Pharmacy Focus:
Pipeline Therapies to Watch through 2024

Key Takeaways

- The approval trend is expected to continue toward specialty medications for rare diseases, with gene and cell therapies remaining a predominant focus.
- Gene therapies continue to be exceptionally high-cost (generally set between $2 million and $3 million for one-time infusions — but one approved in March 2024 exceeds $4 million).
- Three more new gene therapies are anticipated in the first half of 2024.
- New cell therapies also are expected, with several others awaiting expanded indications.

What's in the Pipeline?[1–7]

In 2023, the United States Food and Drug Administration (FDA) approved 55 novel drugs — new and innovative treatments that often fulfill an unmet medical need. Twenty of the 55 therapies approved were first-in-class, meaning there were no other similar alternatives to these treatments prior to their approval. Approvals have been trending toward specialty medications for rare diseases for several years, and this is expected to continue moving forward. Gene and cell therapies, in particular, remain a predominant focus, with treatments for ultra-rare hereditary diseases like leukocyte adhesion deficiency-I, a disorder of the immune system that is often fatal before the age of one, awaiting approval.

The new wave of new gene therapies also is expected to expand treatment options for rare disease states, including hemophilia B, a bleeding disorder. Many gene and cell therapies in the pipeline have received an expedited review designation, which ultimately means they could be approved within six to 10 months after the completed application is submitted for FDA review.

The costs associated with gene therapies remain exceptionally high, with prices generally set between $2 million and $3 million or more for the one-time infusions. However, in March 2024, the most expensive gene therapy in the world (to date) — Lenmeldy™, which treats metachromatic leukodystrophy – was approved, carrying a price tag of $4.25 million. These estimated prices do not include any ancillary charges, such as hospitalizations or the on-going acute care and monitoring that is needed following administration. The potential monetary impact of these therapies can be huge, which is why it is important to closely monitor the pipeline.

There are three more gene therapies with potential approval dates in the first half of 2024:

- Fidanacogene elaparvovec — a second gene therapy for hemophilia B
- EB-101 — a second topical gene therapy for epidermolysis bullosa (condition that causes fragile, blistering skin)
- Kresladi — treatment for severe leukocyte adhesion deficiency-I (LAD-I)

Other rare disease states with potential gene therapies up for approval in 2024 and into early 2025 include:

- Fanconi anemia, a blood disorder;
- Aromatic l-amino acid decarboxylase deficiency (AADC), a genetic neurodevelopmental disorder; and
- Duchenne muscular dystrophy (DMD), a neuromuscular disease, for which Elevidys currently is approved for young males ages four to five years, and expanded indication is awaiting approval.

There also are several cellular therapies in the oncology field seeking approval, while several therapies that already have FDA approval – like Carvykti® and Abecma® – are awaiting potential expanded indications.

Rare Diseases and Pipeline Gene and Cell Therapies[1,3,4,6,8]

Disease	Therapy*	Anticipated Review Timing
AADC Deficiency	Upstaza™ (eladocagene exuparvovec)	Q1 2025
Acute Lymphocytic Leukemia	AUT01 (obecabtagene autoleucel)	11/16/2024
Duchenne Muscular Dystrophy	Elevidys (delandistrogene moxeparvovec)	6/21/2024 (expanded use)
Epidermolysis Bullosa	EB-101 (prademagene zamikeracel)	5/26/2024
Fanconi Anemia	RP-L102	Q4 2024
Hemophilia B	PF-06838434 (fidanacogene elaparvovec)	4/27/2024
Leukocyte Adhesion Deficiency-I	Kresladi (marnetegragene autotemcel)	6/30/2024
Marginal Zone Lymphoma Follicular Lymphoma	Breyanzi® (lisocabtagene maraleucel)	2024 (possible expanded use)
Multiple Myeloma	Abecma® (idecabtagene vicleucel) Carvikti® (ciltacabtagene autoleucel) Zevorcabtagene autoleucel	Q2 2024 (expanded use) 4/5/2024 (expanded use) Q4 2024

**If common names for therapies are listed, such names are not guaranteed to remain the same upon market approval.*

Number of Pipeline Therapies for Additional Diseases[1,4,6,8]

The diseases noted below all have potential therapies in the late phases of clinical trials. The number listed represents the possible drugs/therapies that could receive market approval in 2024 for the treatment of that disease.

Disease	Therapies
Acute Lymphoblastic Leukemia	2
Acute Myeloid Leukemia	2
Bladder Cancer	1
Chronic Myeloid Leukemia	1
Hemophilia A/B	3
Hepatocellular Carcinoma	2
Mucopolysaccharidosis (All Types)	4
Multiple Myeloma	3

Disease	Therapies
Myasthenia Gravis	2
Myelodysplastic Syndromes	1
Niemann-Pick Disease	1
Non-small Cell Lung Cancer	4
Paroxysmal Nocturnal Hemoglobinuria	2
Primary Biliary Cholangitis	1
T-cell Lymphoma	2

Cost Containment Considerations

As part of its HMConnects™ cost containment program, HM Insurance Group (HM) works to support cost management opportunities around the use of gene and cell therapies and other high-cost pharmaceutical treatment options that can impact our clients' bottom line. The Pharmacy Operations (RxOps) team watches the market – and our book of business – to anticipate how current and future advancements will impact financial risk levels for HM's client base. Standard practices include reviewing, auditing and collaborating on the content of current policies, monitoring trends and implementing appropriate cost savings techniques. Additional practices include the prevention of stockpiling, working to ensure prescriptions are filled via in network pharmacies and assessing to determine if patients are properly dosed based on weight and lab values when appropriate. All these services are provided to HM's clients at no additional cost to them.

Pharmacy Focus provides valuable information about pharmaceutical industry developments and their associated costs that can impact the growing claims trend in the self-funded insurance market. Be aware of influences and gain insight into approaches that may help to contain costs. Please share topic suggestions or feedback with **HMPharmacyServices@hmig.com**.

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Sources: [1]Magellan RX Report: Medical and Pharmacy Benefit Management, Spring 2024, Magellan Rx Management, http:/ issuu.com/magellanrx/docs/24-mrx-01_spring_report_online, accessed March 29, 2024; [2]Justiz Vaillant AA, Ahmad F., Leukocyte Adhesion Deficiency. [Updated 2023 Jul 3]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-., available from: https://www.ncbi.nlm.nih.gov/books/NBK539770/; [3]Cellular & Gene Therapy Products: Approved Cellular and Gene Therapy Products, FDA.gov, https://www.fda.gov/vaccines-blood-biologics/cellular-gene-therapy-products/approved-cellular-and-gene-therapy-products, accessed March 28, 2024; [4]RxOutlook: 1st Quarter 2024, OptumRX, ORX6204-230222_B2B-NEWSLETTER_RxOutlook Q1_FINALv2.pdf (optumrx.com), accessed March 28, 2024; [5]Orchard Sets $4.25M US Price for Gene Therapy Lenmeldy on Heels of Approval," Biospace, https://www.biospace.com/article/orchard-sets-4-25m-us-price-for-gene-therapy-lenmeldy-on-heels-of-approval/, accessed March 20, 2024; [6]Drug Pipeline Report: 1H 2024, IPD Analytics, January 2024; [7]Fast Track, Breakthrough Therapy, Accelerated Approval, Priority Review, FDA.gov, www.fda.gov/patients/learn-about-drug-and-device-approvals/fast-track-breakthrough-therapy-accelerated-approval-priority-review, accessed March 29, 2024; [8]2024 Gene Therapy Pipeline Q1 2024-Q4 2026: Projected Treatments and Launch Timelines, CVS Health, http:insightslp.cvshealth.com/rs/161-LXO-491/images/REPORT-Q1-2024-Gene-Therapy-Pipeline-CVS-Health-February-2024.pdf?version=0&trk=public_post_comment-text, accessed March 28, 2024.

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