PRECISION ADVANCE the cell & gene therapy collective™

Cell and Gene Therapies:
How High Can Prices Go?

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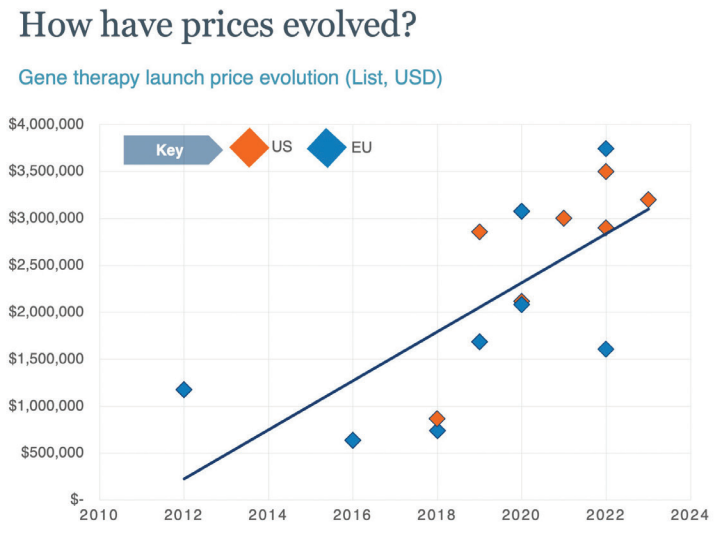
This white paper is based on a webinar convened by PRECISIONadvisors, focusing on cell and gene therapy (CGT) pricing. The webinar featured two in-house experts from the PRECISIONadvisors Global Pricing & Market Access practice:

- **Richard Macaulay**, Senior Vice President
- **David Carr**, Senior Director

What are CGT prices and how have they been justified?

As of this writing, 11 gene therapies have launched in the United States and the European Union (EU), starting with the 2012 approval of Glybera for lipoprotein lipase (LPL) deficiency syndrome. The pace of approvals peaked in 2022, when Roctavian and Upstaza were introduced in the EU, and Hemgenix launched in both the US and EU. And, this June, Elevidys for Duchenne muscular dystrophy (DMD) has been approved in the US.

As Figure 1 illustrates, the first four gene therapies launched at list prices of roughly $1 million per patient (PP). However, since then, launch prices have climbed steadily higher, peaking at more than $3.5 million PP for Hemgenix.



Gene Therapy	US List Price	EU List Price	Approval Date
Glybera	N/A	€1,100,000	2012
Strimvelis	N/A	€594,000	2016
Luxturna	$865,000*	€690,000*	2018
Zynteglo	$2,856,000	€1,575,000	2019
Zolgensma	$2,114,847	€1,945,000	2020
Libmeldy	N/A	€2,875,000	2020
Skysona	$3,000,000	N/A	2021
Upstaza	N/A	€3,500,000	2022
Roctavian	$2,900,000	€1,500,000	2022
Hemgenix	$3,500,000	N/A	2022
Elevidys	$3,200,000	N/A	2023

* both eyes

Figure 1. **Gene therapy launch list price evolution (USD)**

Our experts looked at how the Institute for Clinical and Economic Review (ICER) assessed two CGT examples: Zolgensma and Hemgenix. Whereas the value of Zolgensma, a treatment for spinal muscular atrophy (SMA), is largely driven by transformational gains in quality-adjusted life-years (QALYs), the value of Hemgenix is driven by the lifetime cost savings of replacing clotting factor, the existing standard of care for hemophilia B (Figure 2).

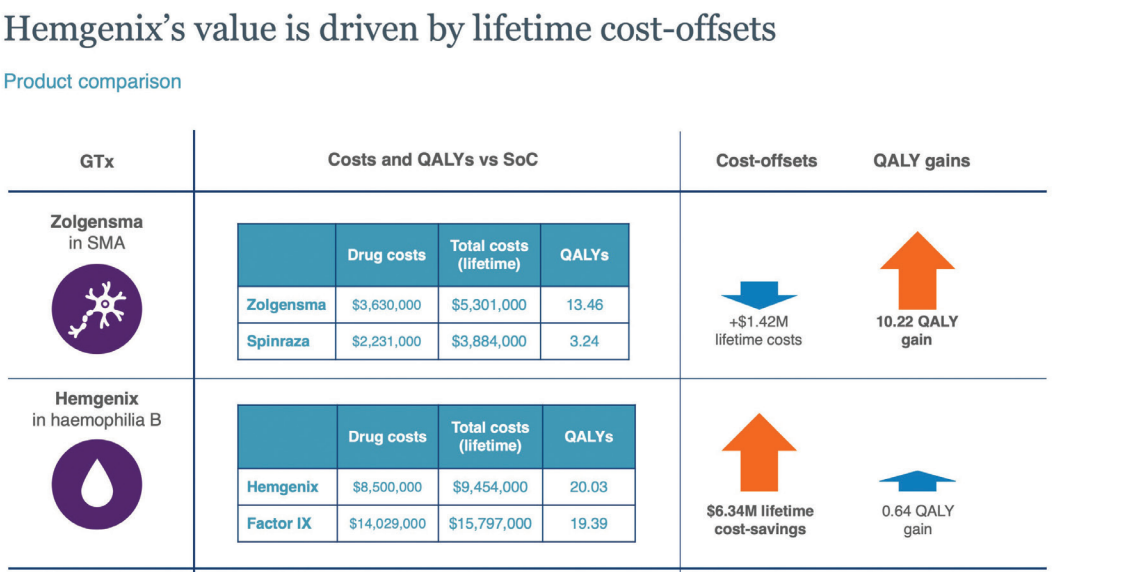


Figure 2. **Zolgensma and Hemgenix ICER report comparison**

The ICER assessment places these therapies at opposite ends of a CGT value proposition archetype continuum (Figure 3).

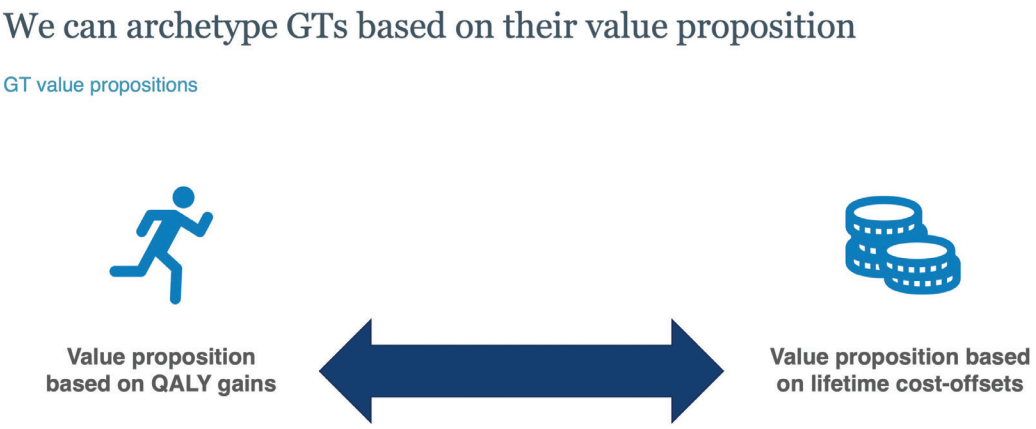


Figure 3. **Archetyping CGTs based on their value proposition**

How high can CGT prices go?

The concept of optimizing CGT value propositions begs the question of what is reasonable when it comes to breakthrough science and unprecedented therapeutic solutions. Can a $5 million price tag be justified? What about $10 million?

To answer those questions, our experts presented a concept study of seven hypothetical CGTs, to indicate how they may be cost-effective based on the ICER cost-effectiveness (CE) threshold of $150,000 per QALY (Figure 4). Products A, B, and C illustrate varying positions along the archetype continuum that are all cost-effective at a $5 million price tag. The same principle applies to products D, E, and F, which are also cost-effective at $10 million.

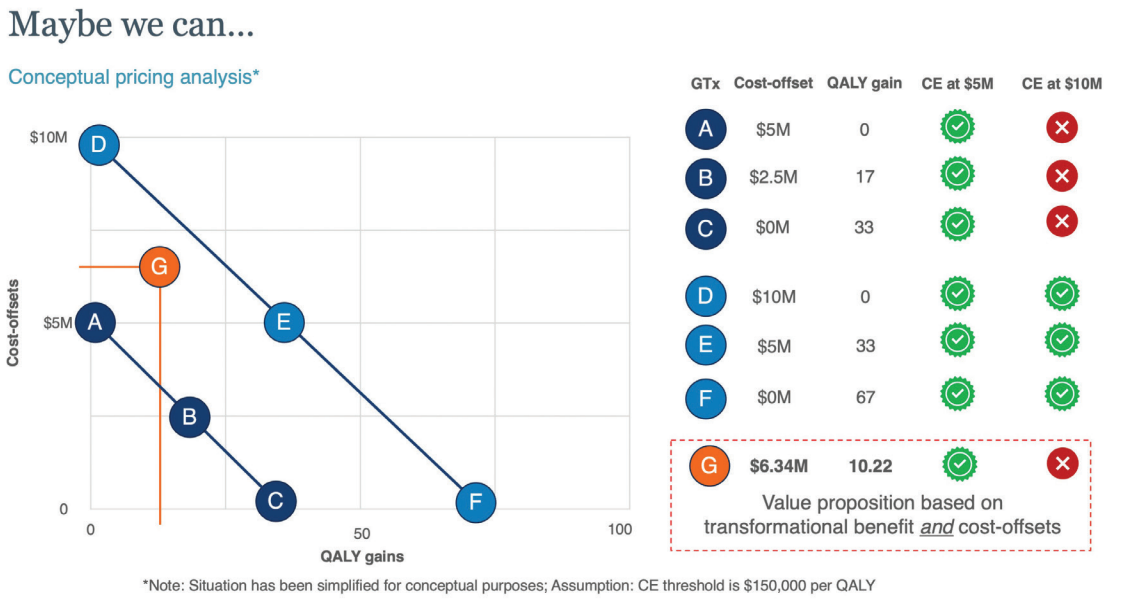


Figure 4. **Conceptual pricing analysis for seven hypothetical gene therapies**

Under this model, Product G, with a cost-offset of $6.34 million (analogous to Hemgenix) and 10.22 QALYs gained (analogous to Zolgensma), would hit an optimal value proposition based on transformational benefit and cost-offsets. But is that realistic?

To be justified, that value proposition would need to replace a high-cost chronic therapy while also delivering substantial clincal benefits by addressing a remaining unmet clinical need despite the availability of an existing, expensive standard of care. Nevertheless, there are numerous therapy areas associated with significant disease burden and premature mortality, despite the existence of high-cost standards of care (such as DMD).

What next for CGT manufacturers?

As prices continue to increase, CGT manufacturers will aim to validate price tags through value-based argumentation driven by cost-offsets or QALY gains, or by clinical benefit. However, upfront costs will likely impact budgets significantly, while cost savings and health benefits may only be realized after many years. Those impacts, combined with uncertain durability of therapeutic effects, will intensify payer scrutiny on CGT evidence packages and reimbursable populations. However, payers still have an appetite to make CGTs available, based on their potentially transformational benefits and substantial long-term cost savings. Manufacturers just need to meet them on common goals.

Pricing for value

CGT manufacturers must price their products based on the value that they offer patients. Yet, whatever price they set, manufacturers must effectively communicate the rationale behind that price, whether based on cost offsets, cost-effectiveness, or other parameters, in a timely, compelling, and evidence-backed manner.

CGT manufacturers must **price their products based on the value** that they offer patients.

Fostering flexibility in contracting

It behooves manufacturers to advocate for more flexible pricing and contracting agreements, including outcomes-based agreements and other innovative solutions. The new economic environment may see a push toward more innovative reimbursement models to help bridge gaps between patient access, manufacturer investment, and what payers can afford to pay. Manufacturers and payers should thus be proactive in overcoming sticking points and impediments to value-based contracts.

Adapting to different markets

It is also important for manufacturers to tailor their value propositions to different payer methodologies and archetypes, particularly in key launch markets. While it may be tempting to apply a US-based analysis to other countries, it is important to remember that the ICER CE threshold is higher in the US than in other markets such as Canada, Australia, and the UK. Additionally, cost-effectiveness is much less relevant in markets such as France and Germany, which focus more on patient-relevant morbidity, mortality, and quality of life. Manufacturers must therefore consider the benefits to the wider health care system, while aligning commercial expectations with markets' perceptions of value drivers.

Conclusion

Future CGTs may be cost-effective at even higher prices than those for existing gene therapies. Those prices will surely draw increased payer scrutiny, and may amplify calls for post-launch evidence generation, including real-world evidence. We can also expect more flexible pricing and contracting agreements, including outcomes-based agreements, between manufacturers and payers, as well as an increasing trend toward public-private partnerships designed to share risk and support implementation of innovative solutions.

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Precision ADVANCE, a collection of interconnected services and complementary teams, uniquely focuses on the complexities of clinical, regulatory, manufacturing, and commercial needs to successfully bring cell or gene therapies to market.

Connect with one of our experts. Contact us at precisionadvance@precisionmedicinegrp.com.
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