ARISTOTLE ATLANTIC PARTNERS

Personalized Medicine

Investing in the Next Frontier of Health Care



Thomas M. Hynes, Jr., CFA – Principal, Managing Director, Portfolio Manager

Precision	**Predictive**	**Personalized**
Molecularly targeted therapies	AI-powered diagnostics	Continuous, real-time care

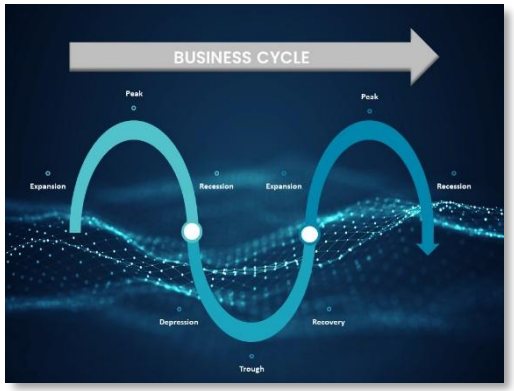
This information is for one-on-one use only and in response to a specific request. Not for further distribution.

AGENDA

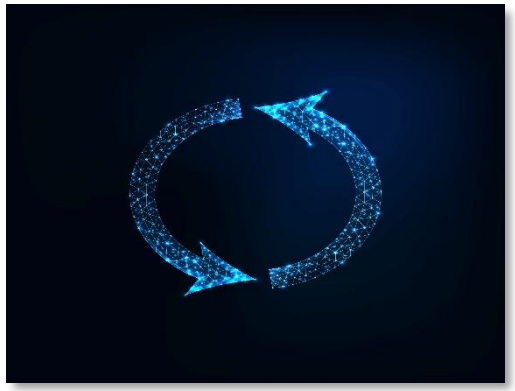
I. Introduction
II. Personalized Medicine
III. Liquid Biopsy
IV. AI & Data Monetization
V. Wearables
VI. Representative Companies
VII. Takeaways and Q&A

INVESTMENT PHILOSOPHY

We believe the foundation of successful investing lies in identifying companies poised to benefit from secular themes, product cycles, or cyclical trends through fundamental, bottom-up research.



Cyclical Trends
5%-20%



Product Cycles
10%-20%



Secular Themes
60%-80%

22 ACTIVE SECULAR THEMES

As of June 30, 2026

- Artificial Intelligence / Quantum Computing
- Automation / Robotics
- Cloud Computing
- Cyber Security
- Data Analysis & Data Monetization
- Space/Aerospace & Defense Modernization
- Digital Connectivity
- E-Commerce
- Emerging Markets Consumer
- Energy Transformation
- Expanding Health Care Consumption
- Fintech
- Health & Wellness
- Infrastructure Modernization
- Personalized Health
- Pet Spend
- Pricing Disruption
- Product, Health & Safety
- Private Label
- Shared Economy
- Subscription Ecosystems
- Supply Chain Security

Personalized Medicine

Investing in the Next Frontier of Health Care

FROM GEOGRAPHY TO GENOMICS

The Core Shift Defining Modern Medicine

Cancer is no longer defined by where it lives, but by what drives it.

Traditional Model

- Carpet-bomb chemotherapy
- One-size-fits-all protocols
- Toxic to healthy tissue
- Trial-and-error selection

Precision Model

- Smart-missile targeted therapy
- Molecularly matched drugs
- Spares healthy tissue
- Higher response rates

Illustrative example. Sources: NCCN Guidelines; peer-reviewed literature on targeted oncology therapy.

FROM GEOGRAPHY TO GENOMICS

Same Diagnosis. Different Diseases.

Advanced non-small cell lung cancer

Patient A — EGFR mutation

Responds to EGFR inhibitors (e.g., osimertinib). Median PFS more than doubles vs. chemotherapy.

Patient B — ALK rearrangement

Responds to ALK inhibitors (e.g., alectinib). EGFR drugs would fail entirely on this patient.

Illustrative example. Sources: NCCN Guidelines; peer-reviewed literature on targeted oncology therapy.

COMPREHENSIVE GENOMIC PROFILING

Mapping the Code — The Diagnostic Backbone of Precision Oncology

Single-Gene Testing

The old approach

- Serial, one-mutation-at-a-time testing
- Weeks to months of turnaround
- Exhausts scarce biopsy tissue
- High risk of diagnostic dead-end

Comprehensive Genomic Profiling

Next-generation sequencing

- Hundreds of genes on a single sample
- Detects mutations and biomarkers
- One workflow, one report
- Preserves tissue for future testing

Pan-Cancer Biomarkers

Unlocking immunotherapy

- Tumor Mutational Burden (TMB)
- Microsatellite Instability (MSI)
- Homologous recombination deficiency
- Identifies immunotherapy responders

CGP is the essential infrastructure layer of modern oncology — no CGP, no targeted therapy market.

CGP: Comprehensive Genomic Profiling. NGS: Next-Generation Sequencing. Sources: Tempus AI, Guardant Health 10-K filings.

THE LIQUID BIOPSY REVOLUTION

A Simple Blood Draw Replaces the Invasive Needle Biopsy

Tumors constantly shed fragments of DNA — circulating tumor DNA (ctDNA) — into the bloodstream. Sequencing these fragments unlocks a diagnostic window that is faster, safer, and repeatable.

Advantages of Liquid Biopsy
Less Invasive
Shorter Turnaround Time
Tumor Heterogeneity - comprehensive view vs localized snapshot
Ease of Repeatability
Lower Patient Risk



Sources: Natera, Guardant Health, and Personalis 10-K filings; company investor presentations (2025–2026).

THE LIQUID BIOPSY REVOLUTION

Tumor-Informed Assay
Bespoke, patient-specific test

How it works
Sequence the surgical tumor tissue first, then design a custom blood test to hunt for that patient's exact molecular fingerprint.

Strengths
- Extreme sensitivity — 1 in 1M molecules
- Ideal for minimal residual disease (MRD)
- Leaders: Natera (Signatera), Personalis

Tumor-Naïve Assay
Off-the-shelf, universal panel

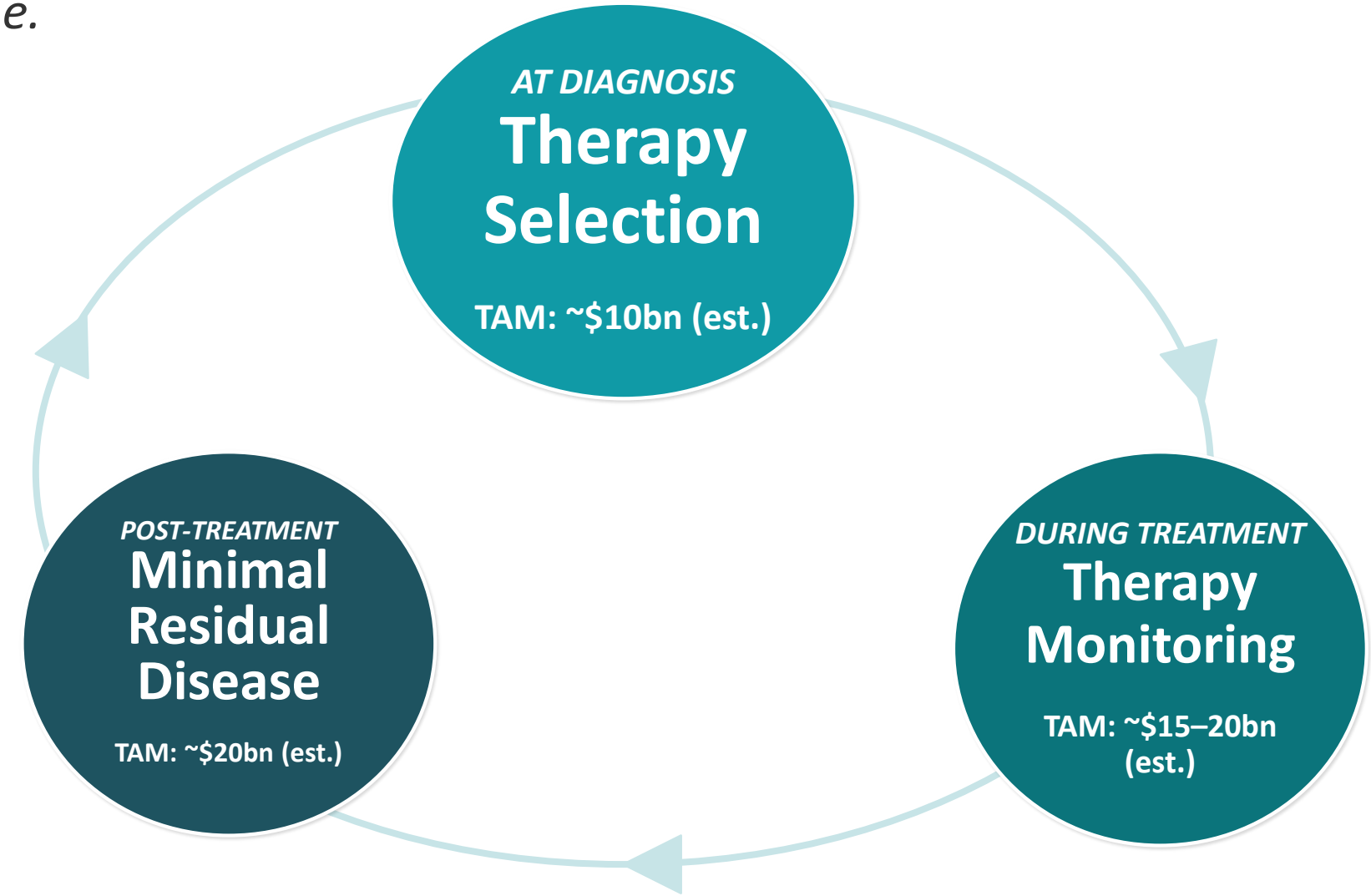
How it works
Screens the blood sample against a standardized panel of the most common actionable cancer mutations — no prior tissue required.

Strengths
- Fast turnaround — days, not weeks
- Works when tissue is unavailable
- Leader: Guardant Health (Guardant360)

Sources: Natera, Guardant Health, and Personalis 10-K filings; company investor presentations (2025–2026).

THE PATIENT JOURNEY —USE CASES

A liquid biopsy is not a single product — it is several distinct, high-value markets across a patient's lifetime.



Sources: Guardant Health, Natera, GRAIL clinical publications.

THE PATIENT JOURNEY —USE CASES

A liquid biopsy is not a single product — it is several distinct, high-value markets across a patient's lifetime.

Pre-diagnosis

Asymptomatic Screening

Multi-Cancer Early Detection (MCED) tests screen healthy individuals for the earliest tumor signals — the population-scale 'holy grail' of preventative oncology. Total Addressable Market - $30-50bn (est.)



MCED: Multi-Cancer Early Detection. Sources: Guardant Health, Natera, GRAIL clinical publications.

ARTIFICIAL INTELLIGENCE & DATA MONETIZATION

From Diagnostic Lab to Proprietary Data Platform

More Tests
Volume grows across oncology programs

→

More Data
Petabytes of genomic + outcomes data

→

Better AI
Sharper predictive algorithms

→

Clinician Preference
Higher order share, more tests

↺ *The loop compounds: every test strengthens the moat.*

Diagnostic Services

Reimbursed per-test revenue from providers and payors. Scales with test volume; margins expand as fixed sequencing costs decline.

Pharma Data Licensing

Biopharma pays premium prices to license de-identified genomic datasets for drug discovery and trial design — software-like margins.

Sources: Tempus AI 10-K; Guardant Health Investor Day 2025; industry analyst estimates.

FIXING THE ECONOMICS OF HEALTHCARE

Precision medicine restructures the two most broken economic models in healthcare — drug development and payor spend.

~$2B
cost to bring a single drug to market

~90%
of drugs fail in clinical trials

~32%
of patients may carry a targetable mutation

For Pharmaceutical Companies

- Pre-select trial participants using CGP
- Smaller, faster, cheaper clinical trials
- Higher probability of success
- Companion diagnostics extend patent life

For Payors, Employers & Patients

- Eliminates spend on ineffective drugs
- Avoids toxicity-driven ER and ICU costs
- Early detection
- Better outcomes, lower total cost of care

Sources: DiMasi et al. (drug development costs); Tufts CSDD; MSK Research Highlights 10/19/23, peer-reviewed oncology outcomes literature.

WEARABLES — THE CONTINUOUS BIOPSY

From Point-in-Time Testing to a 24/7 Digital Health Shield

Medical-grade wearables move personalization from the clinic into daily life — monitoring blood glucose, blood pressure, oxygenation, heart-rate variability, and sweat-based biomarkers in real time.

Continuously Monitored Signals

- **Heart-rate variability & ECG**
- **Continuous blood glucose**
- **Blood pressure & pulse-wave**
- **Blood oxygen saturation**
- **Skin temperature**
- **Sweat-based biomarkers**

Illustrative use cases. Sources: peer-reviewed literature on continuous physiological monitoring.

WEARABLES — THE CONTINUOUS BIOPSY

Examples

Cardiology

Subtle anomalies in heart-rate variability over weeks flag an undiagnosed condition long before a catastrophic stroke or MI — enabling outpatient intervention.

Oncology Support

Spikes in resting heart rate during chemotherapy flag infection or cardiotoxicity days before fever — avoiding six-figure ICU admissions.















Illustrative use cases. Sources: peer-reviewed literature on continuous physiological monitoring.

INCREASED MEDIA AWARENESS

THE WALL STREET JOURNAL.
MONDAY, SEPTEMBER 15, 2025
WSJ.com
HEALTH & SCIENCE

The Cancer Vaccine Gold Rush Has Begun

A new wave of experimental shots aims to train the immune system to stop tumors, drawing big bets from drugmakers and investors.

By Jonathan Rockoff
The Wall Street Journal

A new race is underway in oncology. After decades of research and a string of early breakthroughs, cancer vaccines are no longer a distant dream—they are becoming a major focus for drugmakers, investors and patients alike.

Buoyed by advances in mRNA technology, artificial intelligence and a deeper understanding of the immune system, companies large and small are racing to develop vaccines that can prevent cancer, treat it after diagnosis or keep it from coming back. The potential is enormous: a vaccine that could stop one of the world's deadliest diseases before it starts, or turn cancer into a manageable condition.

"We are at the beginning of a paradigm shift," said Dr. Ugur Sahin, co-founder and chief executive of BioNTech, whose mRNA technology helped power the Covid-19 vaccines and is now being applied to cancer. "The immune system can be trained to recognize and destroy cancer. The question is no longer if, but how fast we can bring these vaccines to patients."

From Covid to Cancer

The success of mRNA vaccines against Covid-19 proved that the technology could be developed and deployed at scale. Now, companies such as BioNTech, Moderna and Merck are adapting the same approach to teach the immune system to target tumor-specific proteins, known as neoantigens.

Unlike traditional vaccines, which prevent infection, cancer vaccines are designed to either prevent tumors from developing in high-risk individuals or to treat existing cancers by helping the immune system recognize and attack cancer cells.

Early results have been encouraging. In a recent trial, Moderna reported that its personalized mRNA cancer vaccine, given in combination with Merck's Keytruda, reduced the risk of melanoma recurrence by 44% compared with Keytruda alone. Other companies, including GSK, AstraZeneca and small biotechs, are testing vaccines for lung, pancreatic and colorectal cancers—some of the deadliest and most difficult to treat.

Big Money, Bigger Hopes

The promise of cancer vaccines has touched off a surge in investment. Venture capital funding for cancer vaccine companies has more than doubled over the past two years, according to industry data, and major pharmaceutical companies are striking partnerships or making acquisitions to secure a foothold.

Analysts estimate the market for cancer vaccines could eventually exceed $100 billion annually, if the science delivers.

"Everybody wants to be in this space," said Leerink Partners analyst Joseph

Challenges Ahead

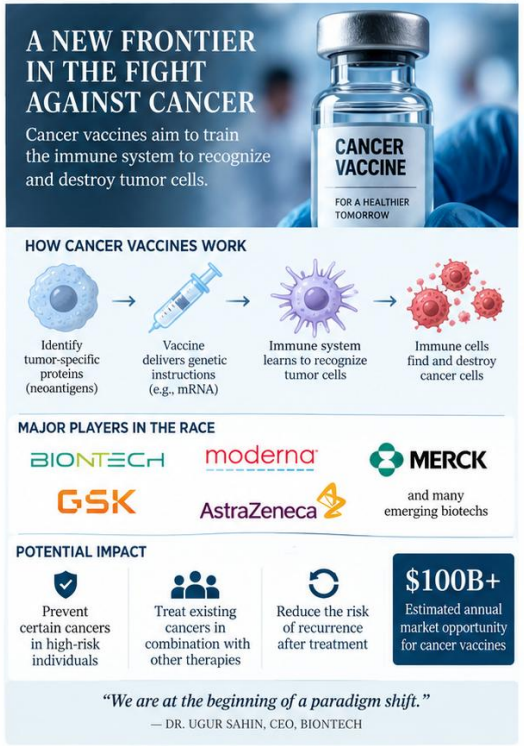
Despite the excitement, scientists caution that cancer vaccines face significant hurdles. Tumors can mutate quickly and may evade the immune system. Unlike viral infections, cancer is not caused by a single pathogen, making it harder to design a one-size-fits-all vaccine. Clinical trials will take years to determine how effective and durable these therapies are.

"This is not going to be an overnight success," said Dr. Elizabeth Jaffee, a cancer researcher at Johns Hopkins University. "But the progress we're seeing is real, and for the first time, we have multiple approaches that could make a meaningful difference."

Still, for patients and families, the prospect of a cancer vaccine offers something rare: hope.

"The idea that we might one day prevent cancers—or keep them from coming back—is extraordinary," said Dr. Patrick Hwu, president of Moffitt Cancer Center. "We're entering a new era, and the momentum is undeniable."

For now, the gold rush continues, with researchers, investors and patients all betting that cancer's toughest foe may one day be a vaccine.



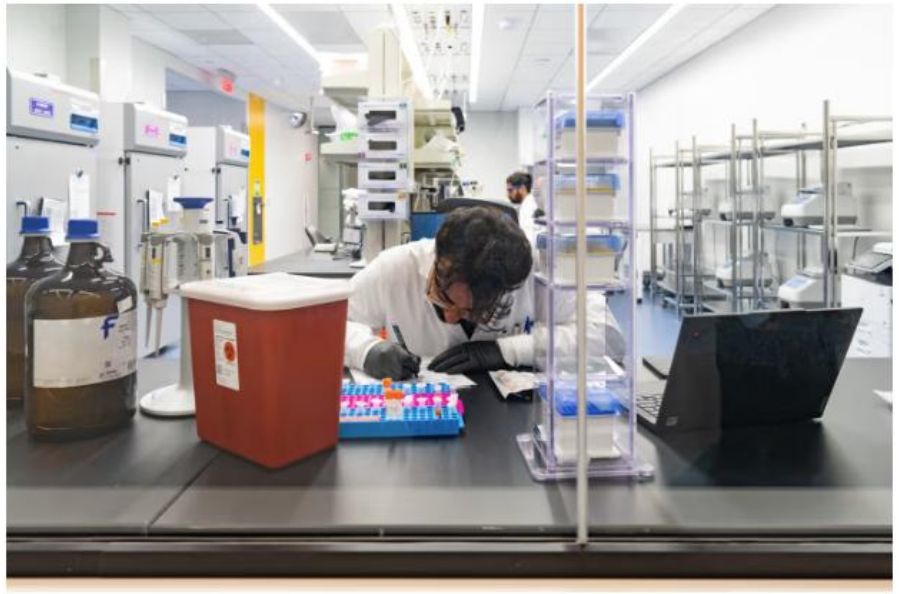
HEALTH • PHARMA • HEARD ON THE STREET Follow

The Cancer Vaccine Gold Rush Has Begun. So Has the Race for Picks and Shovels.

Tempus AI could capture a lucrative slice of Moderna and Merck's personalized cancer therapy business, with Personalis at the center of the bet

By David Wainer
Sept. 4, 2026 5:30 am ET

60 Gift unlocked article Listen (6 min)



Moderna's new lab and manufacturing facility in Marlborough, Mass. MEL MUSTO FOR WSJ

Source: The Wall Street Journal

PERSONALIZED HEALTH

Companies We Believe are Poised to Benefit from Personalized Health



The companies identified on this slide are examples of holdings and are subject to change without notice. The companies have been selected to help illustrate the investment process described herein. A complete list of holdings is available upon request. The investment examples were selected based on the following criteria: all Aristotle Atlantic holdings identified under Personalized Medicine as an investable secular theme as of 6.30.2026. Please see important disclosures at the end of this document.

Investment Takeaways

1

Own the Diagnostic Endpoints

CGP and liquid biopsy platforms are the entry point of every precision-medicine dollar spent downstream.

2

Control the AI Data Flywheels

Proprietary genomic datasets compound in value. Scale of tests → scale of data → a durable moat.

3

Bridge Diagnostics to Pharma

Companion diagnostics and data-licensing agreements unlock software-like margins on top of test revenue.

4

Integrate Real-Time Wearables

Continuous physiological data extends precision medicine from the clinic to a 24/7 health platform.

Thank you — questions welcome.

DISCLOSURES

The opinions expressed herein are those of Aristotle Atlantic Partners, LLC and are subject to change without notice. This material is not financial advice or an offer to purchase or sell any product. Aristotle Boston reserves the right to modify its current investment strategies and techniques based on changing market dynamics or client needs.

All investments carry a certain degree of risk, including the possible loss of principal. Investments are also subject to political, market, currency and regulatory risks or economic developments. International investments involve special risks that may in particular cause a loss in principal, including currency fluctuation, lower liquidity, different accounting methods and economic and political systems, and higher transaction costs. These risks typically are greater in emerging markets. While Large-capitalization companies may have more stable prices than smaller, less established companies, they are still subject to equity securities risk. In addition, large-capitalization equity security prices may not rise as much as prices of equity securities of small-capitalization companies. Securities of small- and medium-sized companies tend to have a shorter history of operations, be more volatile and less liquid. Value stocks can perform differently from the market as a whole and other types of stocks. The material is provided for informational and/or educational purposes only and is not intended to be and should not be construed as investment, legal or tax advice and/or a legal opinion. Investors should consult their financial and tax adviser before making investments. The opinions referenced are as of the date of publication, may be modified due to changes in the market or economic conditions, and may not necessarily come to pass. Information and data presented has been developed internally and/or obtained from sources believed to be reliable. Aristotle Atlantic Partners does not guarantee the accuracy, adequacy or completeness of such information.

All third-party trademarks and service marks are the property of their respective owners.

Aristotle Atlantic Partners, LLC is an independent investment adviser registered under the Investment Advisers Act of 1940, as amended. Registration does not imply a certain level of skill or training. More information about Aristotle Atlantic Partners, including our investment strategies, fees and objectives, can be found in our Form ADV Part 2, which is available upon request. AAP-2609-18