

# 2hr Screener: Freenome

## HQ Location: San Francisco, California

<b>Year Founded</b>	2014
<b>Latest Valuation (post money)</b>	\$2.20B
<b>Total Raised</b>	\$1.35B
<b>Notable Investors</b>	a16z Life Sciences Growth Fund, M&G, Ares, Baillie Gifford, Janeus, Wellington Management, KKR, Pictet, Neuberger Berman, Fidelity Management and Research Company, Kaiser Permanente, Roche Venture Fund, T. Rowe Price Group, SVB, Bain Capital, SoftBank
<b>Product Overview</b>	<ul style="list-style-type: none"> <li>Freenome is a biotech company that develops blood tests for early cancer detection.</li> <li>Their core product is a liquid biopsy platform that uses artificial intelligence and advanced genomics to analyze various biological markers in a simple blood sample.</li> <li>This technology aims to identify cancer at its earliest, most treatable stages by examining genomic, transcriptomic, methylomic, and proteomic data.</li> <li>The company's goal is to make cancer screening more accessible and effective, potentially improving patient outcomes by catching the disease before it progresses.</li> <li>While Freenome's initial focus has been on colorectal cancer, they are working to expand their platform to detect other types of cancer as well.</li> </ul>
<b>Core Technology</b>	<ul style="list-style-type: none"> <li>At its core, Freenome's technology is a multiomics platform that combines advanced genomics with artificial intelligence to analyze blood samples for early cancer detection. The "multiomics" approach means they're not just looking at one type of biological data, but rather integrating genomic, transcriptomic, methylomic, and proteomic data. In simpler terms, they're examining DNA sequences, RNA expression, DNA methylation patterns, and protein levels all at once.</li> <li>The real magic happens in their computational pipeline. They use machine learning models trained on both tumor and non-tumor biomarkers to identify suspicious molecular patterns in a patient's blood. This involves processing hundreds of terabytes of molecular data extracted from blood samples. Their AI algorithms are designed to detect subtle changes that might indicate the presence of cancer, even at its earliest stages. The company leverages Google Cloud technologies, particularly Google Kubernetes Engine (GKE), to manage and deploy the high-performance computing clusters needed for their machine learning components. This infrastructure allows them to handle the massive data processing required for their analyses, which is crucial given the complexity and volume of the biological data they're working with.</li> </ul>
<b>Previous Funding Notes</b>	<ul style="list-style-type: none"> <li><b>Grant (2014):</b> \$0.70M</li> <li><b>Seed Round (2015):</b> \$0.80M</li> <li><b>Seed Round (2016):</b> \$5.55M</li> <li><b>Series A (2017):</b> \$72.00M</li> <li><b>Series B (2019):</b> \$160.00M</li> <li><b>Series C (2020):</b> \$270.00M</li> <li><b>Series D (2021):</b> \$300.00M</li> <li><b>Series E (2022):</b> \$290.00M</li> <li><b>Series F (2024):</b> \$254.00M</li> </ul>

<p><b>Intro</b></p>	<ul style="list-style-type: none"> <li>• <b>Technology/Product:</b> Freenome is a biotech company developing blood tests that use multiomics and machine learning to detect cancer at early, treatable stages.</li> <li>• <b>Berkeley Link:</b> Richard Bourgon (Senior VP of Computational Science), Brian Gallo (Director, HR Business Partner)</li> </ul>
<p><b>Initial Highlight/Traction</b></p>	<ul style="list-style-type: none"> <li>• <b>Clinical Study Results (April 2024):</b> PREEMPT CRC study met all primary endpoints, with 79.2% sensitivity for colorectal cancer detection and 91.5% specificity for non-advanced colorectal neoplasia. Results show that the test correctly identified about 79.2% of people who actually have colorectal cancer and it identified 91.5% of people who do not have advanced colorectal neoplasia (precancerous growths). The study enrolled 48,995 participants, making it the largest study of a blood-based test for colorectal cancer. Results validate their idea.</li> <li>• <b>Strategic Partnerships &amp; Collaborations:</b> Announced collaboration with Quest Diagnostics, a Fortune 500 company, to advance multi-cancer screening technology (2024). Partnered with Siemens Healthineers to develop a blood test for breast cancer (2023).</li> <li>• <b>Product Diversification:</b> Initiated PROACT LUNG, a prospective observational clinical study enrolling up to 20,000 participants for lung cancer screening. Eventually Freenome wants to offer blood test analysis for multiple cancer types.</li> <li>• <b>Market Growth:</b> The global multi-cancer early detection market size and share is projected to grow from USD 1.25 Billion in 2024 and is forecasted to reach USD 5.1 Billion by 2034, exhibiting a compound annual growth rate (CAGR) of 16.4%</li> </ul>
<p><b>Initial Risks/Considerations</b></p>	<p><b>Internal Risks</b></p> <ul style="list-style-type: none"> <li>• <b>Leadership Transition (September 25, 2024):</b> CEO Mike Nolan resigned for personal reasons. The company has established an interim Office of the CEO and is searching for a new leader.</li> <li>• <b>Workforce Reduction (April 2024):</b> Freenome announced a 20% staff cut, eliminating about 100 jobs. This comes despite a recent \$254 million funding round in February 2024. Suggests the company might have bad financial planning and budgeting.</li> </ul> <p><b>External Risks</b></p> <ul style="list-style-type: none"> <li>• <b>Competition:</b> Freenome faces strong competition in the early cancer detection market from established players. Grail (\$9.80B, 2021), which was acquired by Illumina and went public in July 2024. Exact Sciences (\$3.25B, 2023), which earned \$643.81M in revenues (2024).</li> <li>• <b>Reimbursement and Pricing Pressures:</b> Securing favorable reimbursement rates from insurance companies and government healthcare programs could be challenging, potentially affecting the commercial viability of Freenome's tests. May harm revenues &amp; profitability.</li> </ul>
<p><b>Follow Up Questions</b></p>	<ul style="list-style-type: none"> <li>• Given the recent \$254 million funding round and the 20% workforce reduction, what is Freenome's current financial standing?</li> <li>• What strategies is Freenome implementing to encourage adoption of its blood-based tests among healthcare providers and patients, especially given the existing screening methods for colorectal cancer?</li> <li>• What specific qualities and experience is the board looking for in the next CEO to lead Freenome through its commercialization phase?</li> <li>• How is the company preparing for potential changes in the regulatory landscape for liquid biopsy tests?</li> </ul>

**Decision:** Continue (P2)

**Further Info:** Freenome operates in a potentially lucrative market with strong growth prospects. Its successful clinical trials and strategic partnership formation, showcase the company's strength. Freenome's plans for expansion indicate its goals to grow. However, the biotech market is a high-risk, high-reward opportunity, especially for complex and niche multi-cancer early detection niche market.