

Case Study

Portfolio Augmentation for a Potential Biologic Drug

The 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.

About the Client



INDUSTRY
Biotech



LOCATION
Europe



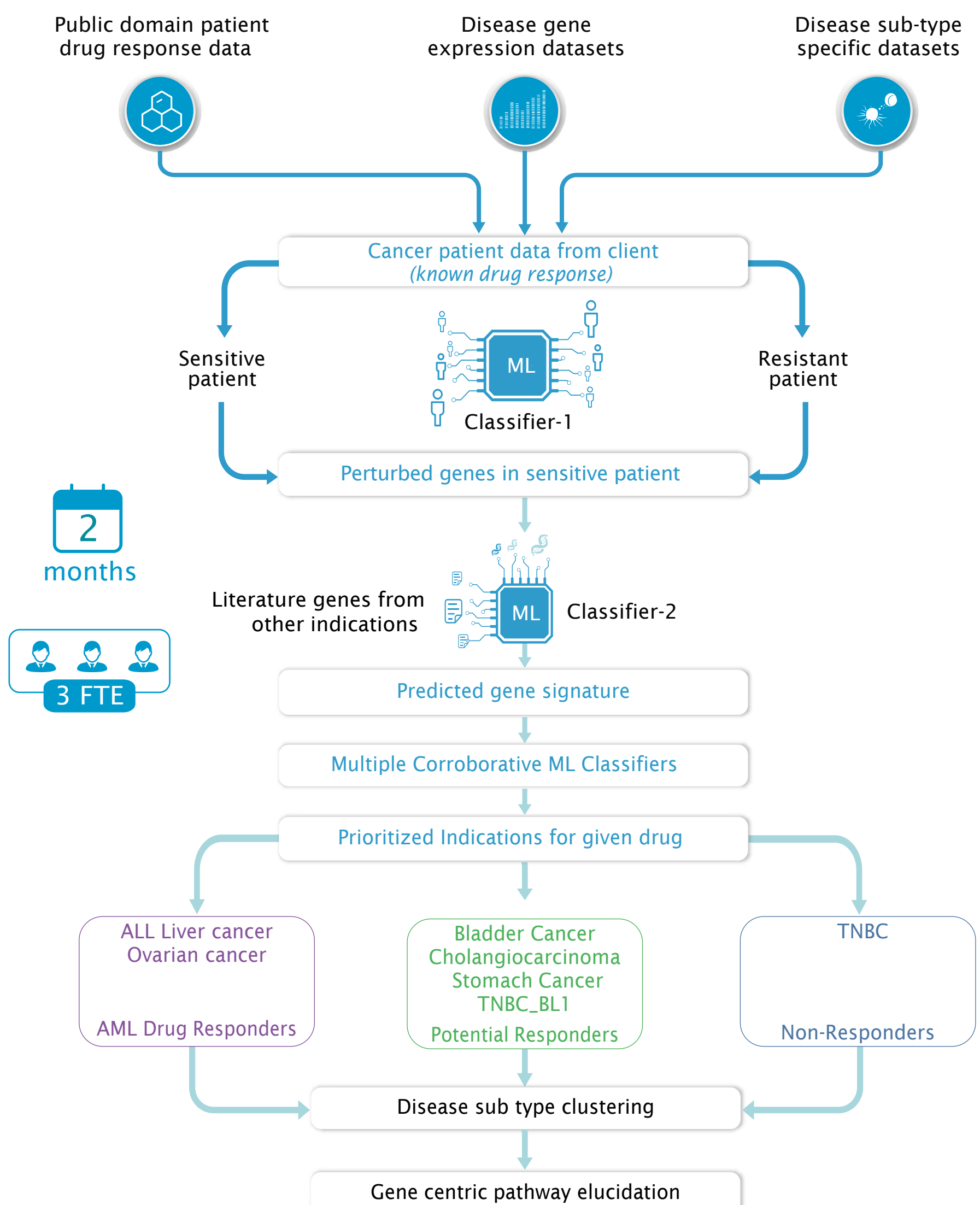
THERAPEUTIC AREA
Oncology

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.

The Excelra 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 as each of the prioritized indications by converging the drug mechanism of action with disease pathophysiology.



Excelra’s 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.

Created value for shareholders and the Board to fund future programs.

Potential revenue generation >\$2Bil*.

Excelra’s Service Portfolio

	Insights	Data
<div><div>Discovery</div></div>	<ul style="list-style-type: none">• Data Science Driven Drug Discovery• Target Identification• Target Dossier Services	<ul style="list-style-type: none">• Chemistry Curation Services• GOSTAR <i>Structure Activity Relationship database</i>
<div><div>Translational</div></div>	<ul style="list-style-type: none">• Biomarker Discovery• Drug Repositioning• Life Cycle Management• Systems Biology Informatics	<ul style="list-style-type: none">• Biology Curation Services• GOBIOM <i>Biomarker intelligence database</i>
<div><div>Clinical</div></div>	<ul style="list-style-type: none">• Precision Oncology Informatics• Clinical Pharmacology	<ul style="list-style-type: none">• Clinical Trial Outcomes Database
<div><div>Value Evidence</div></div>	<ul style="list-style-type: none">• Outcomes Research• Epidemiology Modelling• Economic Modelling• Value Evidence Communication	<ul style="list-style-type: none">• RWE & Big Data Realization• SLR & Meta-analysis
<div><div>Technology Solutions</div></div>	<ul style="list-style-type: none">• Enterprise Data Strategy• Enterprise Cloud Ops• Enterprise Digital Transformation	

For more information, visit https://www.excelra.com/clinical/#precision_oncology



About Excelra

Excelra's data and analytics solutions empower innovation in life sciences across the value chain from discovery to market. The Excelra Edge comes from a seamless amalgamation of proprietary curated data assets, deep domain expertise and data science. The company's multifaceted teams harmonize and analyse large volumes of disparate unstructured data using cutting-edge technologies. We galvanize data-driven decisions to unlock operational efficiencies to accelerate drug discovery and development. Over the past 18 years, Excelra has been the preferred data and analytics partner to over 90 global clients, including 15 of the top 20 large Pharma.