



PREDICTIVE ONCOLOGY



Corporate Overview

Cancer Quest 2020 Project

September 2019

Forward looking statements

This presentation includes “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These statements include but are not limited to our plans, objectives, expectations and intentions and other statements that contain words such as “expects,” “contemplates,” “anticipates,” “plans,” “intends,” “believes” and variations of such words or similar expressions that predict or indicate future events or trends, or that do not relate to historical matters. These statements are based on our current beliefs or expectations and are inherently subject to significant uncertainties and changes in circumstances, many of which are beyond our control. There can be no assurance that our beliefs or expectations will be achieved. Actual results may differ materially from our beliefs or expectations due to economic, business, competitive, market, regulatory, and other factors. A full discussion of our operations and financial conditions, including risk factors that may affect our business and future prospects, is contained in our most recent regulatory filings with the U.S. Securities and Exchange Commission (“SEC”), including our Form 10-K filed April 1, 2019 and our Form 10-Q filed on August 19, 2019.



Predictive Oncology – Who we are



Predictive Oncology (NASDAQ:POAI) is a data and AI-driven discovery services company that provides predictive models of tumor drug response to improve clinical outcomes for patients.



Today

- Opportunity for Predictive Oncology to invest in precision medicine business with goal to **monetize** the assets within **18 months to have a valuation comparable to its peers of \$250 million.**
- For comparison: Tempus is valued at approx. \$1BN with \$320MM invested.
 - Continues to burn cash to build its asset.
- We have **HISTORICAL** data and assets that with investment we can leverage **TODAY.**
 - Competitors addressing cancer must **wait at least five years** to find out if the patient survived treatment before they can show value from their investments in gathering data.
- Our execution plan is founded on leveraging our two unique assets
 - A clinically validated patient-derived (PDx) tumor profiling platform that can generate **drug response profiles** and other multi-omic data. This platform had **over \$200M invested** and was clinically validated in ovarian cancer
 - Data on the **drug response** profiles of **over 150,000 tumors across 137 cancer types** tested using the PDx platform in **over 10+ years of clinical testing**
- The **Execution** risk is due to funding.....
- The **Development** risk is minimal because we already have the assets.
 - These assets are proven and exist today.
- Furthermore, **we can continue to generate more data every day** and have the ability to reach back to get more outcome data.



The Unmet Need In Precision Medicine

- Pharma has invested heavily in genomics and “big data” to understand each patient’s genome to target therapies
 - Success rates for targeted therapies are low
 - Uptake in clinical practice is patchy
- Realization now that “just genomics” is not enough
- A clear unmet need for a **multi-omic** (genome, transcriptome, epigenome, proteome, responseome and microbiome) approach, which may offer a greater chance of success, but such data is difficult to access quickly
 - Few comprehensive, multi-omic datasets exist
 - Need to initiate prospective data collection = time-consuming.



Building commercial value from our unique assets and collaborations

AI-Predictive model V1, ready to partner with Pharma in revenue generating projects to search for new drugs/biomarkers of Ovarian cancer

Q1-2020

UK 100,000 genome project data*
Genomics, Drug treatment and clinical outcome data
Further validation of AI model of Ovarian cancer

Q4-2019

Helomics-Magee Data
Genomics*, Drug Response and clinical outcome data
Validate AI model of Ovarian Cancer

Q3-2019

All timelines dependent on investment

Unlike most companies in the space, we have samples and access to **historical** data (The Helomics asset) on clinical outcomes. Hence, we can **generate value to Pharma** much more quickly

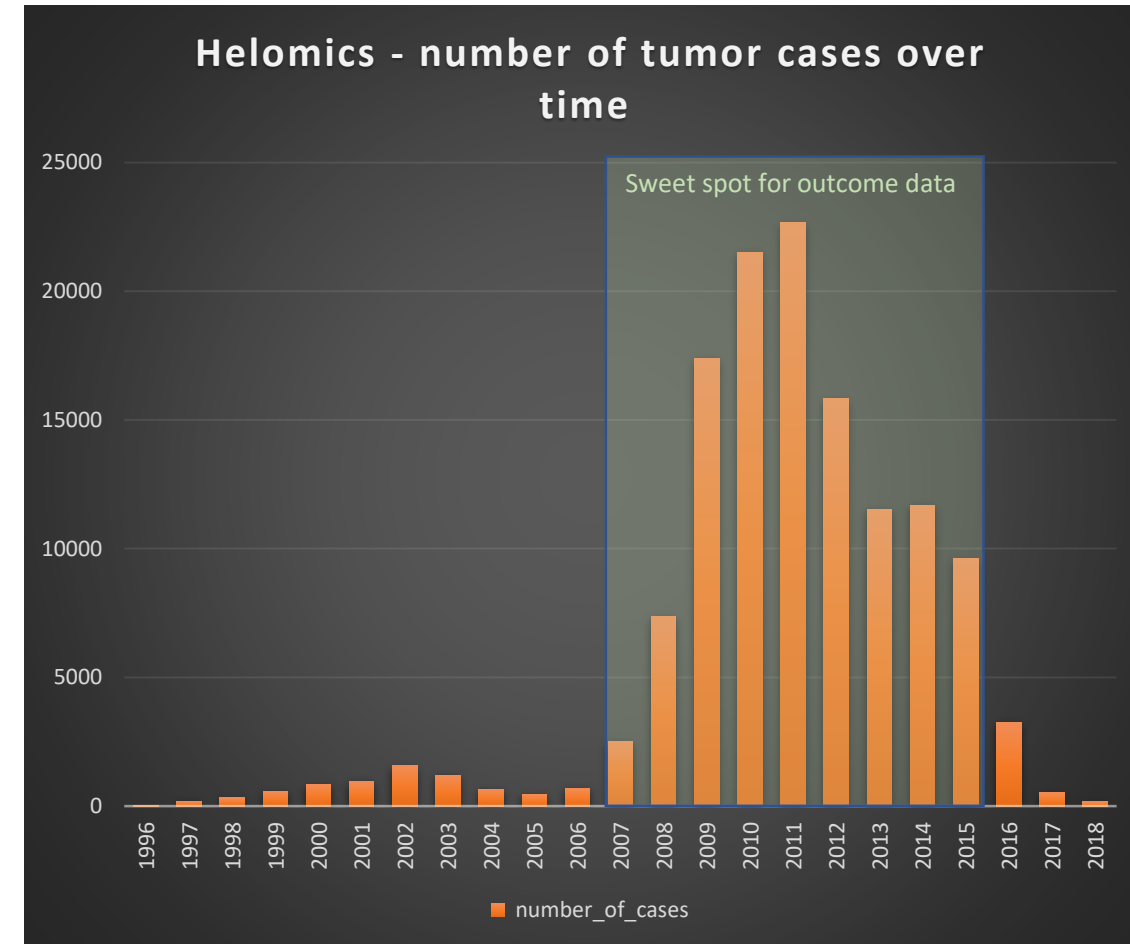
Companies starting today **must wait** for that clinical outcome data **at least 5 years**

* Requires investment to sequence Helomics samples/access data from UK 100,000 genomes project



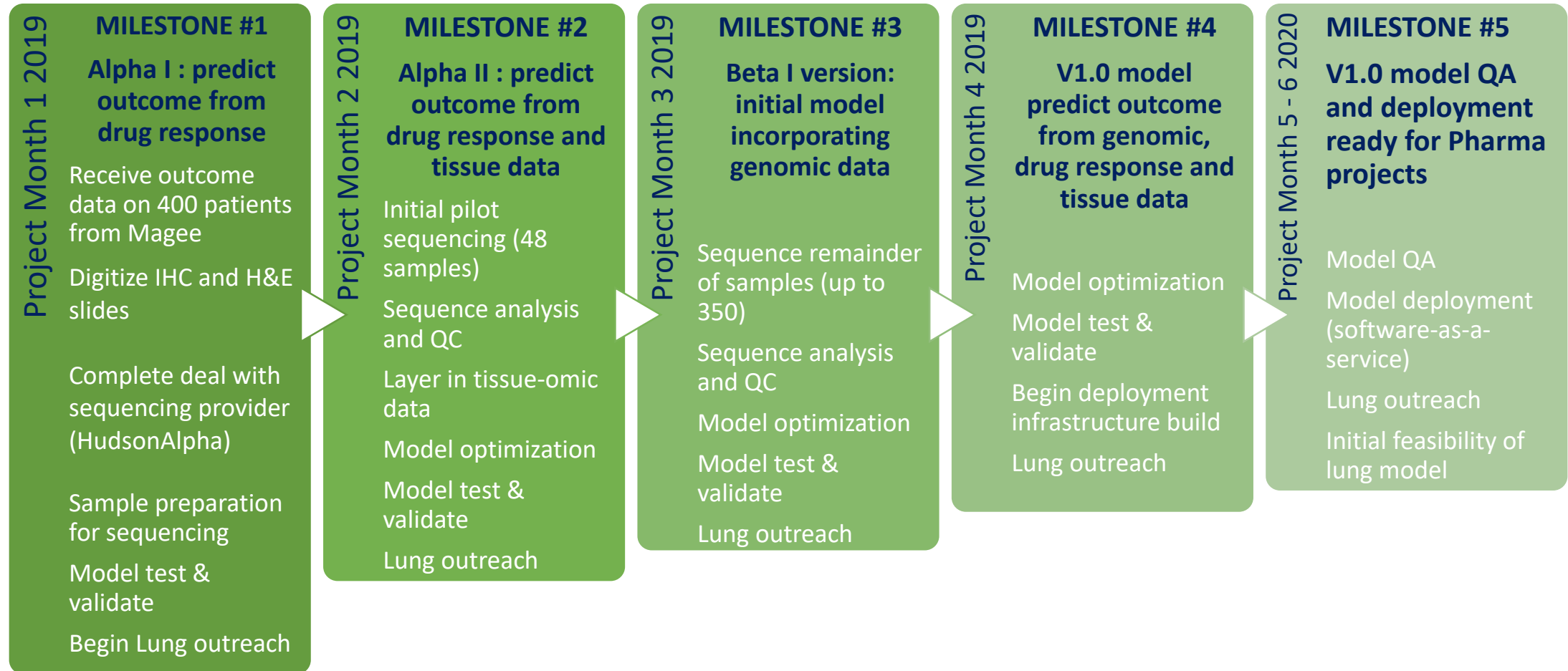
Helomics unique position on outcome data

- We have **HISTORICAL** data and assets that with investment we can leverage **TODAY**.
- Other companies in our space are spending investment \$\$ to generate data **TODAY** that they can't leverage until the **FUTURE**
- We have only to wait for **how long it takes to sequence** and gather outcome data which is **measured in months** not years
- For example in cancer you have to **wait at least 5 years** to see progression free survival rate.
- Sweet spot of **120,000** cases to access **10+ years** of survival data



Our testing data on tumors goes back 15+ years = key asset

Cancer Quest 2020 – key milestones



Application of Predictive Oncology Models

Research

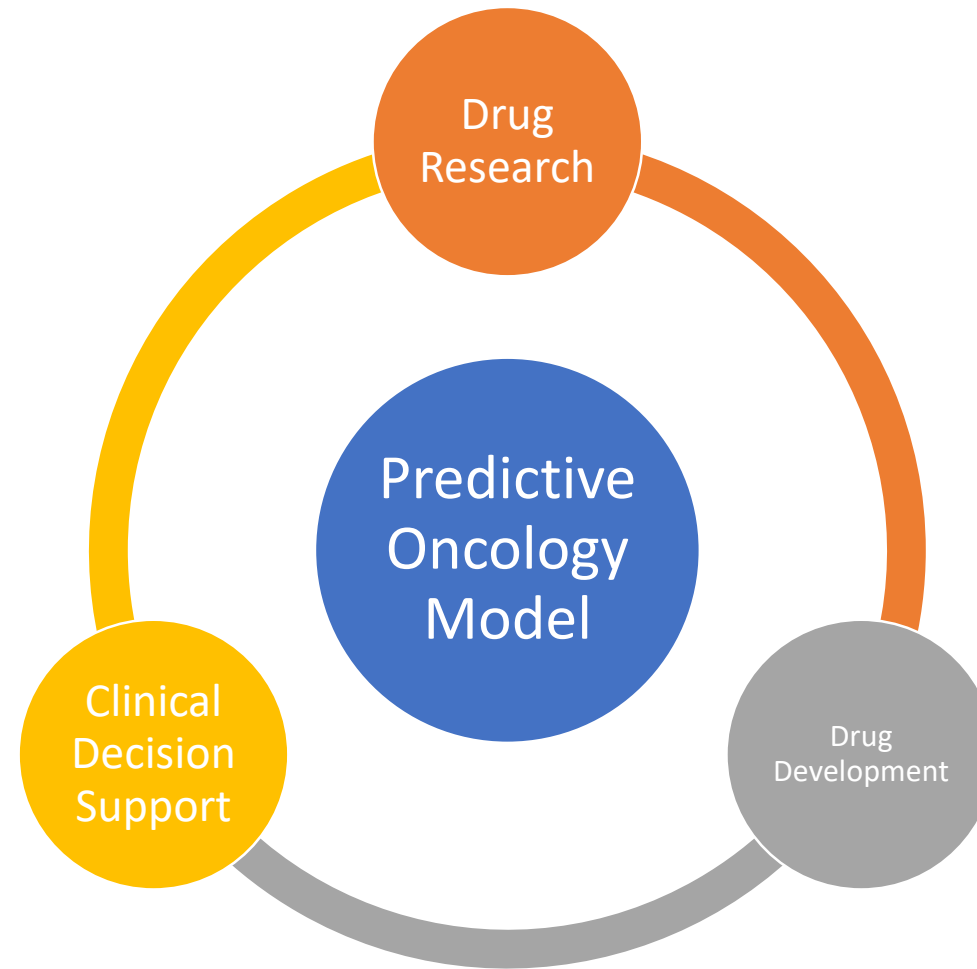
- Biomarker discovery
- Drug discovery
- Drug-repurposing

Development

- Patient enrichment & selection for trials
- Clinical trial optimization
- Adaptive trials

Clinical Decision Support

- Patient stratification
- Treatment selection



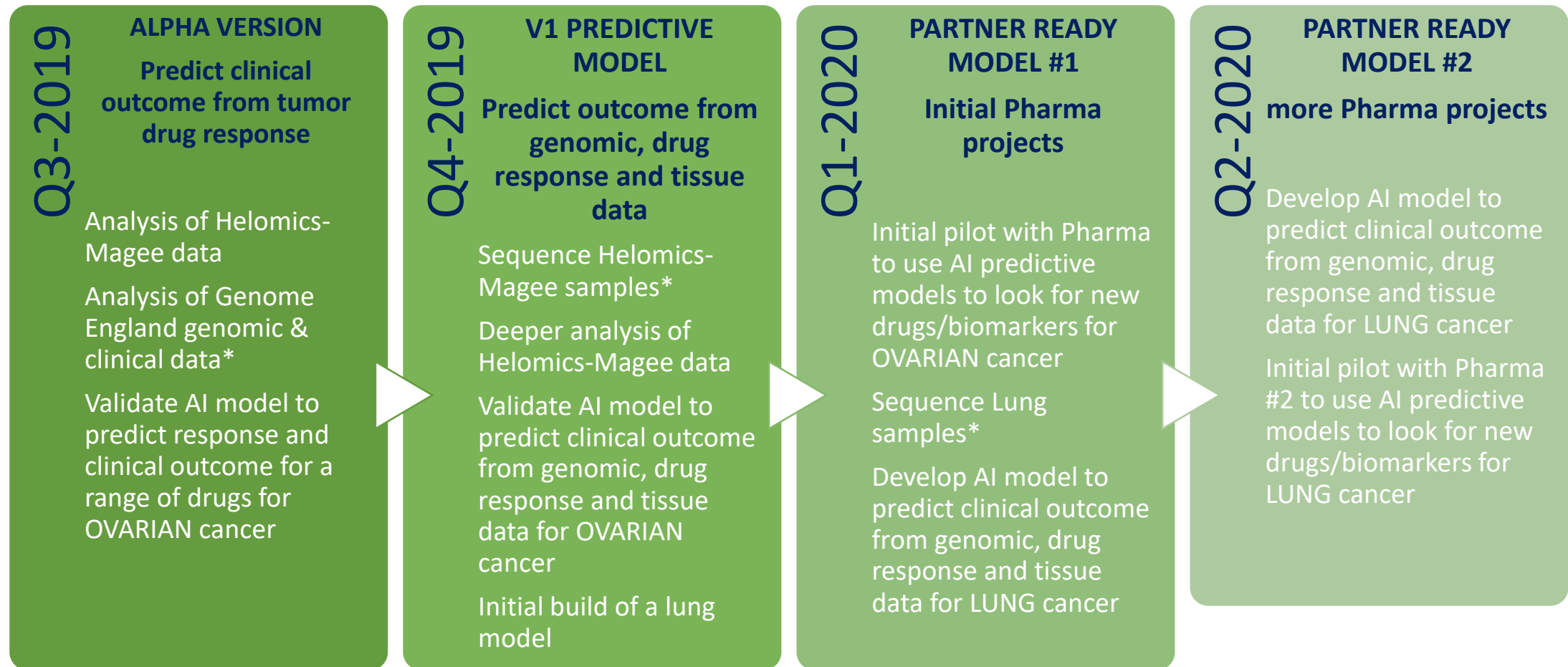
Multi-omic models that predict drug response in tumors are highly value to Pharma

Commercialization: PDx, data and AI-driven Discovery Services

- To build AI models of tumor drug response of value to;
 - Pharma discovery and translational research projects
 - Highest value = Pharma contracts
 - Sales cycle 12-18 months
 - Contract value **(1M–5M)**
 - Collaborations and pilots
 - Earn short term revenue (\$50-\$250K)
 - Build commercial validation
- New precision medicine clinical tests for individualizing therapy in cancer
 - Longer term revenue opportunity
 - Clinical validation & regulatory approval required



Commercialization Roadmap – AI Predictive models



Because we have samples, drug response data and access to clinical outcomes going back over 7+ years **investment is the only bottleneck in building models** we can use in partnership with Pharma to look for new drugs/biomarkers for a range of cancers

Ovarian Model

Milestone	Item
Milestone #1	Sample extraction and library preparation (48 samples) Sequencing (48 samples) – outsource Additional compute costs Start reach-out to get lung outcomes
Milestone #2	Pay sequencing for 48 samples – outsource Sample extraction and library preparation (350 samples) Additional Slide digitization (outsource in short term) Upfront payments for Sequencing 350 samples Additional compute costs (bioinformatics analysis, Deep Learning GPU's and grids, storage (1 petabyte))
Milestone #3	Pay sequencing for 350 samples - outsource Additional compute costs (bioinformatics analysis, Deep Learning GPU's and grids, storage (1 petabyte)) Additional data from Magee
Milestone #4	Compute costs (bioinformatics analysis, Deep Learning GPU's and grids, storage (1 petabyte)) Web Infrastructure build out to deploy completed model Payments for lung outcome data
Milestone #5	Complete infrastructure build-out



Summary

- Opportunity for Predictive Oncology to invest in precision medicine business with goal to **monetize** the assets within **18 months to have a valuation comparable to its peers of \$250 million.**
- For comparison: Tempus is valued at approx. \$1BN with \$320MM invested.
 - Continues to burn cash to build its asset.
- We have **HISTORICAL** data and assets that with investment we can leverage **TODAY.**
 - Competitors addressing cancer must wait at **least five years** to find out if the patient survived treatment before they can show value from their investments in gathering data.
- Our execution plan is founded on leveraging our two unique assets
 - A clinically validated patient-derived (PDx) tumor profiling platform that can **generate drug response profiles** and other multi-omic data. This platform had **over \$200M invested** and was clinically validated in ovarian cancer
 - Data on the **drug response profiles** of **over 150,000 tumors across 137 cancer types** tested using the PDx platform in over **10+ years of clinical testing**
- The **Execution** risk is due to funding.....
- The **Development** risk is minimal because we already have the assets.
 - These assets are proven and exist today.
- Furthermore, **we can continue to generate more data every day** and have the ability to reach back to get more outcome data.





PREDICTIVE ONCOLOGY



Thank You

Cancer Quest 2020 Project

September 2019