

# Challenges & Management of a multinational Biotechnology & Innovation Startup

The  **BIOMAKERS**<sup>®</sup> Case  
MOLECULAR PATHOLOGY & RESEARCH



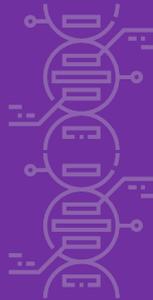
## Transforming genomic testing and global data-driven Drug Discovery through Precision Medicine building the largest tumor biobank in LATAM

Enabling precision diagnosis, treatment and drug  
discovery for cancer and complex diseases through  
genetic & molecular testing and technology development.

In Biomakers we allow the individualization of treatments and provide personalized therapeutic solutions through genetic testing and molecular diagnosis.



### BIOMAKERS TUMOR BIOBANK IS THE LARGEST IN LATIN AMERICA



We collect, generate and analyze genomic & clinical data from advanced-stage cancer patients, creating the biggest advanced tumor **BIOBANK** in Latin America and collaborating with the development & discovery of more personalized and effective target drugs **globally**.

# The Founders

Deep expertise  
in oncology &  
genomics.



**NICOLAS KIRCHUK**

CEO & Co-Founder

20 years of Trajectory  
the Cancer Drug  
Development Space

DIAGNOSTICO  
MAIPU

RA  
IncUBate

AAIPHARMA

upf.  
Universitat  
Pompeu Fabra  
Barcelona



UBA  
Universidad de Buenos Aires  
*Argentina virtus robor et studium*



**RUBEN SALANOVA**

CMO & Co-Founder

15 years of experience in Oncology  
Diagnostics & Molecular Pathology



UBA  
Universidad de Buenos Aires  
*Argentina virtus robor et studium*

# We are the largest genomic testing and diagnostics platform for cancer in LATAM

LARGEST

TUMOR BIOBANK  
IN LATAM

35K

LATAM SPECIMENS  
COLLECTED

170K

GENOMIC TESTS  
PERFORMED

5K

PHYSICIANS USING  
TESTING SERVICES

We help Pharmas to recruit for clinical trials and identify drug candidates through genetic characterization of **Cancer Patients**.

40+

PARTNERSHIPS WITH PHARMA  
ACROSS LATAM & US

OUR CURRENT CLIENTS:



# OPERATING ACROSS ALL OF LATAM & USA

- Testing across 17 countries
- 3 Own Genomic Testing Labs



# BIOMAKERS GENOMIC & DATA FACILITIES

- Recoleta, Ciudad de Buenos Aires. Argentina
- Rincón del Pedregal, Ciudad de México. México
- Bella Vista, Sao Paulo. Brazil
- San Francisco, California. Estados Unidos – Data Office



## OUR MULTI-PLATFORM TESTING TECHNOLOGIES



Ldylta



NGS



FISH



PSR Secuenciación Sanger



PCR Real Time



PCR Real Time



DNA Extraction Robotization



BEEAMing



IHQ Automatizada



IHQ Automatizada



PCR Digital



# ARGENTINA AND LATAM BIOTECH / HEALTH TECH STARTUP LANDSCAPE

<p><b>PREVENTION</b></p> <p>medpass, psicologia viva, SOUSmile, IDOC3, AMPARO, beep!, vitamíne-se, welbe, WJS, yana, zenklub</p>	<p><b>TREATMENT</b></p> <p>cheiz, examedí, kompa, mediclic, moens, MIDOCONLINE, Placi, PLENNNA, sofía, tani, theia, ViBe</p>	<p><b>SUPPLY CHAIN</b></p> <p>farmalisto, InvestFarma, mevo, prizz</p>
<p><b>DIAGNOSIS</b></p> <p>cardiotrack, ISA, medictalks, neo, NEURALMED, vivanta</p>	<p><b>HEALTH HARDWARE</b></p> <p>eva</p>	<p><b>RESEARCH</b></p> <p>BIOMARKET, eolo PHARMA, BIA</p>
<p><b>CARE</b></p> <p>KLIVO, nilo SAUDE, PROSPERIA</p>	<p><b>FINANCE</b></p> <p>alice, alineahhealth, betterfly, iza, LIVANCE, pipo saúde</p>	<p><b>2022 LATIN AMERICA HEALTH TECH 50</b></p> <p>Holon IQ</p>
<p><b>SYSTEMS</b></p> <p>Conexa+, osena, vittude, WURU</p>		

ARGENTINA AND LATAM BIOTECH / HEALTH TECH STARTUP LANDSCAPE

# Despite LATAM representing 8.5% of the World Population

There are almost no Latin American genotypes & clinical data used in Drug Discovery.

**NEW CANCER COMPOUNDS  
ARE MOSTLY DEVELOPED  
WITHOUT LATAM GENOTYPES**

In the context where **9 out of 10** cancer Drugs are currently developed based on genetic data.

**LATAM HAS POOR  
CLINICAL TRIAL  
REPRESENTATION**

Less than **3%** of the oncology clinical trials are active for patients in **LATAM**.





2/3

Of the cancer patient  
Population in **LATAM**  
do not have access to  
predictive genetic testing  
& targeted treatments

# OUR PURPOSE

## Mission-Vision

**TO TURN ADVANCED CANCER INTO A CHRONIC DISEASE**



GENOMIC TESTING &  
CANCER MONITORING

PATIENT ENROLLMENT IN  
CLINICAL TRIALS



NOVEL  
TARGET DISCOVERY

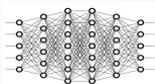
DRUG DISCOVERY



Plataforma Única  
de Testeos  
Oncológicos

REAL WORLD DATA  
& TESTING  
DIGITAL PLAFORM

BIOINFORMATIC  
ANALYSIS PIPELINE



AI TREATMENT DECISION  
MAKING ALGORITHM

BIG DATA ANALYSYS



THE MARKET IS GLOBAL. THINK GLOBAL.

# THE COMPETITION COULD BE ANYWHERE IN THE WORLD



# THE TEAM & THE CHALLENGES FOR TALENT MANAGEMENT

**80 Highly Trained Professionals**

- Molecular Biologists
- Molecular Pathologists
- Biotechnologists
- Biochemists
- Oncologists
- Engineers
- Geneticists
- Bioinformaticians



**ROMINA GIROTTI PH.D.**  
Biomarker Development



**VIVIANA SILES PH.D**  
CTO



**ERIKA VON EUW PH.D.**  
Target & Drug Discovery  
Consultant



**ANREA MENDOZA PH.D**  
R&D Head



**MANUEL BIBILONI**  
General Manager



## Advisory Board



**CLARISA ESTOL**  
Executive Committee Member  
*Former President of Banco Hipotecario  
& Board Member of Grupo IRSA*



**CLAUDIO MARTIN M.D.**  
Advisor  
*Key Opinion Leader In Thoracic Tumors  
In Latin America*



**OSCAR ARRIETA M.D.**  
Advisor  
*Key Opinion Leader in Thoracic  
Tumors In Latin America*



**GUILLERMO MENDEZ M.D.**  
Advisor  
*Key Opinion Leader In Gastrointestinal  
Tumors In Latin America*

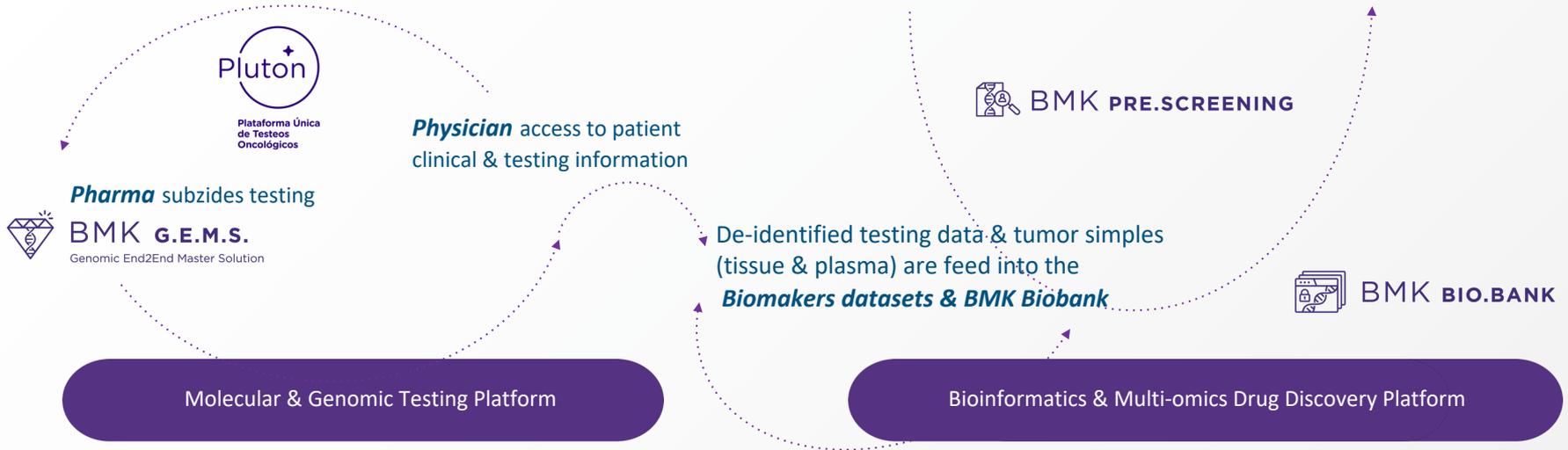
**Biomakers** has built the largest and only end-to-end data infrastructure for the entire cancer patient journey in **Latin America** with a complex and robust revenue model including patients, physicians, pharma & CROs:

**Predictive Genomic Testing**

**FDA Approved Personalized treatment**

**Clinical Trial Screening & Enrollement**

**Investigational Treatment Access**

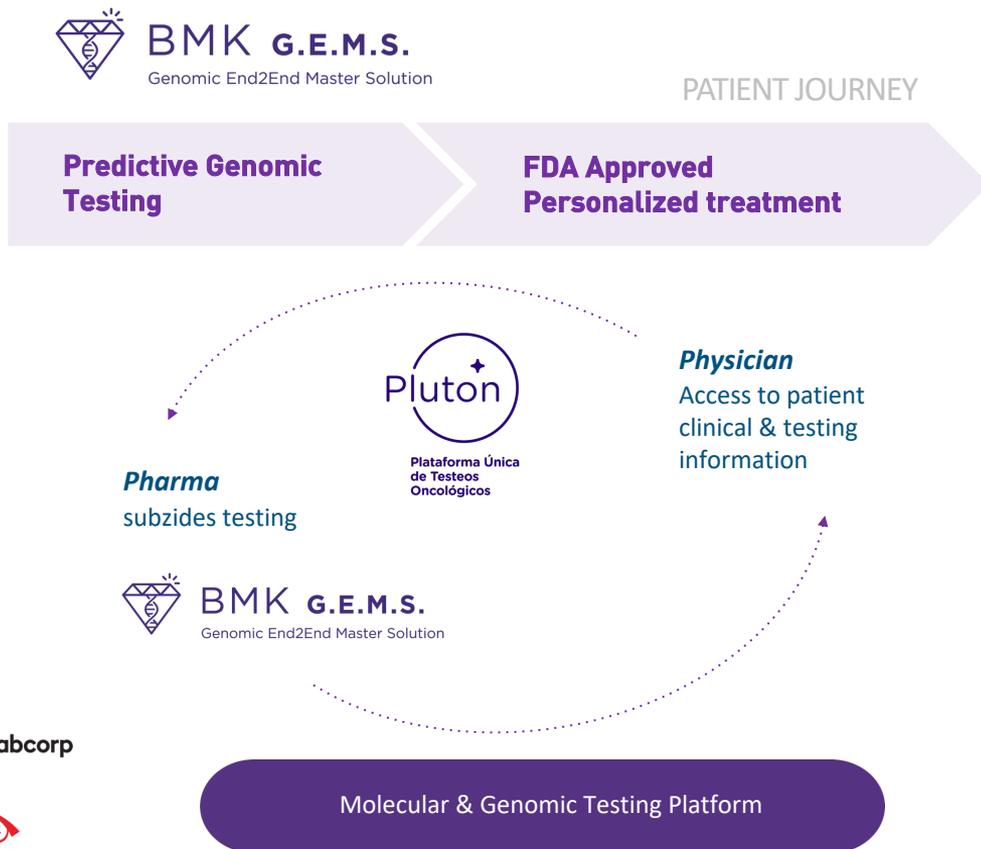


# HOW IT WORKS

1. Pharma subsidizes **genomic testing** to increase access to their branded targeted therapies.
2. Test ordering, clinical information gathering and treatment recommendation is streamlined for providers (Physicians) via the **PLUTON platform** at no cost to increase **BIOMAKER's** access to clinical data and to make users develop their own Data Base and Real World Data repository.



## Molecular & Genomic Testing Platform



# DATA & BIOBANK

## Business Model



Genomic Data enables drugs to be designed based on the biological mechanisms increasing the number of potential targets.



Targets with genetic evidence have higher Success rate and significantly speed up the development process.

## WHAT BIOMAKERS PROVIDES

1.

Access to Genomic & Clinical data to find potential candidates for Clinical Trials

2.

Access to Genomic & Clinical data from our BIOBANK to provide specific information about the prevalence of certain types of mutations in a specific country/region

3.

Access to raw exome Sequencing Data + Clinical Data from samples of our Tumor Biobank for Target & Drug Discovery projects

4.

Access to tumor tissue from our Tumor BIOBANK for Diagnostic Kit Development

5.

Access to Analyzed and Curated Data (Exome Wide Association Study or BMK Gene Candidate Engine) from samples of our BIOBANK to enable Drug Discovery

## OUR CLIENTS

PHARMA &  
CROS

PHARMA

PHARMA &  
BIOTECHS

DIAGNOSTIC  
COMPANIES

PHARMA &  
BIOTECHS

# CREATING MOATS IS THE KEY TO SUCCESS

## Technology Product Development



### Genomic End2End Master Solution for Pharma

Comprehensive genomic & molecular testing Programs for cancer patients in Latin America sponsored by Pharma.



### Interactive Digital Genomic Platform (Pluton) for Physicians

To order tests, manage and organize clinical and molecular data.



### BMK Pre-Screening Program for CROs & Pharma

Testing Patients in LATAM to massively identify candidates for clinical trials and increase the Enrollment.



## BIOINFORMATICS, BIOBANK & DRUG DISCOVERY PLATFORM



### Artificial Intelligence Platform & Data Lake

To predict cancer treatment outcomes and determine the best treatment pathway for each patient.



### BMK Biobank

The largest Latin-American advanced-stage tumor. **Biobank:** 15,000+ DNA & 20,000 tissue tumor samples.



### Bioinformatic Integrated Technology

To develop our own Tumor Exome wide association study Platform and give access to our data in different levels.



### Target Gene Candidate Engine: An AI Algorithm & Bioinformatic Pipeline

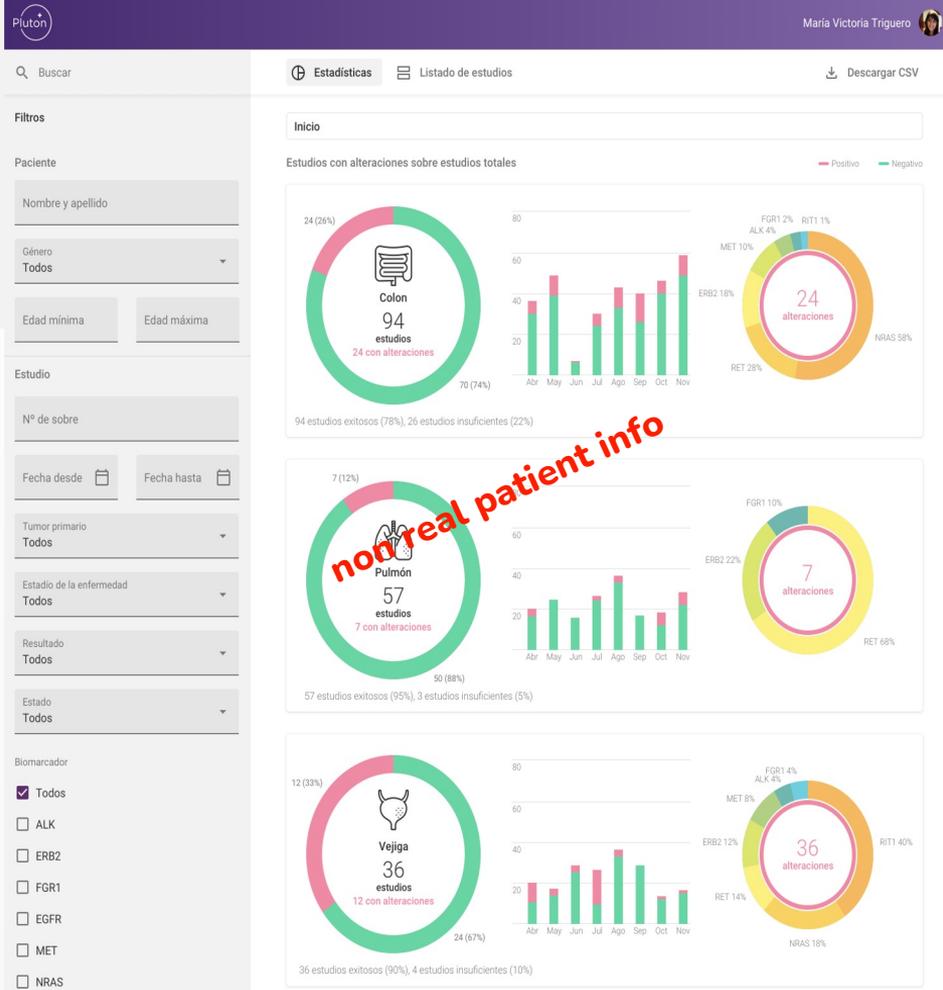
Developed with Stamm Biotech to speed up the drug discovery projects identifying new potential targets and gene interactions



## Pluton Platform allows Physicians to:

- Order genomic tests, sponsored by Pharma & CROs
- Generate statistical analyses
- Input longitudinal clinical information
- Review therapeutic recommendations
- Export Real World Data from their own Patient database

Pluton provides genomic and clinical data from **10K**  
new patients / year.



# WE BUILT THE LARGEST AND UNIQUE OF ITS KIND MULTINACIONAL LATE-STAGE TUMOR BIOBANK IN LATAM

Tumor Tissue + Tumor DNA + Plasma for Drug & Target Discovery purposes

## BIOBANK TOTAL SAMPLES



## BIOBANK TUMOR TYPES

 **BMK BIO.BANK**



Melanoma



Lung



Colorectal



Esophagus



Other Tumors



Cervix



Bladder



Breast

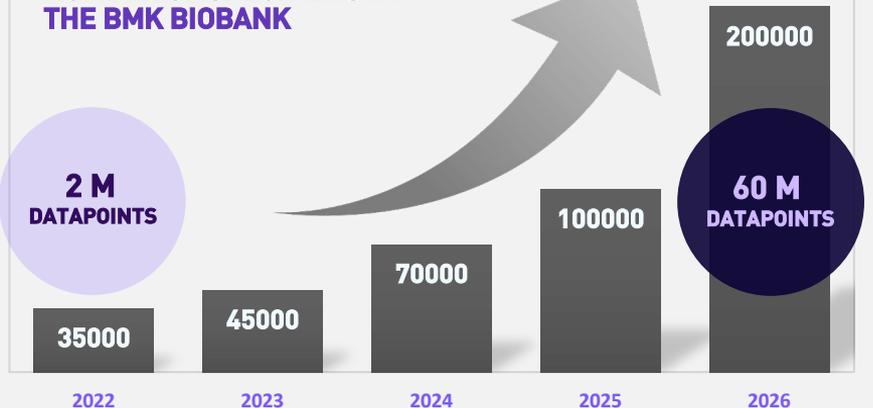


Head and neck



Gastric

## EVOLUTION OF THE NUMBER OF SPECIMENS IN THE BMK BIOBANK





**BMK B.I.T.**

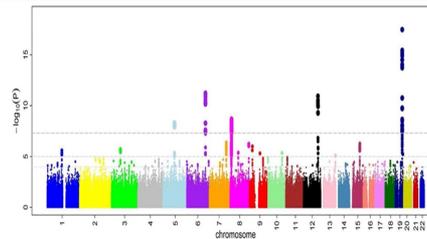
Bioinformatic Integrated  
Technology

Cracking the  
tumor genetic code  
will help us to revolutionize  
the molecular diagnosis  
and identify new  
therapeutic targets to  
create more personalized  
and effective cancer  
therapies.

**35,000**

Tumor samples  
in our Late-Stage **BIOBANK**  
ready

to perform Exome Sequencing  
and  
EWAS

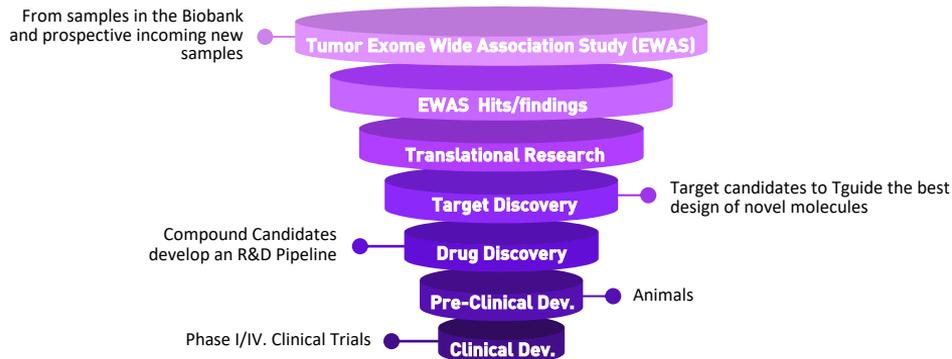


**(EWAS) Exome-Wide Association  
Study Reveals Mutation Patterns,  
Susceptibility Genes and Pathways  
Associated With Different Solid  
and Liquid Malignancies**

**+ 15,000**

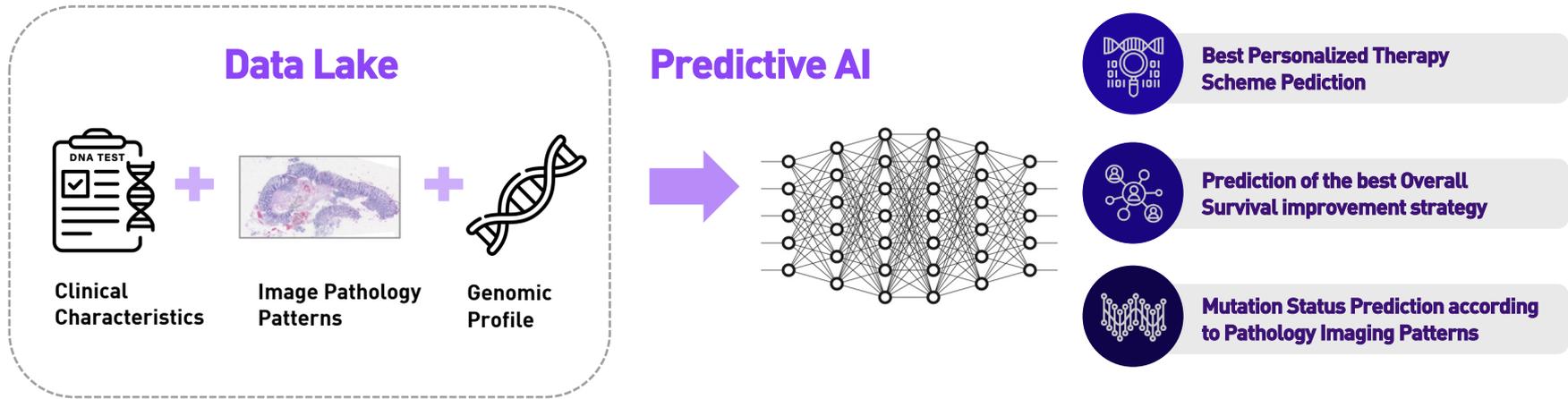
New samples  
per year from  
+10 different countries  
in **LATAM** added  
to our **Biobank**

## NOVEL DRUG DISCOVERY POTENTIAL WITH OUR DATA & BIOBANK



# AI IMPROVEMENT SURVIVAL PLATFORM

Artificial Intelligence Predictive Algorithm



The Platform will allow Physicians to determine the Best Treatment Option for each advanced patient given the Genomic Profile, the Clinical Characteristics and the Pathology Image Patterns.

# TAKING RISKS: DIVING INTO THE US MARKET

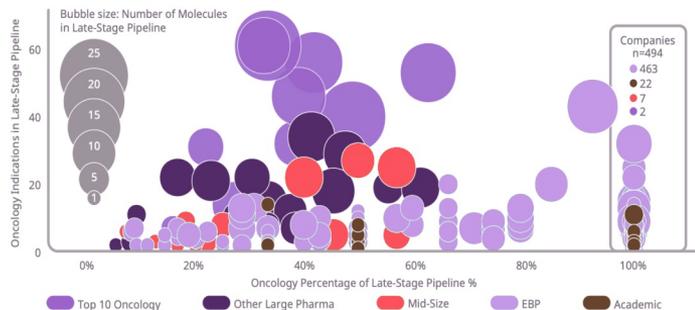


**BIOMAKERS** has already entered the **US Market** acquiring large clients

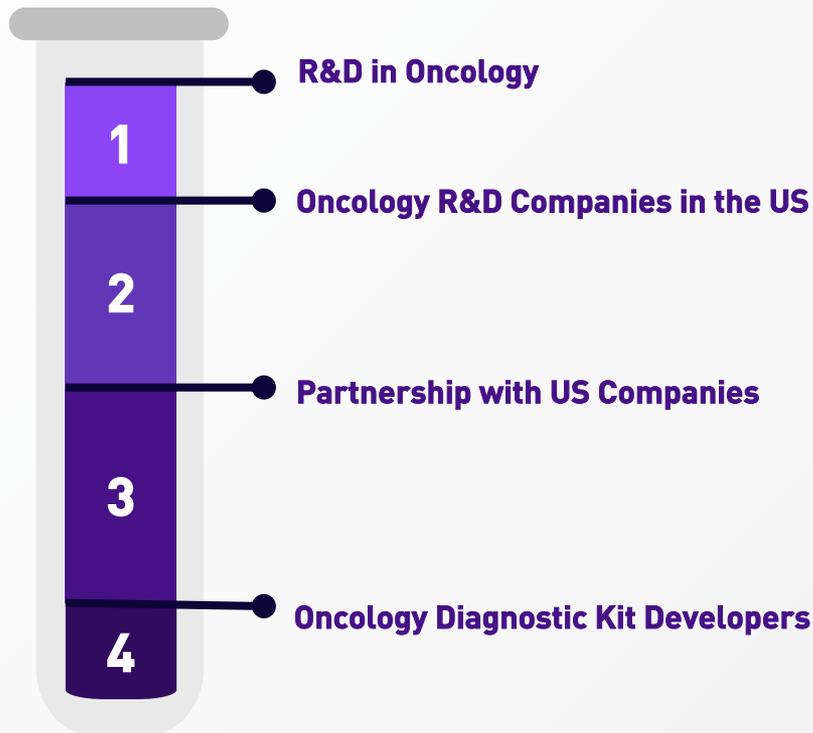


711 companies are active in late-stage oncology R&D, with a significant contribution from emerging biopharma companies

Exhibit 13: Company Late-Stage Pipelines, Number of Oncology Indications and Oncology Percent of Pipeline



Source: IQVIA R&D Intelligence, Dec 2018; IQVIA Institute, Jan 2019



# Final Concepts

1

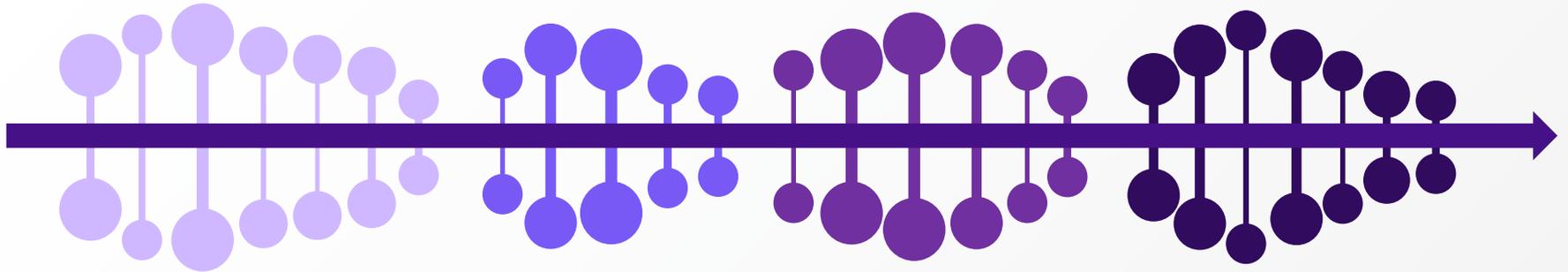
**Think global. Act global.  
And take Risks.**

3

**Ideas don't make the difference.  
Execution does.**

5

**The higher Moats, the higher Success**



2

**Create Outstanding Teams.**

4

**Timing is the #1 Key. Not Ideas. Not  
Money.**

6

**People don't need Missions & Visions.  
People need a PURPOSE.**



NICOLAS KIRCHUK



Instagram

@nicokirchuk

Thank you!