gene in patients ages 17 years and younger	Injection–intracochlear, one-time per ear	810–6,500 pediatric patients
4Q	isargalgagene civaparvovec	Sangamo BioSciences	Phase I/II	New biologic	No	Gene therapy, in vivo	The treatment of Fabry disease in adults	Injection–IV, one-time	3,200 adult patients
4Q	ifezuntirgene inilparvovec (fka AMT130)	Uniqure	Phase I/II	New biologic	Yes	Gene therapy, in vivo	The treatment of early Huntington's disease in patients ages 25–65 years	Injection–intracerebral, one-time	7,000 adult patients
4Q	laruparetigene zosaparvovec	Beacon Therapeutics	Phase II/III	New biologic	No	Gene therapy, in vivo	The treatment of X-linked retinitis pigmentosa in males ages 8–50 years with a mutation in the RPGR gene	Injection–intraocular, one-time per eye	3,100–7,100 adult and pediatric patients
4Q	OCU400	Ocugen	Phase III	New biologic	No	Gene therapy, in vivo	The treatment of retinitis pigmentosa in patients ages 8 years and older	Injection–intraocular, one-time per eye	5,800–8,900 adult and pediatric patients

2027 PROJECTED LAUNCHES

QUARTER	THERAPY NAME	MANUFACTURER	PHASE OF DEVELOPMENT	TYPE	BREAKTHROUGH THERAPY DESIGNATION	DRUG CLASS	INDICATION	ROUTE OF ADMINISTRATION & FREQUENCY	ESTIMATED POTENTIAL U.S. CANDIDATES
1Q	detalimogene voraplasmid	enGene Holdings	Phase I/II	New biologic	No	Gene therapy, in vivo	The treatment of high-risk, non-muscle invasive bladder cancer with carcinoma in situ with or without papillary tumors that is unresponsive to Bacillus Calmette-Guérin therapy	Injection–intravesical, multi-dose	27,900–55,800 adult patients
1Q	RGX202	RegenxBio	Phase I/II	New biologic	No	Gene therapy, in vivo	The treatment of Duchenne muscular dystrophy in ambulatory patients ages 1 year and older	Injection–IV, one-time	1,200 pediatric patients
1Q	RPA501	Rocket Pharmaceuticals	Phase II	New biologic	No	Gene therapy, in vivo	The treatment of Danon disease in males ages 8 years and older	Injection–IV, one-time	7,500–15,000 adult and pediatric patients
1H	avalotcogene ontaparvovec	Ultragenyx Pharmaceutical	Phase III	New biologic	No	Gene therapy, in vivo	The treatment of ornithine transcarbamylase (OTC) deficiency in patients ages 12 years and older	Injection–IV, one-time	3,600–5,700 adult and pediatric patients
1H	olvimulogene nanivacirepvec (aka olvi-vec)	Genelux	Phase III	New biologic	No	Gene therapy, in vivo	The treatment of platinum-resistant or refractory ovarian cancer, in combination with platinum-based chemotherapy and bevacizumab	Injection–intraperitoneal, multi-dose	83,000 adult patients
1H	surabgene lomparvovec (fka RGX314)	AbbVie/RegenxBio	Phase III	New biologic	No	Gene therapy, in vivo	The treatment of neovascular (wet) age-related macular degeneration	Injection–intraocular, one-time per eye	2 million adult patients
2Q	NTLA2002	Intellia Therapeutics	Phase III	New biologic	No	Gene therapy, in vivo	The treatment of hereditary angioedema in adults	Injection–IV, one-time	5,700 adult patients

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3Q	ProstAtak (aglatimagene besadenovec)	Candel Therapeutics	Phase III	New biologic	No	Gene therapy, in vivo	The first-line treatment of adults with intermediate- to high-risk, localized prostate cancer, in combination with external beam radiation therapy and valacyclovir	Injection–intratumoral, multi-dose	107,000 adult patients
3Q	Tecartus (brexucabtagene autoleucel)	Gilead Sciences/ Kite	Phase I/II	Supplemental indication	No	Chimeric antigen receptor (CAR) T-cell therapy/ Gene therapy, ex vivo	The treatment of relapsed or refractory B-cell precursor acute lymphoblastic leukemia in patients ages 2–21 years	Injection–IV, one-time	2,800 pediatric and adult patients
2H	Elevidys (delandistrogene moxeparvovec-rokl)	Sarepta Therapeutics	Phase III	Supplemental indication	No	Gene therapy, in vivo	The treatment of Duchenne muscular dystrophy with a confirmed mutation in the DMD gene in patients ages 3 years and younger	Injection–IV, one-time	640 pediatric patients
4Q	cemacabtagene ansegedleucel	Allogene Therapeutics	Phase II	New biologic	No	Chimeric antigen receptor (CAR) T-cell therapy/ Gene therapy, in vivo	Consolidation therapy in adults with minimal residual disease after response to first-line treatment of large B-cell lymphoma	Injection–IV, one-time	10,200 adult patients

2028 PROJECTED LAUNCHES

QUARTER	THERAPY NAME	MANUFACTURER	PHASE OF DEVELOPMENT	TYPE	BREAKTHROUGH THERAPY DESIGNATION	DRUG CLASS	INDICATION	ROUTE OF ADMINISTRATION & FREQUENCY	ESTIMATED POTENTIAL U.S. CANDIDATES
1Q	Invossa (tonogenchoncel-L)	Kolon Group	Phase III	New biologic	No	Gene therapy, in vivo	The treatment of knee osteoarthritis	Injection–intra-articular, one-time	10.8 million adult patients
1Q	RPL301	Rocket Pharmaceuticals	Phase II	New biologic	No	Gene therapy, ex vivo	The treatment of pyruvate kinase (PK) deficiency in patients ages 8 years and older	Injection–IV, one-time	1,100–2,800 adult and pediatric patients



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FDA (U.S. Food and Drug Administration), SC (subcutaneous), IM (intramuscular), IV (intravenous).

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Source: RxPipeline, CVS Health Clinical Affairs. Information current as of June 12, 2025.

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