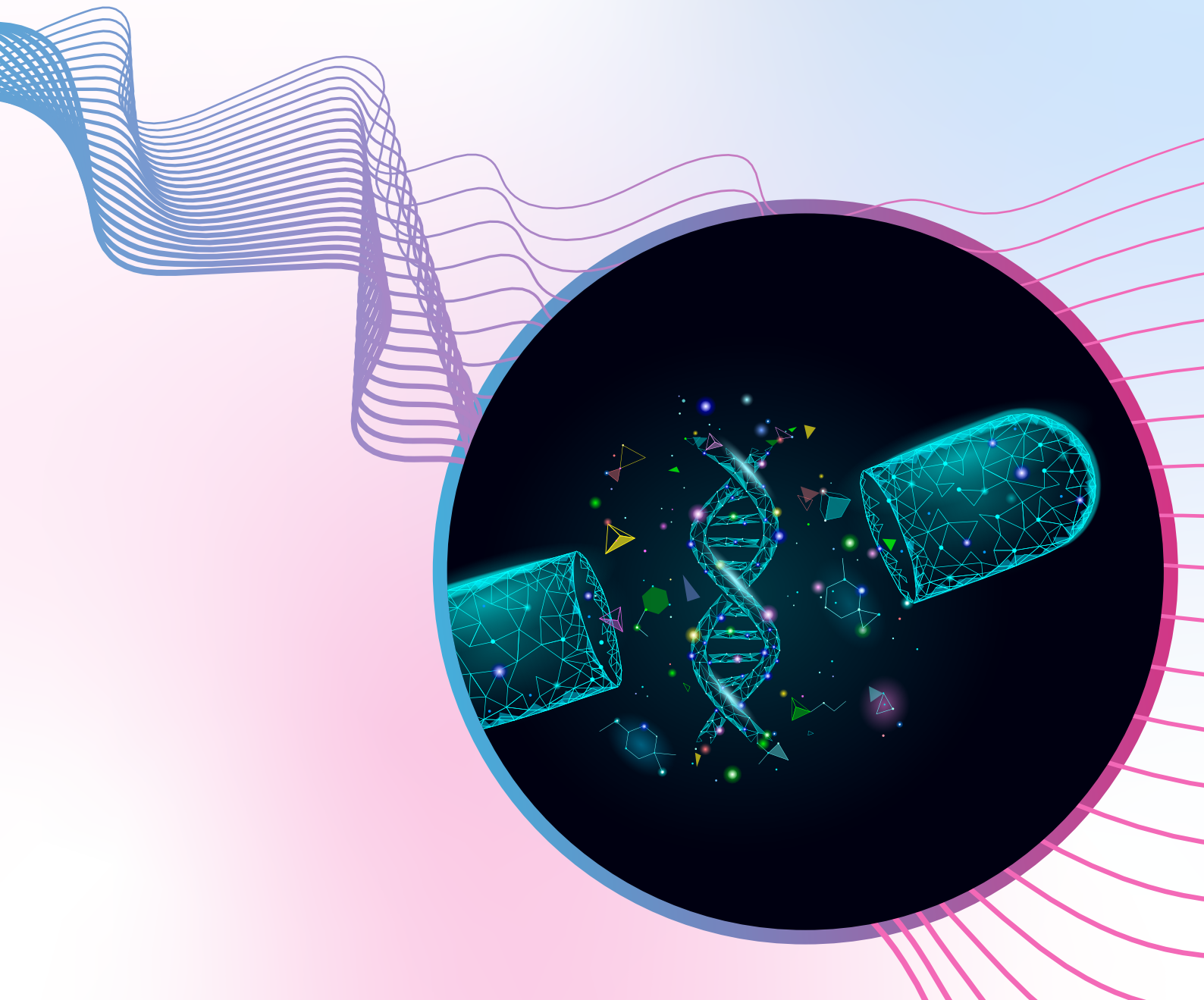


excelra

Portfolio augmentation for a potential biologic drug

CASE STUDY



Purpose

The partner had a large molecule asset that was under development for blood cancer. They were interested in expanding the therapeutic potential of the molecule to solid tumours to augment the existing portfolio.

Client



Industry
Biotech



Location
Europe



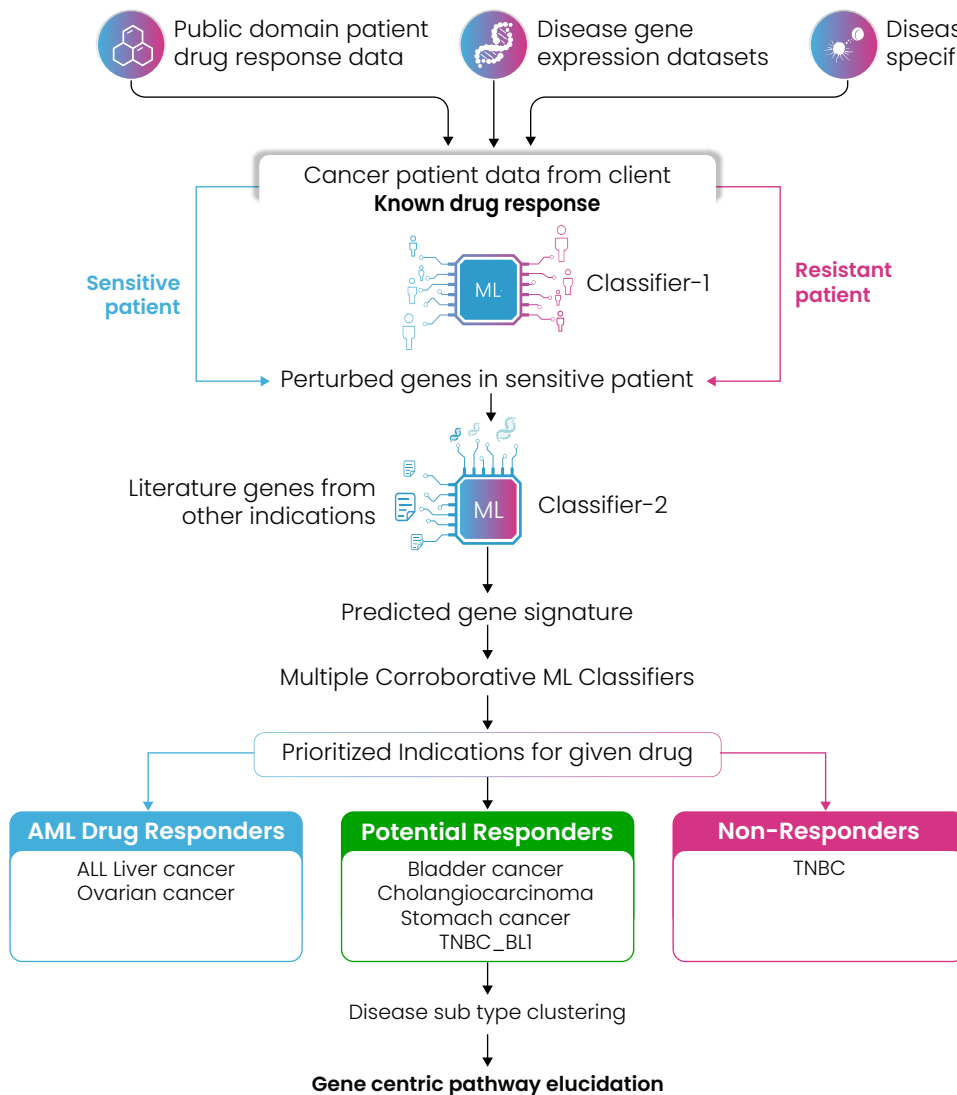
Sector
Oncology

Client requirement

The focus was on leveraging public gene expression data-sets from cancer patients treated with a drug candidate with similar mechanism of action. Machine-learning based predictive models were built using information on drug responsiveness and disease gene signatures.

Our approach




Predictive models were built using an iterative approach wherein patient-level and disease-level gene expression profiles were used as input data. Clustering of cancer indications was done to prioritize indications which were potentially sensitive to the treatment. Biological rationale was built for each of the prioritized indications by converging the drug mechanism of action with disease pathophysiology.



Our contribution

- ✓ Excelra facilitated portfolio optimization and expansion for the partner, by prioritizing 10 oncology indications, a mix of solid & liquid tumors types.
- ✓ ALL (acute lymphoblastic leukemia) determined as a top-priority indication by Excelra, was further confirmed by the client, that successfully validated our approaches.
- ✓ Prediction of drug-response at a cancer subtype level.
- ✓ Determined causal gene signatures and provided a comprehensive biological rationale and pathway analysis.
- ✓ Portfolio enhanced for next 2 years.
- ✓ Increased application of partner's technology platform & external validation.
- ✓ Potential revenue generation >\$2Bil*

Our service portfolio

 <p>Data</p>	<p>Data curation Filter out the noise, focus your attention</p> <p>Clinical data Analysis-ready data for informed clinical decision-making</p> <p>Semantic data Refine your decisions, find your value</p>
 <p>Insights</p>	<p>Bioinformatics Illuminating the path to faster discoveries</p> <p>Data science Unlock the power of data</p> <p>Visualization Pictures paint a thousand words</p>
 <p>R&D technology</p>	<p>Product design and development Unlock your potential with data-driven design and development</p> <p>Cloud enablement Optimize your output on the cloud</p> <p>Data engineering Mitigate risks, protect your data, and rationalize your portfolio and processes.</p>



Where data means more

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