

Life Sciences Technology

Foundation Medicine, Inc.

(FMI) - NEUTRAL

Price: **\$22.96**
Fair Value Estimate: \$28.00
52-Week Range: \$18.00-\$45.00
Market Cap (MM): \$647
Shr.O/S-Diluted (mm): 28.2
Average Daily Volume: 344,160
Book Value: \$4.34

FYE: Dec	2013A	2014E	2015E
EPS:	\$(4.64)A	\$(1.86)E	\$(1.32)E
Prior EPS:		NC	NC
P/E:	NA	NA	NA

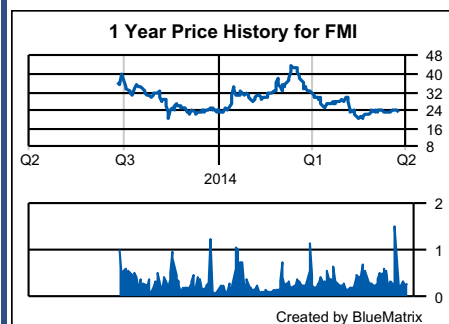
Quarterly EPS:

	2013A	2014E	NA
Q1	\$(2.56)A	\$(0.44)A	NA
Q2	\$(3.33)A	\$(0.47)E	NA
Q3	\$(3.51)A	\$(0.46)E	NA
Q4	\$(0.48)A	\$(0.49)E	NA

FYE: Dec	2013A	2014E	2015E
Revenue (M):	\$29.0A	\$57.0E	\$110.0E

Quarterly Revenue (M):

	2013A	2014E	NA
Q1	\$5.2A	\$11.5A	NA
Q2	\$5.9A	\$13.0E	NA
Q3	\$8.2A	\$15.5E	NA
Q4	\$9.7A	\$17.0E	NA



Equity Research
Basic Report

Next Generation of Cancer Diagnostics and Informatics; Initiating at Neutral

INVESTMENT CONCLUSION:

Foundation Medicine is developing the most comprehensive molecular diagnostics and bioinformatics platform in the cancer diagnostics market. With a seasoned management team from Clariant and a compelling approach to match cancer patients with the right treatment, we believe that Foundation Medicine is properly aligned to benefit from this new era of personalized medicine. Selling at 6.2x 2015 revenue and 3.5x our 2016 sales estimate, our fair value is \$28 per share or 18% above the current share price. We initiate with a Neutral rating.

KEY POINTS:

A Paradigm Shift in Diagnostics Technology

Foundation Medicine (FMI) utilizes next-generation laboratory technology like Illumina's gene sequencers to identify a comprehensive set of deterministic genes in cancer patients. Foundation then inputs molecular diagnostic information into its proprietary algorithm to match patients with similar genetic profiles so physicians can prescribe the most effective and appropriate therapies for treatment or recommend a potentially beneficial clinical trial. The market to leverage molecular information to drive therapeutic treatment decisions is just beginning to develop. There are only 40 cancer drugs that have parallel genetic tests today, but nearly 950 clinical trials that leverage molecular information to match patients with the most effective therapies.

A Paradigm Shift in Information Technology

Foundation Medicine is changing how doctors prescribe treatments and the way biopharmaceutical companies perform research and development. The company is a leader in its field and works with renowned cancer researchers to develop next-generation tests. It is estimated that 85% of the 10,000 practicing oncologist in the U.S. work in community-based hospitals, and these physicians will increasingly leverage patients' molecular information to guide treatment decisions as biotherapeutics become more ubiquitous. Foundation Medicine provides comprehensive analysis of patient samples with solid tumors (FoundationOne) and hematological malignancies (FoundationOne Heme).

FMI is currently working with 18 biopharmaceutical partners to develop targeted medicines. These partnerships help maintain the company's leadership in oncology-based molecular diagnostics, increase collaboration revenue, and lead to the acceptance of more targeted therapies. We believe that the most significant risk to FMI's long-term potential is the future level of insurance reimbursement.

Fair Value is \$28 Per Share

Our fair value is based upon the average of 5x the price-to-revenue multiple upon 2015 and 2016 estimates. Foundation is currently valued at 6.2x our 2015 revenue estimate and 3.5x our 2016 forecast. We view the acquisitions of Clariant in 2010 at 5.3x as a solid valuation proxy for Foundation Medicine. At a 5x multiple-of-revenue, our fair value of FMI would be \$35 per share and \$19 per share on 2016 and 2015, respectively. We average both prices to get to our fair value estimate of \$28 per share.

Research Analyst Certifications and Important Disclosures
are on pages 14 - 16 of this report

COMPANY OVERVIEW

Foundation Medicine is at the forefront of medical innovation, helping advance the way physicians treat and biopharmaceutical companies develop targeted cancer therapies. Foundation's products assess biologically relevant genetic alterations and aggregate that information into a concise format designed to optimize a patient's course of treatment. Foundation Medicine utilizes genetic sequencers, predominately Illumina's technologies, to generate molecular information about an individual cancer patient's genome and to guide treatment decisions. FMI launched its first product, FoundationOne, in June 2012 for solid tumors, and its second, FoundationOne Heme, in December 2013 for blood-based cancers like leukemia, lymphoma, and myeloma.

Cancer treatments have rapidly evolved over the past several years. Today, when possible, physicians prescribe targeted or immuno-therapeutics to mitigate the collateral damage to healthy cells that often occurs with chemotherapy and other antiquated therapeutic approaches. Foundation Medicine has built the only platform to assess cancer tissue for all four classes genomic alterations: point mutations, insertions/deletions, gene amplifications/fusions, and gene deletion/non-recurring mutations. FMI's FoundationOne test analyzes 236 biologically relevant cancer genes associated with an FDA-approved target therapies or clinical trials. The company's other product, FoundationOne Heme, uses RNA sequencing to identify 265 genes and DNA sequencing of 405 genes to detect all genes responsible for known inherited genomic alterations – pediatric cancers, sarcomas, somatic alterations, and hematologic malignancies. Foundation's comprehensive tests have sensitivity and specificity above 90% across all coding regions.

FMI estimates that there are approximately 1.1 million newly diagnosed patients per year in the United States with cancers that fall into its target categories – rare or aggressive diseases, tested negative or ineligible for traditional treatment approaches, or patients whose disease has progressed beyond standard treatment guidelines. Over the next five years, the company believes that there is a potential to expand the market by an additional 800,000 patients as the number of targeted therapies expands and physicians become more accustomed to using molecular information to guide treatment decisions. Through 2013, Foundation had sold nearly 11,000 FoundationOne clinical tests to over 2,100 physicians in more than 25 countries since its commercial launch in June 2012. The company reported over 400% growth in the number of clinical FoundationOne tests performed YoY in 2013, and management anticipates 140-170% growth in total clinical tests (FoundationOne and FoundationHeme) in 2014.

FMI tests are done in its newly expanded laboratory in Cambridge, Massachusetts. Currently, the company is able to deliver medical reports to physicians within 14 to 17 days for its FoundationOne solid tumor product and within 28 days for the FoundationOne Heme. The differentiating factor for FMI relative to its "hot spot testing peers" is that the company's proprietary algorithm can source and scan 1000s of publications and scholarly abstracts linked to trial and drug information to determine the best clinical approach for a particular patient. While additional therapeutic approvals will increase the value of FMI's platform, the true incremental driver of value for Foundation will be dependent upon the company's expansion of clinical tests performed. Creating long-term tangible value will be largely dependent on the amount of patient data that the company can source on its bioinformatics platform; the faster FMI test utilization occurs, the broader the company's moat. Presently, 18 biopharmaceutical partners utilize Foundation Medicine's molecular information platform to enhance the development of their targeted cancer therapies, including Novartis, Johnson and Johnson, Sanofi, AstraZeneca, Celgene, Eisai Co, Agios Pharmaceuticals, and Clovis Oncology.

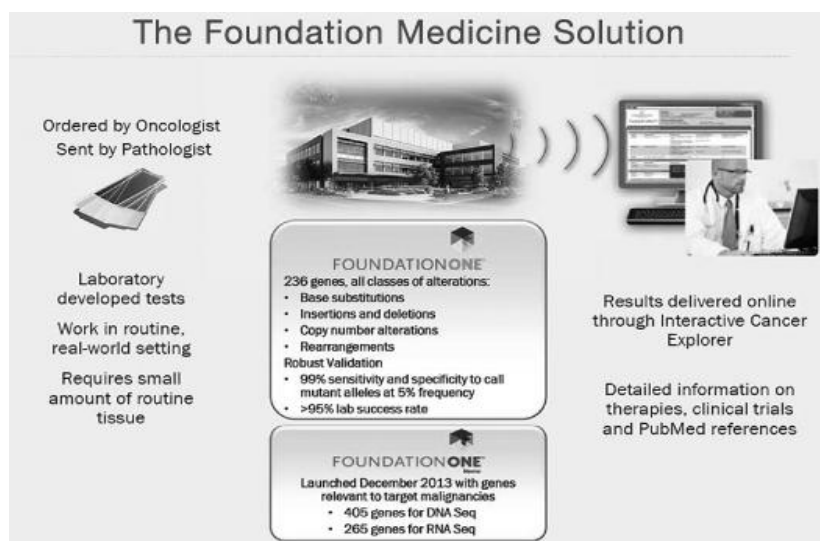
While Foundation's approach is novel, many investors question the long-term potential of the company. Investors' key concerns center on reimbursement uncertainty, potential long-term pricing pressures, and the clinical test adoption curve. We believe that all of these lingering questions are valid, but investors should look at the track record of Foundation's CEO, Michael J. Pellini. As the former CEO of Clariant Corporation, a molecular and cancer diagnostic services company, Mr. Pellini has had a successful career understanding how to communicate diagnostic information to doctors. Clariant was acquired by GE for \$587 million in 2010 (5.3x revenue and 30.9x TEV/EBITDA). Foundation is currently valued at 16x sales (ttm); 6.2x consensus' FY15 sales estimate; 3.5x consensus' FY16 sales estimate. Those multiples show that a lot of optimism is baked into FMI's current stock price. Clearly investors think that the novel nature of the company's value proposition is intriguing and

potentially disruptive, and are putting a little bit of weight into positive Medicare/Medicaid reimbursement color sometime in 2015. To get to our 2016 sales estimate of \$195 million, we assume 75,000 clinical tests sold and \$3,400 per test; similar consolidated pricing dynamics FMI reported in 2013 and in 1Q14. Our FY16 estimate assumes a 3-year CAGR of 102% in clinical tests sold. We estimate that three customers accounted for close to 50% of FMI's revenues in 2013.

Technology Overview

Foundation Medicine believes that the oncology community needs a new, better approach to treatment as traditional methods have several inherent limitations. Current molecular diagnostic tests only identify single or multi-genomic markers, limiting clinicians' ability to identify genomic alterations to a fraction of the four classes. Furthermore, tissue biopsies, another approach used to gather solid tumor characteristics, are often plagued by insufficient or poor tumor tissue quality. Because of these limitations with current approaches, physicians often prescribe off-label therapies to patients who have had limited-to-no success with FDA-approved treatment recommendations. FMI's hope is to educate physicians' treatment decisions through aggregating patients' cancer-related molecular information and distilling the data down into a concise and actionable format to aid physicians in their treatment decisions; thereby, saving lives. FMI performs all of its tests in its diagnostic laboratory located in Cambridge, Massachusetts. Of the nearly 4,000 clinical specimens received from the FoundationOne's launch in June 2012 through May 2013, the solid tumor test identified 82% of the time at least one alteration associated with an FDA-approved therapy or clinical trial. Each sample does not require special handling beyond current standards of practice. FoundationOne and FoundationOne Heme analysis consists of sample preparation, gene sequencing, and data analysis.

- **Sample prep** - FMI is able to process samples for testing using a very small amount of DNA: at least 40 microns in thickness and consist of at least 20% tumor cells. These specifications represent a much smaller threshold for analysis than typical methods post-biopsy. The company estimates that approximately 95% of all specimens it receives meet these requirements. Samples that do not adhere to these metrics typically do not have enough high-quality DNA, 50 nanograms or so, for FMI to perform proper FoundationOne tumor analysis. Using 500 nanograms of extracted RNA in addition to DNA, FoundationOne Heme samples are submitted as formalin-fixed, paraffin-embedded (FFPE) blocks or slides. The Heme test has the same minimum requirements as Foundation's solid tumor test. After extraction, DNA and RNA are then broken down into small fragments, and the RNA is converted into complementary DNA (cDNA).
- **Sequencing** - The content of each molecule of DNA is determined using Illumina next-generation gene sequencers (NGS). The sequencer determines every nucleotide in the DNA molecule. Drawing from that information, the FoundationOne and FoundationOne Heme tests are able to detect genomic alterations as low as 1% of the cells being tested. At the end of the sequencing process, FMI identifies the sequence of every DNA molecule in the sample and enters the data into a sophisticated series of proprietary computational algorithms designed to detect and identify all genomic alterations present in the cancer sample.
- **Data Analysis** - FMI then takes the consolidated information and further distills it down to a list of alternations with known FDA-approved therapies or ongoing clinical trials. The outputted information is further vetted by a computational biologist to ensure accuracy, and then the data is translated by a team of specialized scientists into actionable report. The final product contains information about the alterations detected, various therapeutic options available, and potential clinical trials that might be pertinent for that particular patient. The ordering physician can use the data in conjunction with his or her clinical assessment to guide treatment decisions. FoundationOne solid tumor reports are turned around in 14-17 days on average, while Heme results typically take 28 days.



Source: Company

Foundation Medicine Market Size

Despite the a significant effort and investment over the past decade-plus to understand the molecular basis of cancer and the important factors in its progression, cancer remains a huge area of unmet medical need. Rather than the conventional cytotoxic agents that indiscriminately kill cells, many of the newer therapeutics target genetic abnormalities or rare cases of cancer. The new generation of treatments have higher efficacy and fewer side effects than classical chemotherapy approaches. The biopharmaceutical industry invests over \$120 billion annually in R&D, and it is estimated that there are over a 1000 anti-cancer treatments currently in development worldwide. In 2011, nearly a fifth of the total biopharma R&D spend went to targeted oncology therapies, an estimated \$21.7 billion. Investments in biologic approaches for treatment of cancer have risen 10x over the past decade. According to a 2012 American Cancer Society report, “Cancer and Survivorship Facts & Figures 2012-2013,” more than 13 million people suffered from cancer and 1.6 million people were newly diagnosed with the disease in the United States during 2012. Within this newly diagnosed populous, an estimated 10% cancer instances are hematological malignancies. Another recent report by the American Cancer Society, “The Global Economic Cost of Cancer”, estimated that the total economic impact of premature death and disability due to cancer worldwide is approximately \$900 billion per annum. Experts believe that cancer will remain a significant medical burden for years to come. The World Health Organization predicts in its *Global Action Against Cancer* publication that there will be 16 million new cancer cases and 10 million cancer deaths globally in 2020.

FMI estimates its annual target market in the US at almost 1.1 million patients for FoundationOne and Foundation Heme. The company plans to focus on newly-diagnosed or recurrent active metastatic cancer patients who fall into challenging treatment categories. Many of these patients have rare or aggressive metastatic growths that continue to progress after standard treatments have been exhausted, or they are not eligible for traditional molecular tests. FMI believes that FoundationOne for solid tumors will benefit this target patient population because product will provide the most comprehensive molecular information to physicians and allow them to make educated treatment decisions. The company also estimates that over the next five years its potential market could expand by an additional 800,000 annual patients as the number of FDA-approved biologic therapies and clinical trials expand and physicians become more accustomed to utilizing bioinformatics to guide treatment decisions.

FMI currently sells its product to approximately 2,100 doctors and academic and non-profit researchers globally. We estimate these customers account for less than 5% of the addressable market. According to the American Society of Clinical Oncology, there are more than 10,000 oncologists treating cancer patients in the United States. Nearly 85% of the oncologists in the US practice in community-based settings and not in major academic cancer centers. Penetrating these domestic community-based centers remains a major source of untapped incremental growth for Foundation Medicine.

In addition to its clinical testing platform, FMI leverages its informatics and proprietary know-how to help enhance the development process of cancer-based biologic therapeutics. Foundation has 18 biopharmaceutical partners - Agios Pharmaceuticals, ARIAD Pharmaceuticals, Array BioPharma, AstraZeneca, Celgene, Clovis Oncology, Eisai, Johnson & Johnson, Novartis, and Sanofi. The company uses its core testing platform, computation biology, and information technology capabilities to analyze patient samples from both retrospective and prospective clinical trials. Biopharmaceutical partners use the information to:

- Accelerate clinical development timelines and increase treatment efficacy by mining for treatment information on other patients with tumors that have a similar genetic profile.
- Aid in the creation of companion diagnostics to test if a particular targeted cancer therapy will benefit a particular patient group. Companion diagnostics can quickly remove those patients who will not respond to treatment; thereby, reducing healthcare costs.
- Create opportunities for drug combination studies, and potentially lead the discovery of additional clinical utility for drugs that have been previously approved by the FDA.

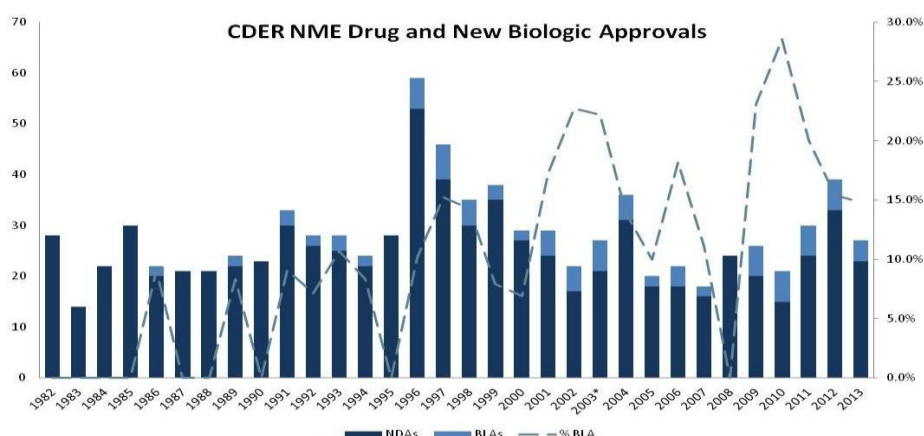
A New Era in Personalized Medicine

While rapid clinical test adoption and clarity around Medicare and Medicaid reimbursement are vital for long-term vitality of FMI, the transition away from trial-and-error, one-size-fits all medicine to targeted therapeutics should enhance Foundation Medicine's value proposition. We believe that FMI will benefit from the new era of drug discovery and diagnostics development. Unlike past biotechnology eras, where a new technology drove a massive shift in market sentiment, this new era is much more compelling. Targeted therapeutics are changing the way people are being treated because patient populations can be stratified by genetic information. Only the sub-population that has shown clinical utility from a particular treatment will be prescribed certain biologics. This approach reduces overall healthcare costs as patients who will not benefit from a particular treatment are not blindly prescribed the biologic, and it also shortens the time from development to commercial release because efficacy is often extremely high for the focus group. As a result of these therapeutics and other fast-tracked orphan medicines, the biopharmaceutical industry reported a 16-year high in new drug discovery in 2012, and the third best year in the last decade in 2013 with the 27 new molecular entities approved. In 2014, current data indicates that the FDA is at an approval run-rate north of 30 new molecular entity approvals in 2014 as 16 have already been approved through June 18, 2014.

Diagnostics have seen an even more dramatic transformation as a result of advancements in cancer biology and genomic technology. These tests enable the identification of certain genes, allowing biopharmaceutical companies to direct more research and development resources towards targeted therapies that match a patient's genetic profile. FMI estimates that there are more than 40 approved targeted oncology therapies on the market in the US and 950 unique clinical trials testing more than 470 targeted oncology therapies.

Figure 1

New Molecular Entities Increasing



Source: U.S. Food and Drug Administration, Janney Capital Markets

Approval rates are at record levels

This era should be even better

Looking back over the last 10-30 years since polymerase chain reaction (PCR) was first utilized and the first human genome was sequenced, the US healthcare landscape has undergone dramatic changes.

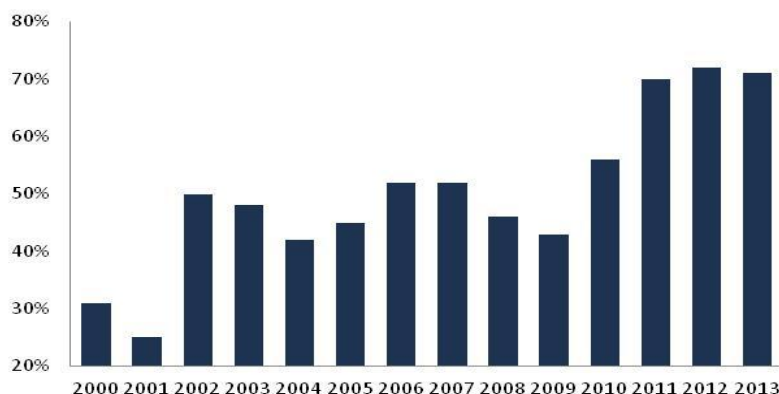
- In the past 30 years, life expectancy for newborn males in the U.S. has increased by 6.0 years to 82.6 (OECD: 1980-2009) and adult 5-year cancer survival rates have increased from 50% to 68% from (NIH: Cancer RePORT 1974-2007).
- Molecular diagnostics, genetic-based tests, have emerged as a leading technology sector primed for medical practice and investments. In the late 1990s, Labcorp and Quest were the only two major diagnostics equities.
- Over the past 10 years, pharmaceutical companies have fully embraced biotechnology, acquiring many of the innovators and ramping up their internal development to combat new entrants. The era of massive chemical screening against disease has transformed to better defined drug targets and more balanced large and small molecule targeted therapy programs.
- Gleevec, an often-cited story exemplifying biotechnology success, was approved in 2001 due to 90% response rates. Today, the drug is a blockbuster with almost \$4.7 billion in annual sales (2013). Gleevec's success symbolizes the promise of targeted therapeutic drugs.

We believe that the acceleration in genetic and drug discovery has already begun, but looking out over the next ten years, we are only at the tip of the iceberg. The few qualitative and quantitative data points include the following.

- Approved New Molecular Entity (NME) reached 39 in 2012, the highest in 16 years. There were approvals 27 in 2013; the third best year in the last decade.
- The approval rate (First Action Approval Rate), an indicator of greater discovery efficiency, expanded to 74% in 2011, and 72% in 2012 and 2013; significantly outpacing the twenty year average of 44% (1993-2012).

Figure 2

NME/NBE First Action Approval Rate



Source: U.S. Food and Drug Administration

NEW TECHNOLOGIES TRANSFORMING DIAGNOSTICS

The next advancement that will accelerate industry growth is the utilization of genetic information for efficient and successful drug development and diagnostic applications. We see instances of pre- and post- genetic sequencing technologies transforming all aspects of research and medical practice. These advancements will enhance the scope and effectiveness of research, and as a result increase the options available to patients and physicians. Sequencing, the core of Foundation Medicine's product offering, is transforming the healthcare industry. A variety of sequencing transformations have occurred over the last several decades due to breakthrough technology (eg faster instruments and reagents).

SEQUENCING TIMELINE IS IMPRESSIVE

- ❑ 1953: James Watson and Francis Crick discovery the helix shape of DNA and Nobel Prize awarded in 1962.

A human genome can now be sequenced in a few days

- ❑ 1964: Taking five years, Robert Holley discovers 80 molecule segments of a DNA transcript and Nobel Prize awarded in 1968.
- ❑ 1985: Kary Mullis discovers method for high speed duplication of any organisms DNA to enable faster sequencing and Nobel Prize awarded in 1993.
- ❑ 1995: First genome (meningitis bacteria) is sequenced with 1.8 billion base pairs.
- ❑ 2000: First human genome sequences by the NIH a Celera Corporation after multi-year effort and cost in excess of \$250 million.
- ❑ 2010: Less than a hundred human genomes sequenced over 10 years at a cost above \$250,000 for each sequence.
- ❑ 2013: Cost of human genome sequence falls below \$3,000 and over 40,000 genomes sequenced in the year.
- ❑ 2014: Illumina announces that the first full human genome sequence for \$1000 is available with their HiSeq X Ten genetic sequencer. Individual laboratories have announced the intent to sequence over 40,000 genomes annually.

As the speed of genetic discovery continues to accelerate, from 100 human genomes sequenced in 2010 to over 50,000 in 2013, the primary question that arises is what is that knowledge going to accomplish? Answering that question starts with a primer on molecular biology. The human body is comprised of 60 trillion cells, and within most of those cells are chromosomes, an organized structure of over 3 billion deoxyribonucleic acid (DNA) molecules. DNA contains the biological underpinning that instructs the development and active function all living organisms. Determining the exact sequence of DNA molecules is the purpose of sequencing instruments made primarily by Illumina and to a lesser degree ThermoFisher, BGI, and others.

Determining the sequence of DNA molecules is important because a grouping of DNA is called a gene, and genes encode and drive the assembly of proteins. Proteins are what we and other organisms are made of - hair, skin, blood, etc. Proteins and genes regulate the function of organism and represent the key to understanding disease, growth and other biological functions. We leave molecular biology to textbooks, but advances in gene sequencing enable the following:

- ❑ Increasing diagnostic tests. In the last decade plus, the life sciences industry has achieved significant advances in molecular diagnostics to detect, predict and manage disease. From an industry dominated initially by LabCorp and Quest, several molecular diagnostics companies with market capitalizations north of \$500 million have been created, including Myriad Genetics, Hologic, Cepheid, Qiagen, Clariant, Genoptix and many others. We expect even faster development and value creation in the next decade as genetic discovery drives more tests.
- ❑ Faster and less expensive drug discovery. Researchers and physicians remain optimistic that genomics will accelerate drug and biological therapy discovery, and save lives. At the discovery stage, sequencing helps identify disease-causing genes. In the clinical trial phase, lower-cost gene sequencing of entire human genomes may pinpoint individuals with adverse affects.

Commercialization

We believe that the keys for long-term value creation for FMI will be dependent upon the company's ability to develop a robust doctor information network, to institute an effective commercialization strategy, and to receive a favorable reimbursement decision from the National Government Services, Medicare, and Medicaid. An effective strategy, product traction, and favorable coverage decisions will create significant barriers to entry for any future competitors. FMI's FoundationOne and FoundationOne Heme are the only commercially available comprehensive molecular information products sold today to assess solid tumors and hematological malignancies. Drawing from its management's prior experience running Clariant (acquired by General Electric in 2010) and collaborations with key opinion leaders (KOLs) in oncology, Foundation Medicine knows what must be done to demonstrate economic value and clinical utility to payors. The company must provide actionable results that are not detected by any other commercial test, increase physician demand by expanding and strengthening customer relationships, engage KOLs to influence inclusion of FoundationOne and FoundationOne Heme in practice guidelines, demonstrate clinical utility through publications in peer-reviewed journals, and provide tangible data that shows an improvement in healthcare economics through utilizing FMI's tests. The company is actively focused on these key initiatives to ensure the long-term vitality of its business

Developing a key portal for oncologists

A Medicare decision
is pending

Third-party payment
is occurring

model. Foundation recognizes that it will become an even more important partner in the treatment of cancer patients if it can continue to integrate its products into the everyday clinical practice of oncologists. FMI has significantly expanded its sales force over the past several years to drive adoption and repeat usage; both are vital to expanding and strengthening customer relationships. The better integrated into a physician's routine clinical practice, the more likely the physician will become a repeat customer. According to Foundation Medicine, during a period of active treatment, patients typically visit their physician every three to four weeks. To ensure that doctors have all of the most recent treatment and clinical trial information throughout the active treatment process, Foundation developed its *Interactive Cancer Explorer*, a continuously updated portal that links directly into publicly available databases, such as PubMed and clinicaltrials.gov. Over time, FMI hopes that it will become the primary community site to capture, aggregate, and analyze genomic data for treatment of cancer. The company is heavily investing in infrastructure today to ensure that it can be the leader tomorrow.

Reimbursement

Currently, FoundationOne and FoundationOne Heme are the only commercially available molecular information products that can assess most types of solid tumors and hematologic malignancies. There is no direct precedent for reimbursement for Foundation's solid tumor and hematological malignancies test; therefore, there is no commercial third-party payors or governmental standard. Foundation Medicine is actively pushing regulators and payors to establish new rules and frameworks for reimbursement. The company hopes to receive a coverage decision for Medicare sometime in 2015.

Foundation Medicine lists its FoundationOne solid tumor and FoundationOne Heme test for \$5,800 and \$7,200, respectively. Nevertheless, like most tests and procedures in the US, actual payment has been averaging about \$3,400 for Foundation Medicine. Sources of current or potential payment include:

- *Commercial third-party payors*, such as health insurance or managed care plans. FMI is not a participating provider so it has yet to receive specific coverage decisions for its FoundationOne or Foundation One Heme. Commercial third-party payors reimburse claims for FoundationOne based upon stacked Current Procedural Terminology (CPT) codes from the American Medical Association, the predominant methodology, or a percentage of charges.
- *Government health-benefit programs*, such as Medicare and Medicaid. FMI's tests are not covered by Medicaid because the company is not currently a participating provider in any state program. FMI is a participating provider in Medicare, but the company is not authorized for reimbursement because there have been no local or national coverage determinations.
- *International distributors, individual patients, and other healthcare providers*, such as hospitals and cancer centers. These groups pay FMI based on previously negotiated rates, which are most often less than list prices.

Foundation Medicine has received reimbursement for a significant number of its third-party payor claims using procedural-based CPT codes. New codes were released January 1, 2013, for molecular testing services and FMI has been reimbursed for a majority of these claims. Despite the changes and the release of the Heme test in 4Q13, Foundation has not seen a decline in average revenue per test reimbursed. There are new CPT codes under consideration to classify molecular tests that rely on next-generation sequencing. A decision on these new CPT codes is expected to be published sometime in 2015.

Some third-party payors utilize the McKesson Diagnostics Exchange™, McKesson DEX, in making reimbursement and coverage decisions. FMI believes that the current Z-Codes associated with its tests in the McKesson DEX do not adequately address the novel nature of the FoundationOne and FoundationOne Heme tests. Foundation Medicine has submitted an application to McKesson to establish unique Z-Codes for its FoundationOne and FoundationOne Heme.

Earnings Model, Balance Sheet & Valuation

While Foundation's approach is novel, many investors question the long-term potential of the company. Investors' key concerns center on reimbursement uncertainty, potential long-term pricing pressures, and the clinical test adoption curve. We believe that all of these lingering questions are valid, but investors should look at the track record of Foundation's CEO,

Michael J. Pellini. As the former CEO of Clariant Corporation, a molecular and cancer diagnostic services company, Mr. Pellini has had a successful career understanding how to communicate diagnostic information to doctors. Clariant was acquired by GE for \$587 million in 2010 (5.3x revenue and 30.9x TEV/EBITDA). Foundation is currently valued at 16x sales (ttm); 6.2x consensus' FY15 sales estimate; 3.5x consensus' FY16 sales estimate. To get to our 2016 sales estimate of \$195 million, we assume 75,000 clinical tests sold and \$3,400 per test; similar consolidated pricing dynamics FMI reported in 2013 and in 1Q14. Our fair value estimate of \$28 per share is based on an averaging of a 5x price-to-sales multiple on our 2015 and 2016 forecast. We anticipate that Foundation Medicine will become EBITDA-positive in 2016 and EBIT-positive in 2017. As a result of management investing in the business, we expect FMI's cash reserves to decline from \$110 million in 1Q14 to \$43.5 million in 2015 before reaccelerating higher in 2016 and beyond.

Revenue

Foundation reported revenue growth of 172% YoY to \$29 million in 2013. We estimate that percentage of revenues from the FoundationOne clinical tests nearly doubled to 48% of total sales in 2013 from 24% in 2012. Foundation reported \$8.0 million in revenue from our biopharmaceutical customers and \$2.6 million in revenue from FoundationOne tests ordered by clinical physicians in 2012. Since its first test, the FoundationOne, was launched in 2012, Foundation Medicine has sold over 15,000 tests to physicians for clinical testing. The company reported clinical testing volumes of 4,702 in 1Q14, representing 300% growth during the quarter. The company reported clinical testing revenues of \$7.1 million in 1Q14; drawing from management's average test cost commentary, we estimate that the FMI received payment of 44% of its tests during the quarter. We anticipate similar dynamics in 2014, roughly 46% payment, and total clinical testing revenues of \$37 million. We believe that clinical revenues will account for a larger pie of the company's total revenues overtime. We estimate that 64% of sales will be due to clinical testing revenues in 2014 and that percentage will accelerate to 85% in 2017.

The majority of the company's revenues are from US based customers. Foundation reported \$3.2 million in revenues from primarily four customers outside of the US in 2013. These customers represented 11% of the FMI's total sales. As the company continues to leverage its international distribution network and leverage its existing customer relationships, we anticipate that the international sales double to 22% of total revenues over the next four years. Revenue visibility should improve over the next several years as the company receives reimbursement coverage decisions from governmental programs like Medicare and Medicaid, and additional guideline decisions that should aid in third-party payor reimbursement clarity. In addition to improved visibility regarding reimbursement, further physician penetration and clinical testing volume growth will be vital to reaching consensus' outer-year expectations.

MANAGEMENT & SELECTED BOARD MEMBERS

Michael J. Pellini, M.D., President and Chief Executive Officer

Michael J. Pellini, M.D., has served as the company's President and Chief Executive Officer and as a member of the board of directors since May 2011. Previously, from April 2008 through April 2011, Dr. Pellini worked at Clariant, a General Electric Healthcare Company, where he held the position of President and Chief Operating Officer. Dr. Pellini served on Clariant's board of directors from May 2007 to April 2009. Dr. Pellini received a B.A. from Boston College, an M.B.A. from Drexel University, and an M.D. from Jefferson Medical College of Thomas Jefferson University.

Steven J. Kafka, Ph.D., Chief Operating Officer

Steven J. Kafka, Ph.D., joined Foundation Medicine as Chief Operating Office in January 2013. Prior, from September 2009 to October 2012, Dr. Kafka was the Chief Operating Officer and Chief Financial Officer at Aileron Therapeutics, a biopharmaceutical company. Before Aileron, from September 2006 to September 2009, Dr. Kafka served as Vice President of Finance at Infinity Pharmaceuticals. Dr. Kafka earned his B.A. with Distinction and Honors from Stanford University and a Ph.D. from Harvard University.

Jason Ryan, Senior Vice President, Finance

Jason Ryan has served as Senior Vice President, Finance at Foundation Medicine since January 2014. Previously, Mr. Ryan was Vice President, Finance and Senior Director, Finance at the company. Prior to FMI, Mr. Ryan led the finance and strategic planning

functions of Taligen Therapeutics, now an Alexion Pharmaceuticals company, from May 2009 to April 2011. Mr. Ryan also worked at Codon Devices and Genomics Collaborative, which was acquired by SeraCare Life Sciences. Mr. Ryan began his career at Deloitte & Touche. Mr. Ryan holds a B.S. in economics from Bates College and an M.B.A. from Babson College, and earned a C.P.A. in Massachusetts.

Brook Byers, Member of the Board of Directors

Brook Byers has served as a member of Foundation Medicine's board of directors since 2011. Mr. Byers is a managing partner at Kleiner Perkins Caufield & Byers and has been a venture capital investor since 1972. Over his career, Mr. Byers has been involved in more than 50 technology-based ventures.

Mark Levin, Member of the Board of Directors

Mark Levin has served as a member of Foundation Medicine's board of directors since 2010. Mr. Levin serves as a partner at Third Rock Ventures, a life sciences venture capital firm focused on the formation, development and strategy of new companies. Mr. Levin co-founded Third Rock Ventures in 2007. Previously, Mr. Levin served as Chief Executive Officer of Millennium Pharmaceuticals from 1993 to 2005.

Krishna Yeshwant, M.D., Member of the Board of Directors

Krishna Yeshwant, M.D., has served as a member of our board of directors since 2011. Dr. Yeshwant is a partner at Google Ventures, a venture-capital fund.

Foundation Medicine
Annual Income Statement

Paul Knight
Janney Montgomery Scott
212-888-2696

(\$ in millions, except per share data)

FY-ending Dec 31,	2011	2012	2013					2014E					2015E	2016E	2017E
	2011	2012	1Q13	2Q13	3Q13	4Q13	2013	1Q14	2Q14E	3Q14E	4Q14E	2014E	2015E	2016E	2017E
Revenues															
Clinical Testing		\$ 2.6					\$ 13.8	\$ 7.1	\$ 8.5	\$ 10.1	\$ 11.1	\$ 36.7	\$ 85.0	\$ 160.0	\$ 255.0
Other		8.0					15.1	4.4	4.6	5.4	6.0	20.3	25.0	35.0	45.0
Total Revenues	\$ 2.1	\$ 10.6	\$ 5.2	\$ 5.9	\$ 8.2	\$ 9.7	\$ 29.0	\$ 11.5	\$ 13.0	\$ 15.5	\$ 17.0	\$ 57.0	\$ 110.0	\$ 195.0	\$ 300.0
Consensus Estimate 06-25-14		24.4%	\$ 5.2	\$ 5.9	\$ 8.2	\$ 9.7	\$ 29.0	\$ 11.5	\$ 13.4	\$ 15.5	\$ 17.9	\$ 58.2	\$ 108.6	\$ 196.3	\$ 312.0
Growth Reported		417.5%	749.7%	225.8%	170.3%	86.6%	172.3%	120.3%	119.6%	88.8%	75.9%	96.5%	93.1%	77.3%	53.8%
Clinical Testing															
Other															
Organic Growth															
Clinical Tests		1,750	Est 1,075	1,626	2,577	3,752	9,050	4,702	5,450	6,300	7,250	23,702	47,500	75,000	100,000
YoY Growth							417.1%	337.4%	235.2%	144.5%	93.2%	161.9%	100.4%	57.9%	33.3%
QoQ Growth				51.3%	58.5%	45.6%		25.3%	15.9%	15.6%	15.1%				
Geographic Revenues (Estimate)	2.1	10.6	5.2	5.9	8.2	9.7	29.0	11.5	13.0	15.5	17.0	57.0	110.0	195.0	300.0
United States	2.1	9.9	4.9	5.5	7.2	8.1	25.8	10.0	11.3	13.3	14.4	48.9	92.5	160.0	235.0
ROW	0.0	0.8	0.3	0.4	1.0	1.5	3.2	1.5	1.8	2.3	2.6	8.1	17.5	35.0	65.0
Highlighted Customers	85.1%	52.3%					36.1%					28.1%	20.7%	14.9%	11.3%
Growth Organic Estimated	0.0%	417.5%	749.7%	225.8%	170.3%	86.6%	172.3%	120.3%	119.6%	88.8%	75.9%	96.5%	93.1%	77.3%	53.8%
Currency	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Geographic Exposure	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
United States	100.0%	92.6%	94.2%	93.0%	87.8%	84.3%	88.8%	86.9%	86.5%	85.5%	84.7%	85.8%	84.1%	82.1%	78.3%
Row	0.0%	7.4%	5.8%	7.0%	12.2%	15.7%	11.2%	13.1%	13.5%	14.5%	15.3%	14.2%	15.9%	17.9%	21.7%
Geographic Growth		417.5%	749.7%	225.8%	170.3%	86.6%	172.3%	120.3%	119.6%	88.8%	75.9%	96.5%	93.1%	77.3%	53.8%
United States		479.2%	906.2%	234.9%	156.3%	65.7%	161.3%	103.2%	104.4%	83.8%	76.8%	89.7%	89.3%	73.0%	46.9%
Row			140.0%	139.9%	344.4%	473.2%	310.4%	400.0%	321.7%	125.0%	71.2%	150.5%	116.0%	100.0%	85.7%
Acquisition Impact		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cost of Goods	0.3	5.7	2.4	2.2	2.9	4.2	11.7	5.3	6.0	7.1	7.7	26.1	48.4	81.9	109.5
Gross Margin	\$ 1.8	\$ 5.0	\$ 2.8	\$ 3.7	\$ 5.4	\$ 5.5	\$ 17.3	\$ 6.2	\$ 7.0	\$ 8.4	\$ 9.3	\$ 30.9	\$ 61.6	\$ 113.1	\$ 190.5
Gross Margin %	87.5%	46.6%	54.3%	62.5%	65.2%	56.5%	59.8%	53.8%	54.0%	54.2%	54.7%	54.2%	56.0%	58.0%	63.5%
S & M Expenses	1.6	3.5	1.8	2.9	3.0	4.6	12.3	5.7	6.3	6.5	7.0	25.5	30.0	36.0	54.0
G & A Expenses	7.0	8.6	3.2	4.8	6.4	7.5	21.9	5.7	6.5	7.2	7.8	27.2	33.5	39.0	50.0
R & D Expenses	9.0	14.8	5.0	6.1	7.0	6.8	24.9	6.9	7.3	7.6	8.2	30.0	35.5	42.0	57.0
Operating Income (EBIT)	\$ (15.8)	\$ (21.9)	\$ (7.1)	\$ (10.0)	\$ (11.1)	\$ (13.5)	\$ (41.8)	\$ (12.1)	\$ (13.1)	\$ (12.9)	\$ (13.7)	\$ (51.8)	\$ (37.4)	\$ (3.9)	\$ 29.5
Op Margin (EBIT %)	-766.7%	-205.8%	-136.9%	-169.4%	-135.5%	-139.6%	-144.1%	-106.0%	-100.8%	-83.2%	-80.6%	-91.0%	-34.0%	-2.0%	9.8%
Interest (Expense)	(0.4)	(0.4)	(0.1)	(0.1)	(0.1)	(0.0)	(0.2)	(0.0)	(0.1)	(0.1)	(0.1)	(0.2)	(0.3)	(0.4)	(0.6)
Other Income (Expense), net	(0.8)	(0.1)	(0.0)	(0.1)	(1.3)	0.4	(0.9)	0.0	(0.1)	(0.1)	(0.1)	(0.3)	(0.4)	(0.5)	(1.0)
Pretax Income	\$ (17.0)	\$ (22.4)	\$ (7.2)	\$ (10.2)	\$ (12.5)	\$ (13.1)	\$ (42.9)	\$ (12.2)	\$ (13.3)	\$ (13.1)	\$ (13.9)	\$ (52.3)	\$ (38.1)	\$ (4.7)	\$ 27.9
Income Taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8
Tax Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.0%
Net Income Operating	\$ (17.0)	\$ (22.4)	\$ (7.2)	\$ (10.2)	\$ (12.5)	\$ (13.1)	\$ (42.9)	\$ (12.2)	\$ (13.3)	\$ (13.1)	\$ (13.9)	\$ (52.3)	\$ (38.1)	\$ (4.7)	\$ 18.1
Extraordinaries (After Tax)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Income GAAP	\$ (17.0)	\$ (22.4)	\$ (7.2)	\$ (10.2)	\$ (12.5)	\$ (13.1)	\$ (42.9)	\$ (12.2)	\$ (13.3)	\$ (13.1)	\$ (13.9)	\$ (52.3)	\$ (38.1)	\$ (4.7)	\$ 18.1
Accretion of convt preferred stock	(0.3)	(0.3)	(0.1)	(0.0)	(0.0)	0.0	(0.1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Income to Common	\$ (17.3)	\$ (22.7)	\$ (7.3)	\$ (10.2)	\$ (12.5)	\$ (13.1)	\$ (43.1)	\$ (12.2)	\$ (13.3)	\$ (13.1)	\$ (13.9)	\$ (52.3)	\$ (38.1)	\$ (4.7)	\$ 18.1
Diluted Operating EPS	\$ (13.82)	\$ (10.33)	\$ (2.54)	\$ (3.31)	\$ (3.50)	\$ (0.48)	\$ (4.62)	\$ (0.44)	\$ (0.47)	\$ (0.46)	\$ (0.49)	\$ (1.86)	\$ (1.32)	\$ (0.16)	\$ 0.60
Diluted GAAP EPS	(13.82)	(10.33)	(2.54)	(3.31)	(3.50)	(0.48)	(4.62)	(0.44)	(0.47)	(0.46)	(0.49)	(1.86)	(1.32)	(0.16)	0.60
Diluted EPS to Common	\$ (14.06)	\$ (10.47)	\$ (2.56)	\$ (3.33)	\$ (3.51)	\$ (0.48)	\$ (4.64)	\$ (0.44)	\$ (0.47)	\$ (0.46)	\$ (0.49)	\$ (1.86)	\$ (1.32)	\$ (0.16)	\$ 0.60
Consensus Estimate 06-25-14								\$ (0.47)	\$ (0.47)	\$ (0.44)	\$ (0.45)	\$ (1.80)	\$ (1.35)	\$ (0.11)	\$ 0.92
Diluted Shares Outstanding	1.2	2.2	2.8	3.1	3.6	27.5	9.3	27.7	28.0	28.2	28.5	28.1	28.9	29.4	30.0
SBC per share included	0.1	1.5	0.7	1.3	3.0	2.3	7.3	0.7				0.7			

Source: Company reports, Janney Capital Markets estimate, Capital IQ, FactSet

06/25/14

Foundation Medicine
Annual Revenue Breakout and Margins

Paul Knight
Janney Montgomery Scott
212-888-2696

% of Revenues

FY-ending Dec 31,	2011	2012	2013					2014E					2015E	2016E	2017E
	2011	2012	1Q13	2Q13	3Q13	4Q13	2013	1Q14	2Q14E	3Q14E	4Q14E	2014E	2015E	2016E	2017E
Revenues															
Total Revenues	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Cost of Sales	12.5%	53.4%	45.7%	37.5%	34.8%	43.5%	40.2%	46.2%	46.0%	45.8%	45.3%	45.8%	44.0%	42.0%	36.5%
Gross Margin	87.5%	46.6%	54.3%	62.5%	65.2%	56.5%	59.8%	53.8%	54.0%	54.2%	54.7%	54.2%	56.0%	58.0%	63.5%
S & M Expenses	75.6%	32.4%	34.8%	48.6%	37.0%	47.6%	42.5%	49.7%	48.7%	41.9%	41.2%	44.8%	27.3%	18.5%	18.0%
G & A Expenses	339.9%	81.2%	60.6%	80.3%	78.6%	77.7%	75.4%	49.8%	50.0%	46.5%	45.9%	47.8%	30.5%	20.0%	16.7%
R & D Expenses	438.6%	138.8%	95.8%	103.0%	85.1%	70.7%	85.9%	60.4%	56.2%	49.0%	48.2%	52.7%	32.3%	21.5%	19.0%
Op Margin	-766.7%	-205.8%	-136.9%	-169.4%	-135.5%	-139.6%	-144.1%	-106.0%	-100.8%	-83.2%	-80.6%	-91.0%	-34.0%	-2.0%	9.8%
Pretax Margin	-828.2%	-210.4%	-138.5%	-172.1%	-151.9%	-135.5%	-148.1%	-106.2%	-102.0%	-84.2%	-81.5%	-91.9%	-34.6%	-2.4%	9.3%
Tax Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.0%
Net Margin	-828.2%	-210.4%	-138.5%	-172.1%	-151.9%	-135.5%	-148.1%	-106.2%	-102.0%	-84.2%	-81.5%	-91.9%	-34.6%	-2.4%	6.0%

YoY % Change

FY-ending Dec 31,	2011	2012	2013					2014E					2015E	2016E	2017E
	2011	2012	1Q13	2Q13	3Q13	4Q13	2013	1Q14	2Q14E	3Q14E	4Q14E	2014E	2015E	2016E	2017E
Revenues															
Total Revenues		417.5%	749.7%	225.8%	170.3%	86.6%	172.3%	120.3%	119.6%	88.8%	75.9%	96.5%	93.1%	77.3%	53.8%
Cost of Revenues		2101.9%	326.2%	74.4%	59.6%	104.1%	105.2%	122.5%	169.5%	148.4%	83.2%	123.6%	85.6%	69.2%	33.7%
Gross Margin		175.9%	5125.9%	579.1%	329.4%	75.0%	249.1%	118.4%	89.7%	57.0%	70.4%	78.2%	99.5%	83.6%	68.4%
S & M Expenses		122.1%	179.9%	310.7%	257.8%	265.8%	256.9%	214.2%	120.0%	114.0%	52.1%	107.0%	17.6%	20.0%	50.0%
G & A Expenses		23.6%	85.4%	137.8%	202.2%	167.2%	153.0%	81.0%	36.7%	11.7%	3.8%	24.4%	23.2%	16.4%	28.2%
R & D Expenses		63.8%	66.3%	68.1%	95.9%	49.0%	68.5%	38.8%	19.7%	8.8%	20.0%	20.5%	18.3%	18.3%	35.7%
Op Margin		38.9%	34.7%	73.4%	109.7%	143.6%	90.6%	70.5%	30.7%	16.0%	1.6%	24.1%	(27.9)%	(89.6)%	(856.4)%
Pretax Income		31.4%	32.4%	72.5%	127.1%	135.4%	91.8%	68.9%	30.1%	4.7%	5.8%	21.8%	(27.3)%	(87.5)%	(687.4)%
Net Income Operating		31.4%	32.4%	72.5%	127.1%	135.4%	91.8%	68.9%	30.1%	4.7%	5.8%	21.8%	(27.3)%	(87.5)%	(481.8)%
Diluted Operating EPS		(25.2)%	(19.7)%	13.5%	48.3%	(77.9)%	(55.3)%	(82.7)%	(85.7)%	(86.8)%	2.1%	(59.7)%	(29.3)%	(87.7)%	(474.2)%
Diluted Shares Outstanding		75.8%	64.8%	52.0%	53.1%	963.2%	329.0%	878.3%	810.9%	691.0%	3.6%	202.4%	2.8%	1.7%	2.0%

Source: Company reports, Janney Capital Markets estimate, Capital IQ, FactSet

Foundation Medicine
Annual Cash Flow Statement

Paul Knight
Janney Montgomery Scott
212-888-2696

(\$ in millions, except per share data)

FY-ending Dec 31,	2011	2012	2013	2014E					2015E	2016E	2017E
	2011	2012	2013	1Q14	2Q14E	3Q14E	4Q14E	2014E	2015E	2016E	2017E
Operating Activities											
Net Income	\$ (17.0)	\$ (22.4)	\$ (42.9)	\$ (12.2)	\$ (13.3)	\$ (13.1)	\$ (13.9)	\$ (52.3)	\$ (38.1)	\$ (4.7)	\$ 18.1
Depreciation & Amortization	1.5	2.9	5.0	1.9	2.0	2.1	2.3	8.3	9.0	9.5	10.5
Stock-based comp	0.1	1.5	7.3	0.7	2.0	2.5	3.0	8.2	9.0	10.0	11.0
Working Capital	0.1	0.5	(2.0)	(3.9)	(1.0)	(1.0)	(1.0)	(6.9)	(5.0)	(7.0)	(7.5)
Other	1.2	0.2	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net from Operations	\$ (14.1)	\$ (17.2)	\$ (30.8)	\$ (13.4)	\$ (10.3)	\$ (9.5)	\$ (9.6)	\$ (42.7)	\$ (25.1)	\$ 7.8	\$ 32.1
Investing Activities											
Acquisitions	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
Capital Expenditures	(5.4)	(3.2)	(6.9)	(0.2)	(1.5)	(1.5)	(2.5)	(5.7)	(7.0)	(7.5)	(8.0)
Other	0.0	0.0	(1.6)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net from Investing	\$ (5.4)	\$ (3.2)	\$ (8.5)	\$ (0.2)	\$ (1.5)	\$ (1.5)	\$ (2.5)	\$ (5.7)	\$ (7.0)	\$ (7.5)	\$ (8.0)
Financing Activities											
Issuance/Reduction of Debt	\$ 2.5	\$ (1.6)	\$ (1.7)	\$ (0.4)	\$ 0.0	\$ 0.0	\$ 0.0	\$ (0.4)	\$ 0.0	\$ 0.0	\$ 0.0
Sale/Repurchase of Common Stock	26.5	66.0	110.4	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Dividends	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net from Financing	\$ 29.0	\$ 64.4	\$ 108.7	\$ (0.4)	\$ 0.0	\$ 0.0	\$ 0.0	\$ (0.4)	\$ 0.0	\$ 0.0	\$ 0.0
Exchange Rate Effect	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Change in Cash	\$ 9.4	\$ 44.0	\$ 69.5	\$ (14.0)	\$ (11.8)	\$ (11.0)	\$ (12.1)	\$ (48.7)	\$ (32.1)	\$ 0.3	\$ 24.1
Cash Flow	\$ (15.5)	\$ (19.5)	\$ (37.9)	\$ (10.3)	\$ (11.3)	\$ (11.0)	\$ (11.6)	\$ (44.0)	\$ (29.1)	\$ 4.8	\$ 28.6
Cash Flow Per Share	(\$12.59)	(\$9.00)	(\$4.08)	(\$0.37)	(\$0.40)	(\$0.39)	(\$0.41)	(\$1.57)	(\$1.01)	\$0.16	\$0.95
EBITDA	\$ (14.3)	\$ (19.0)	\$ (36.8)	\$ (10.2)	\$ (11.1)	\$ (10.8)	\$ (11.4)	\$ (43.5)	\$ (28.4)	\$ 5.6	\$ 40.0
EBITDA per Share	(\$11.56)	(\$8.78)	(\$3.95)	(\$0.37)	(\$0.40)	(\$0.38)	(\$0.40)	(\$1.55)	(\$0.98)	\$0.19	\$1.33
Free Cash Flow	\$ (19.5)	\$ (20.4)	\$ (37.7)	\$ (13.6)	\$ (11.8)	\$ (11.0)	\$ (12.1)	\$ (48.4)	\$ (32.1)	\$ 0.3	\$ 24.1
Free Cash Per Share	(\$15.85)	(\$9.43)	(\$4.06)	(\$0.49)	(\$0.42)	(\$0.39)	(\$0.42)	(\$1.72)	(\$1.11)	\$0.01	\$0.80

Source: Company reports, Janney Capital Markets estimate, Capital IQ, FactSet

(\$ in millions, except per share data)

FY-ending Dec 31,	2011	2012	2013	2014E					2015E	2016E	2017E
	2011	2012	2013	1Q14	2Q14E	3Q14E	4Q14E	2014E	2015E	2016E	2017E
Assets											
Current:											
Cash + Equivalents	\$ 10.9	\$ 54.8	\$ 124.3	\$ 110.3	\$ 98.6	\$ 87.6	\$ 75.6	\$ 75.6	\$ 43.5	\$ 43.8	\$ 67.9
Receivables - net	0.3	2.2	6.3	8.0	9.0	10.0	11.0	11.0	16.0	23.0	30.5
Inventories	0.3	0.8	1.8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Prepaid Exp and Other Assets	0.3	0.6	1.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Total Current Assets	\$ 11.8	\$ 58.4	\$ 133.3	\$ 122.5	\$ 111.7	\$ 101.8	\$ 90.7	\$ 90.7	\$ 63.7	\$ 70.9	\$ 102.6
PP & E, net	\$ 6.1	\$ 7.5	\$ 22.1	\$ 22.3	\$ 21.8	\$ 21.2	\$ 21.4	\$ 21.4	\$ 19.4	\$ 17.4	\$ 14.9
Restricted Cash	0.2	0.2	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Other Assets	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Assets	\$ 18.1	\$ 66.0	\$ 157.3	\$ 146.6	\$ 135.4	\$ 124.8	\$ 114.0	\$ 114.0	\$ 84.9	\$ 90.2	\$ 119.3
Liabilities and Shareholders' Equity											
Current:											
Current Debt	\$ 1.6	\$ 1.7	\$ 1.5	\$ 1.1	\$ 1.1	\$ 1.1	\$ 1.1	\$ 1.1	\$ 1.1	\$ 1.1	\$ 1.1
Accounts Payable	1.4	1.6	7.0	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Accrued Liabilities	1.0	3.5	5.2	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Deferred Revenue	0.2	1.6	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Other Liabilities	0.1	0.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Total Current Liabs.	\$ 4.2	\$ 8.5	\$ 15.8	\$ 15.8	\$ 15.8	\$ 15.8	\$ 15.8	\$ 15.8	\$ 15.8	\$ 15.8	\$ 15.8
Long-Term Debt	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0
Other Liabilities	3.7	2.2	9.8	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
Stockholders Equity	10.2	55.3	131.7	120.3	109.1	98.5	87.7	87.7	58.6	63.9	93.0
Total Liabs. & Equity	\$ 18.1	\$ 66.0	\$ 157.3	\$ 146.6	\$ 135.4	\$ 124.8	\$ 114.0	\$ 114.0	\$ 84.9	\$ 90.2	\$ 119.3
Audit	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Ratio Analysis

FY-ending Dec 31,	2011	2012	2013	2014E					2015E	2016E	2017E
	2011	2012	2013	1Q14	2Q14E	3Q14E	4Q14E	2014E	2015E	2016E	2017E
Book Per Share		\$25.50	\$14.17	\$4.34	\$3.90	\$3.49	\$3.08	\$3.12	\$2.03	\$2.17	\$3.10
Net Cash per Share		\$24.60	\$13.40	\$4.00	\$3.54	\$3.13	\$2.67	\$2.71	\$1.53	\$1.51	\$2.29
Return on Assets (ROA)		(33.9%)	(27.3%)	-33.2%	-39.2%	-41.8%	-48.6%	(45.9%)	(44.8%)	(5.3%)	15.2%
Return on Equity (ROE)		(40.5%)	(32.6%)	(40.4%)	(48.6%)	(53.0%)	(63.2%)	(59.7%)	(64.9%)	(7.4%)	19.5%
Return on Invested Capital (ROIC)		(122.5%)	(89.3%)	(95.2%)	(102.1%)	(99.8%)	(103.5%)	(97.9%)	(67.0%)	(6.9%)	29.0%
Inventory Turnover		7.1	6.6	7.1	8.0	9.6	10.4	8.8	16.3	27.5	36.8
Days Sales Outstanding		74.2	77.8	62.5	62.0	57.8	58.0	69.3	52.2	42.4	36.6
Current Ratio		6.8	8.5	7.8	7.1	6.4	5.7	5.7	4.0	4.5	6.5
Debt / Equity		3.1%	1.1%	0.9%	1.0%	1.1%	1.2%	1.2%	1.8%	1.7%	1.1%
Debt / Capital		3.0%	1.1%	0.9%	1.0%	1.1%	1.2%	1.2%	1.8%	1.6%	1.1%

Source: Company reports, Janney Capital Markets estimate, Capital IQ, FactSet

IMPORTANT DISCLOSURES

Research Analyst Certification

I, Paul Knight, the Primarily Responsible Analyst for this research report, hereby certify that all of the views expressed in this research report accurately reflect my personal views about any and all of the subject securities or issuers. No part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views I expressed in this research report.

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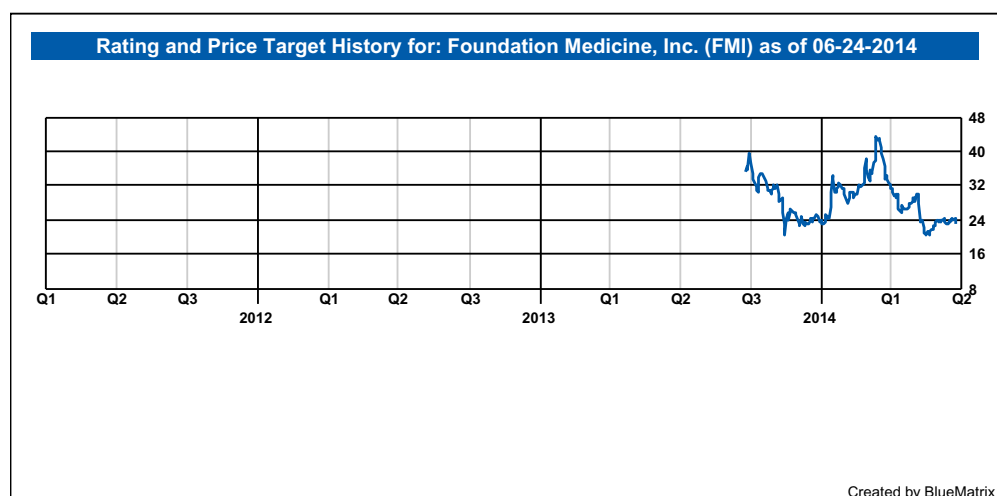
Definition of Ratings

BUY: Janney expects that the subject company will appreciate in value. Additionally, we expect that the subject company will outperform comparable companies within its sector.

NEUTRAL: Janney believes that the subject company is fairly valued and will perform in line with comparable companies within its sector. Investors may add to current positions on short-term weakness and sell on strength as the valuations or fundamentals become more or less attractive.

SELL: Janney expects that the subject company will likely decline in value and will underperform comparable companies within its sector.

Price Charts



Janney Montgomery Scott Ratings Distribution as of 3/31/14

Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [B]	218	51.12	44	20.18
NEUTRAL [N]	205	48.12	21	10.24
SELL [S]	3	0.70	0	0.00

***Percentages of each rating category where Janney has performed Investment Banking services over the past 12 months.**

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