A Long-Term Forecast of the Economic Impact of Gene Therapies in France

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Introduction

Many gene therapy candidates are currently being developed across a range of different indications. These imminent gene therapies will have significant impact on sustainability of healthcare budgets.[1]

This calls for more robust models forecasting the economic impact of gene therapies.

This research aims to build a forecasting model of all gene therapies marketed or in development over the period of 2022-2030, to assess their impact on France's pharmaceutical budget.

Materials & Methods

Clinical studies of gene therapies were identified and key information extracted via clinicaltrials.gov[2] and ct.catapult.org.uk.[3]

Timing to first commercial patients, probability of success, price estimates and annual treatment penetration rates were estimated based on analysis of historical data and Inbeeo's algorithms.

The model featuring budget impact in France was built in Excel 365 with VBA 7.1.

Results

Between 2022 and 2030, 36 new gene therapy treatments are expected to reach the market, with up to 9 in a single year, i.e. the year 2027 (Figure 1).

By 2030, more than 117,700 patients could be treated annually in France by a gene therapy, which would represent 3.5% of the total eligible population (Figure 2).

Leading indications would include haematological cancers, cardiovascular diseases and solid tumours, with 33,500, 32,900 and 23,700 annual patients in 2030, respectively (Figure 3).

Figure 1: Expected Number of Gene Therapy Launches

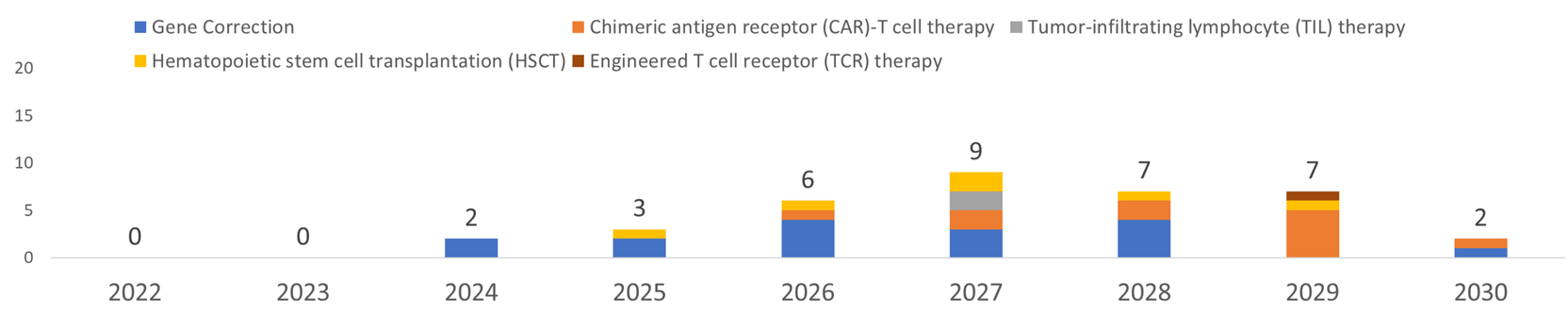


Figure 2: Expected Number of Total Eligible and Forecasted Patients

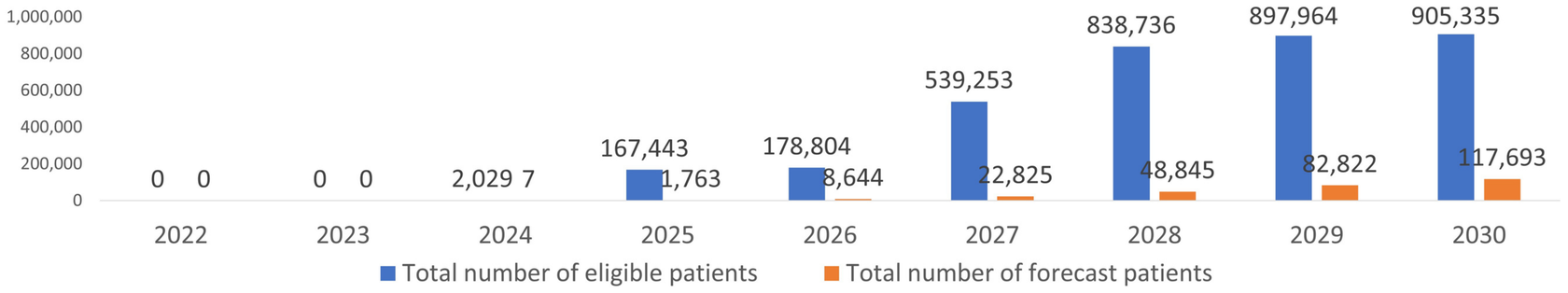
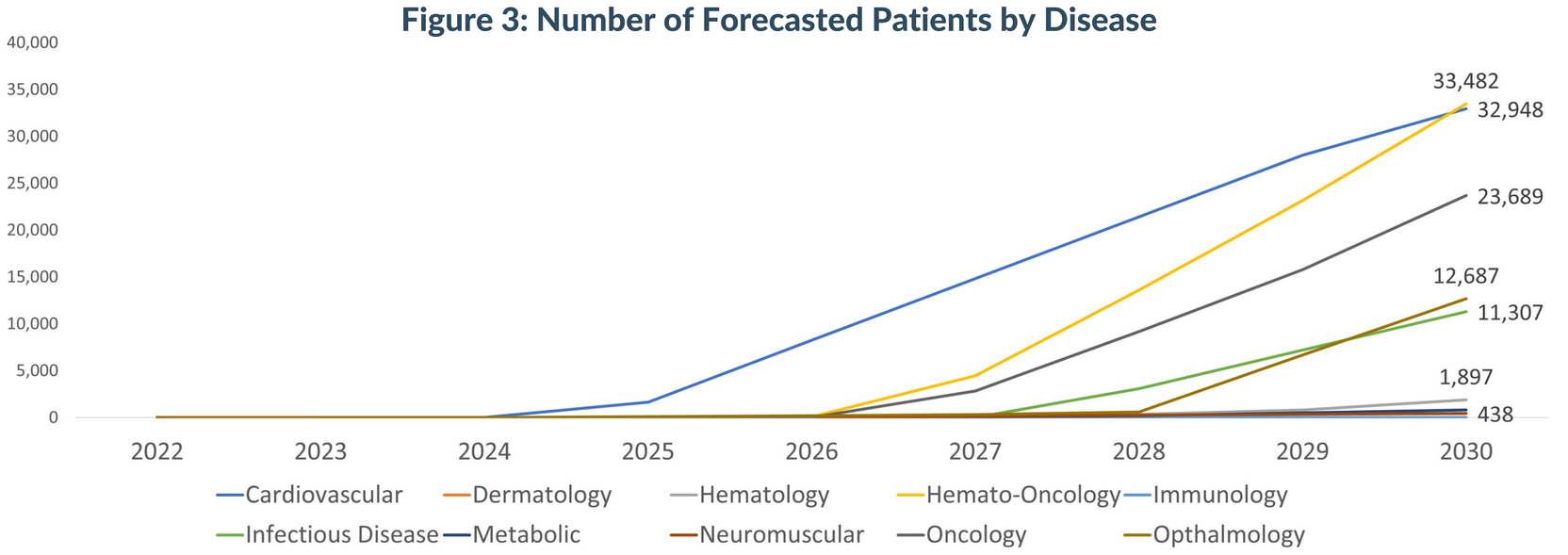


Figure 3: Number of Forecasted Patients by Disease



Conclusion

Our model outlines the acceleration of gene therapy uptake particularly in oncology, driven in the near-term by gene correction treatments, and eventually transitioning to CAR-Ts in the longer term.

These data could be used to inform both internal and external stakeholders' pricing and market access narratives.

The model also points to a potential need to rethink the ecosystem (e.g., infrastructure of care, financing model, etc.) for these disruptive, innovative products.

References

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