Initiation
Overweight

NSTG, NSTG US
Price: $9.44

Price Target: $14.00

NanoString

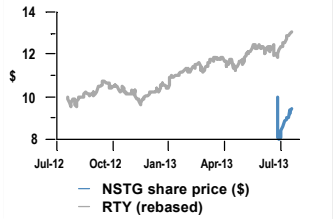
Stringing Together the Next Big Story in Tools and Diagnostics; Initiating with OW and $14 PT

We are initiating coverage of NanoString (NSTG) with an Overweight rating and December 2014 DCF-derived price target of $14. As a life science company moving into diagnostics, NSTG can leverage several trends, including a migration from analog to digital multiplex analysis, and the need for new clinically relevant content in areas like breast cancer analysis. With steady growth in the life science business today, and anticipated FDA approval of the ProSigna Breast Cancer assay in 1Q14 (JPMe), we expect the company to outgrow peers, aided by an expanding installed base of nCounter systems, increased consumable pull-through and, ultimately, adoption/ acceptance of ProSigna and other follow-on tests.

- **Life science business should provide steady base for the next several years.** NanoString has an established life sciences business, with an installed base of >140 nCounter instruments, which have had an average pull-through of ~$100K in consumables over the last three years. We expect this business to continue to grow with a CAGR of 27% from 2012 to 2016E. To date, the technology has seen strong adoption in a number of markets including gene expression analysis, microRNA expression and copy number variation analysis.
- **Long-term, diagnostics franchise should be primary driver of growth.** While the life science business currently provides a solid base, the primary driver over the next few years, from both a growth and sentiment perspective, is expected to be the ProSigna Breast Cancer assay, which we project to grow to >30K tests per year in 2016 (following anticipated FDA approval in 1Q14). Based on data presented from clinical studies, including TransATAC, which showed Prosigna assigned 26% fewer patients to an intermediate risk profile and almost doubled the amount in high risk compared to Onco*type* Dx (from GHDX), we expect NSTG to take share, in addition to converting the underlying market. Furthermore, a decentralized business model and favorable reimbursement should incentivize labs to bring the test in house.
- **Proprietary physician survey bodes well for potential ProSigna adoption.** In conjunction with our initiation, we surveyed 54 breast cancer physicians with results highly positive for NSTG, as 47 of the 54 (or 87%) surveyed physicians said that they would consider using ProSigna once it gains FDA approval. Full survey results are provided later in this note beginning on page 11.
- **Introducing December 2014 price target of $14.** We see room for upside as NSTG has underperformed the S&P 500 by 14% since the IPO and is well positioned to outgrow peers in two attractive end markets. Our 2014 price target of $14 is derived using a 10-year DCF methodology and represents 50% upside to latest close.

Life Science Tools & Diagnostics
Tycho W. Peterson AC
(1-212) 622-6568
tycho.peterson@jpmorgan.com
Bloomberg JPMA PETERSON <GO>
Patrick Donnelly
(1-212) 622-9735
patrick.donnelly@jpmorgan.com
J.P. Morgan Securities LLC

Price Performance



	YTD	1m	3m	12m
Abs	-5.6%	-5.6%	-5.6%	-5.6%
Rel	-25.9%	-12.1%	-20.7%	-36.6%

NanoString Technologies, Inc. (NSTG;NSTG US)

FYE Dec	2011A	2012A	2013E	2014E	2015E
Revenue ($ mn)					
Q1 (Mar)	4	5	6A	10	18
Q2 (Jun)	5	6	7	12	20
Q3 (Sep)	4	6	7	14	21
Q4 (Dec)	5	6	10	21	28
FY	18	23	29	58	87

Source: Company data, Bloomberg, J.P. Morgan estimates.

Company Data	
Price ($)	9.44
Date Of Price	19 Jul 13
52-week Range ($)	10.00-7.81
Market Cap ($ mn)	94.40
Fiscal Year End	Dec
Shares O/S (mn)	10
Price Target ($)	14.00
Price Target End Date	31-Dec-14

See page 31 for analyst certification and important disclosures.

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

J.P.Morgan

Table of Contents

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

J.P.Morgan

Investment Thesis

NanoString (NSTG)

Overweight

Life science business should provide steady base for the next several years

NanoString has an established life sciences business, with an installed base of >140 nCounter instruments, which have had an average pull-through of ~$100K in consumables over the last three years. We expect this business to continue to grow with a CAGR of 27% from 2012 to 2016E and project the installed base to grow to 391 systems by the end of 2016. To date, the technology has seen strong adoption in a number of markets including gene expression analysis, microRNA expression and copy number variation analysis.

Long-term, diagnostics franchise should be primary driver of growth

While the life science business currently provides a solid base, the primary driver for NanoString over the next few years, from both a growth and sentiment perspective, is expected to be the ProSigna Breast Cancer assay, which we project to grow to >30K tests per year in 2016 (following anticipated FDA approval in 1Q14). Based on data presented from clinical studies, including TransATAC, which showed Prosigna assigned 26% fewer patients to an intermediate risk profile and almost doubled the amount in high risk compared to Oncotype Dx (from GHDX), we expect the company to take share, in addition to converting the underlying market. Furthermore, a decentralized business model, in which instruments are placed with customers, and favorable reimbursement should incentivize reference labs and others to bring the test in house.

Proprietary physician survey bodes well for potential ProSigna adoption

In conjunction with this initiation, we recently surveyed 54 breast cancer physicians with results, discussed within, highly positive for NanoString, as 47 of the 54 (or 87%) surveyed physicians said that they would consider using ProSigna once it gains FDA approval. Full survey results are provided later in this note beginning on page 11.

Margin profile becomes more attractive as Prosigna sales grow

While we are expecting strong growth in the Life Sciences business from 2012 to 2016E (CAGR of 27%) the primary driver of the growth should be the Diagnostics business which we expect to grow from zero revenue in 2012 to $61M in 2016E, with Prosigna having revenues of $37M in the U.S. and $24M OUS. We model significant GM expansion over that time (GM of 46.4% in 2012, 69.1% in 2016E) as high-margin consumables become a larger part of the Life Sciences revenue mix and Prosigna, which will carry substantially higher GM, should be the primary growth driver and becomes a larger part of revenue. We believe this high-growth profile with significantly expanding GM will be attractive to investors.

Introducing December 2014 price target of $14

We see room for upside as NanoString has underperformed the S&P 500 by 14% since the IPO and is well positioned to outgrow peers in two attractive end markets. Our 2014 price target of $14 is derived using a 10-year DCF methodology and represents 50% upside from latest close.

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

J.P.Morgan

Risks to Rating and Price Target

FDA approval is pushed out or not obtained

NanoString submitted a 510(k) for the ProSigna breast cancer assay in December 2012 and FDA approval is expected by early 2014. If this approval is pushed out or the FDA denies the request, the company's anticipated growth rate would be significantly impacted.

Market share gains in diagnostics market may be slower than anticipated

If Prosigna is approved, NanoString must then execute on commercializing the test and building out a sales force to gain share from a larger competitor with >90% of the market. There is a chance the company gains share more slowly than expected which would push profitability out to a later time period.

Company may need to raise cash again within 1-2 years

While the company is currently well capitalized after raising $55M in the IPO, it is burning a significant amount of cash each quarter and will likely need to raise cash through equity or debt at some point in 2014; this may dilute shareholders and could be done on unfavorable terms.

Reimbursement may not be approved

There is always uncertainty with reimbursement for new technologies and tests; if NanoString is unable to obtain coverage at adequate levels, the market acceptance of ProSigna would be negatively impacted.

Company Description

Since being founded in 2003 NanoString has developed the nCounter Analysis System and the ProSigna Breast Cancer Assay. The company operates in two key markets, Life Sciences tools and Molecular Diagnostics. Currently, the nCounter instruments and consumables represent the substantial majority of the company's revenue. We expect ProSigna will be approved by the FDA and launched in early 2014 with a strong uptake, gaining share from competition. NanoString is traded on the NASDAQ under the ticket NSTG.

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

Corporate Overview

NanoString was incorporated in Delaware in 2003 and is headquartered in Seattle, WA. On June 26th, 2013 the company listed on NASDAQ in an IPO of 5.4 million shares, for which J.P. Morgan was a lead book-runner.

Today, the company operates in two key markets: Life Sciences, with the nCounter system, and Diagnostics with the Prosigna test, which is also run on nCounter. Currently, all revenue comes from Life Sciences business, but the primary growth driver in the future should come from the Diagnostics segment, as Prosigna is expected to be FDA approved by 1Q14. Over the last ten years, NanoString has grown its sales force to more than 30 reps, with an installed base of over 140 systems and revenue of $23M in 2012.

Stepping back, the addressable market for Life Sciences is the >$28B currently spent by researchers on tools and related consumables, including ~$1.2B spent on gene expression profiling products. The molecular diagnostics market is expected to grow to ~$6.2B in 2014, and within this, NanoString will initially target the breast cancer segment, for which there are estimated to be ~235K newly diagnosed cases in the U.S. this year.

nCounter system

The nCounter system is NanoString's simple-to-use genomic analysis platform that is the foundation for both the Life Sciences and Diagnostics businesses. Among other things, the multiplexing system is rapidly replacing older analog technologies (microarrays, PCR) while being complementary for next-gen sequencing, for areas including gene expression analysis, miRNA and copy number variation analysis.

The primary competitive advantage for nCounter is that the system does not use enzymes or amplification, which simplifies the workflow, minimizes the possibility of human error and does not require specialized staff to operate, which lowers the total cost of analysis. Since being launched, the nCounter system has seen rapid adoption in cancer biomarker discovery and validation, and the company now has an installed base of over 140 systems in genome centers and smaller academic labs. The system, which, among other things, is used to validate next-gen sequencing discoveries and translate them into clinically actionable information for drug and diagnostics development, is able to profile up to 800 genes simultaneously and requires only a small amount of tissue as a sample. Another benefit of the system is the simple workflow, as the machine only requires ~15 minutes of technician hands-on time, including five minutes to add the buffer, CodeSet and sample to a strip tube before leaving it for 12 hours/overnight (for hybridization), followed by another five minutes to set up the prep station by placing the strip tube onto the automated Prep Station with reagents and consumables, before an automated 2.5-3 hours to purify the sample and a final five minutes hands-on time taking the cartridge from the Prep Station and placing it into the Digital Analyzer before the last 3-4.5 automated hours to count the gene expression.

Figure 1: nCounter Prep Station

Source: Company report.

Stepping back, we believe the immediate addressable market is replacing the microarrays that are used in high-throughput gene expression work which we estimate at ~3,000 systems, which means nCounter is currently ~5% penetrated in this market. However, notably, the company also has a third-generation system in development, which could expand the market into the tens of thousands of systems, similar to PCR.

In terms of consumables, the system allows for a razor/razor blade model, with a list price of ~$235K and average annual system pull-through over the last three years of >$100K. Over time, as the system moves more into diagnostics, we believe the company could eventually move to more a reagent rental model.

ProSigna breast cancer assay

NanoString secured an exclusive worldwide license to the PAM50 gene signature from Washington University, a life sciences customer, in 2010 which is the foundation for the Prosigna assay. Prosigna provides an assessment of a patient's risk of recurrence (ROR) which is a prognostic score that predicts the probability of cancer recurrence over ten years. It also provides the patient and physician with the intrinsic subtype classification of the tumor, something that the competition does not offer and is a distinct competitive advantage. In a head-to-head study vs. Oncotype DX, Prosigna assigned 26% fewer patients to the intermediate risk profile and almost double the amount in high risk. Results can be available in two days vs. 10-14 with Genomic Health's or Agendia's test.

Prosigna is an IVD platform that enables local clinical labs to decentralize high-value cancer testing which offers them an economic incentive. In the U.S., the company will seek a similar reimbursement level to Genomic Health and initially follow that model with expectations of reimbursement immediately when the test is approved. Eventually we expect the company to seek a unique code. Decision impact studies showing the chemotherapy expense and usage decrease with Prosigna are key to reimbursement in European countries, and we expect the company will invest in these in the coming years.

The test is currently available in Israel and EU where it was launched in February 2013 with CE Mark and a 510(k) (submitted in December 2012) is under review with the FDA with the expectation of a commercial launch in the US in 1Q14. We note that Agendia has received FDA approval for its test and NanoString only needs to prove equivalency (not superiority) for approval. The company plans to conduct future clinical studies to evaluate Prosigna's ability to guide physicians and patients in making additional treatment decisions (appropriate chemo regimen, duration of adjuvant endocrine therapy, whether to use adjuvant radiation therapy) in Hormone Receptive (HR+) early-stage breast cancer.

TransATAC study

In 2011, NanoString conducted a clinical study of 1,017 patients with estrogen receptor (ER) positive breast cancer to evaluate the ability of the ROR score to add prognostic information to clinicopathologic variables. The median follow-up of patients was 10 years. The purpose of the study was to find out if the ROR score could provide an alternative approach to Genomic's ODX recurrence score (RS) while also identifying intrinsic subtypes. The study used extracts available from Genomic Health's ATAC study which were screened so that the sample had hormone receptor positive disease by central analysis, chemotherapy not received, RS available, and sufficient residual RNA for PAM50 analysis. The primary end point of the study was time from random assignment to first DR and other secondary/primary cancers were not considered events for TTDR. The study concluded that in the overall population and each subgroup, additional prognostic information beyond that in the CTS was greater for ROR than RS with better differentiation of intermediate- and higher-risk groups.

Figure 2: Comparisons of Added Prognostic Information

			Comparison									
			CTS (1 *df*)		ROR (1 *df*)		RS (1 *df*)		ROR + CTS Versus CTS (1 *df*)		RS + CTC Versus CTS (1 *df*)	
ROR (including tumor size)	No. of Patients	No. of DRs	LR – $\Delta\chi^2$	*P*	LR – χ^2	*P*	LR – χ^2	*P*	LR – $\Delta\chi^2$	*P*	LR – $\Delta\chi^2$	*P*
All patients	1,007	160	144.9	< .001	99.9	< .001	38.2	< .001	33.9	< .001	22.7	< .001
Node-negative patients	739	79	45.1	< .001	60.9	< .001	28.2	< .001	24.6	< .001	15.0	< .001
HER2-negative/node-negative patients	649	62	36.6	< .001	53.7	< .001	22.9	< .001	23.4	< .001	10.2	.001

			Comparison									
			CTS (1 *df*)		ROR* (1 *df*)		RS (1 *df*)		ROR* + CTS Versus CTS (1 *df*)		RS + CTS Versus CTS (1 *df*)	
ROR* (excluding tumor size)	No. of Patients	No. of DRs	LR – $\Delta\chi^2$	*P*	LR – χ^2	*P*	LR – χ^2	*P*	LR – $\Delta\chi^2$	*P*	LR – $\Delta\chi^2$	*P*
All patients	1,007	160	144.9	< .001	87.4	< .001	38.2	< .001	34.3	< .001	22.7	< .001
Node-negative patients	739	79	45.1	< .001	55.1	< .001	28.2	< .001	23.7	< .001	15.0	< .001
HER2-negative/node-negative patients	649	62	36.6	< .001	49.9	< .001	22.9	< .001	23.3	< .001	10.2	.001

			Comparison					
			IHC4 + CTS Versus CTS (1 *df*)		RS + CTS Versus CTS (1 *df*)		ROR* + CTS Versus CTS (1 *df*)	
Sample splitting ROR* (excluding tumor size)	No. of Patients	No. of DRs	LR – $\Delta\chi^2$	*P*	LR – $\Delta\chi^2$	*P*	LR – $\Delta\chi^2$	*P*
All patients	940	154	28.7	< .001	17.6	< .001	27.6	< .001
Node-negative patients	683	74	22.4	< .001	12.3	< .001	19.3	< .001
HER2-negative/node-negative patients	615	59	13.6	< .001	8.0	.005	22.4	< .001

Abbreviations: CTS, clinical treatment score; DR, distant recurrence; HER2, human epidermal growth factor receptor 2; LR, likelihood ratio; ROR, risk of recurrence; RS, recurrence score.

Source: Journal of Clinical Oncology "Comparison of PAM50 ROR Score with Oncotype DX and IHC4 for Predicting Risck of Distant Recurrence after Endocrine Therapy."

Figure 3: Comparison of Proportion of Node-Negative Patients by Risk Group Using ROR vs. RS

	Low		Intermediate		High		Total	
Test	No.	%	No.	%	No.	%	No.	%
ROR* (excluding tumor size)								
No CTS								
RS								
Low	309		110		15		434	58.7
Intermediate	114		67		62		243	32.9
High	5		15		42		62	8.4
Total	428	57.9	192	26.0	119	16.1	739	100
CTS included								
RS								
Low	379		59		2		440	59.5
Intermediate	61		90		50		201	27.2
High	3		18		77		98	13.3
Total	443	59.9	167	22.6	129	17.5	739	100
ROR (including tumor size)								
No CTS								
RS								
Low	318		97		19		434	58.7
Intermediate	113		68		62		243	32.9
High	6		14		42		62	8.4
	437	59.1	179	24.2	123	16.6	739	100
CTS included								
RS								
Low	386		53		1		440	59.5
Intermediate	61		94		46		201	27.2
High	4		18		76		98	13.3
Total	451	61.0	165	22.3	123	16.6	739	100

Abbreviations: CTS, clinical treatment score; ROR, risk of recurrence; RS, recurrence score.

Source: Journal of Clinical Oncology "Comparison of PAM50 ROR Score with Oncotype DX and IHC4 for Predicting Risck of Distant Recurrence after Endocrine Therapy."

Competition

NanoString competes with a number of established life sciences research companies when selling nCounter, including Affymetrix, Agilent, Bio-Rad, Exiqon, Fluidigm, High Throughput Genomics, Illumina, Life Technologies, Luminex, Perkin Elmer, and Qiagen (another competitor, Roche Applied Science, recently announced plans to restructure and exit the market). There are also several earlier-stage companies, including RainDance and Wafergen Bio-Systems, developing competitive technologies. That said, while we view the competition as real, we believe that competition in the diagnostics market is far more important to both the longer-term growth profile and investor sentiment, with the greatest competition to ProSigna being Genomic Health (Oncotype Dx) and Agendia (Symphony).

Genomic Health

Genomic Health is the current market leader, with >95% market share in the breast cancer testing market. The primary competitive advantage Genomic Health uses to market its test is the ability to predict a chemotherapy benefit with a high Recurrence Score (RS) or a lack of chemotherapy benefit relative to risks with a low RS with the downside of what to do with an intermediate RS remaining an ongoing question. The CLIA test, which was launched as a service in 2005, is now included in major breast cancer guidelines (including ASCO and NCCN) for treatment decision making and is widely reimbursed in the U.S.

Agendia

Agendia offers the Symphony suite of tests for breast cancer, which has shown an ability to predict the risk of breast cancer recurrence in the first five years following diagnosis. Until early 2012, when it introduced a technology to accept formalin fixed paraffin embedded (FFPE) samples, the company was only able to accept fresh frozen tissue, which represents a small part of the market. In terms of the clinical data, Agendia's largest data set was provided by the RASTER outcome study, which included five-year outcomes-based prospective data from 16 centers and 427 patients enrolled between 2004 and 2007. The results showed that over half (51%) of patients were low risk vs. only less than a third (31%) being defined as low risk by traditional clinical parameters. Of the 51% low risk, >97% of patients were disease free at five years which compares to >91% of high-risk patients being disease free at five years. The 29% (87 patients) additional low-risk patients vs. traditional parameters were 98.4% disease free at five years. We believe Agendia is currently taking share from Genomic Health, while being relatively conservative with the sales build-out, although that could change if the company raises capital, as it has commented it intends to do.

Figure 4: Comparison of Tests

company	Genomic Health	Agendia	Nanostring
platform	Oncotype DX	Symphony	ProSigna
U.S. Year Introduced	2005	2011	2014 (expected)
FDA Approved	No	Yes	No (expected 1Q14)
Intrinsic subtyping	No	No	Yes
Allow for decentralized model for labs	No	No	Yes
Turnaround time	10-14 days	10-14 days	2 days
Prospective data	No	Yes	No
Predicts chemo benefit	Yes	No	No
U.S. Market Share	95%	5%	0%

Source: Company data and J.P. Morgan estimates.

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

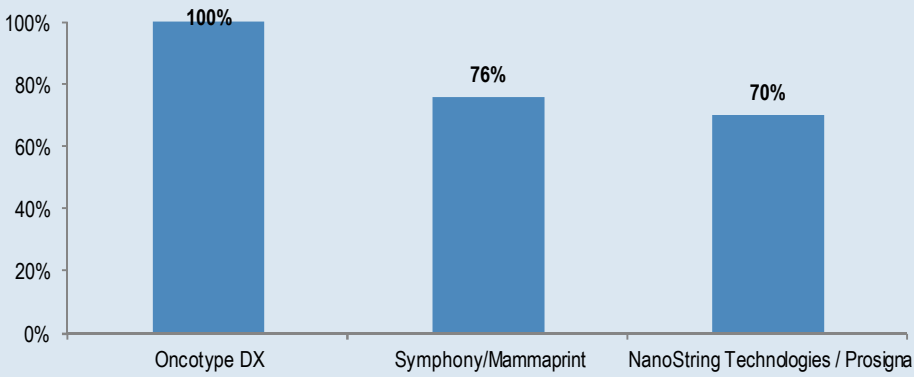
Survey Results

To better understand the awareness of and interest in Prosigna, we surveyed 54 breast cancer doctors to get their opinion on the test. Overall, we view the responses positively as 38 of the 54 physicians had heard of Prosigna and 32 of those 38 had a positive view on the data from the TransATAC study. Importantly, of the 38 physicians who had heard of ProSigna, 36 would consider using the test in their practice if it was FDA approved. The detailed survey responses are below.

General awareness of Prosigna

We asked the 54 physicians if they had heard of ProSigna and 38 (or 71%) responded that they had heard of it. We also asked the physicians about Agendia's Symphony suite of tests and 41 (76%) had heard of the test. In our view, it is positive that Prosigna already has nearly the same name recognition with physicians that Symphony and believe this will only grow when the test receives FDA approval. As expected, all 54 physicians were familiar with Oncotype DX.

Figure 5: Which of the Following Breast Cancer Assays Are You Aware Of?



Source: J.P. Morgan Research Survey.

Positive opinions on TransATAC study

We asked the physicians about their takeaway from the TransATAC study and 38 of the 54 respondents replied with some opinion. Overall, the responses bode well for NanoString, with 32 of the 38 physicians responding that the data from the test was positive. The full responses are below.

Figure 6: What Are Your Thoughts on the Data Presented from the TransATAC Study?

Mixed
not impressed
compelling
Encouraging
Still too early
interesting technology
it is beneficial in predicting recurrence outcome
very impressive with value of test
Favorable for use of genomic testing for predicting risks of recurring
interesting. recurrence score is independent predictor of distant recurrence
i think prospective data for the RS is important, and this proves that
the breast cancer index (BCI) is a significant prognostic factor for late recurrence of ER+ patients
Suprising
Clincally proving the benifit of gene assay in predicting response
seems to work better than oncotypeDx for stratification in ER+ non-metastatic population
Neutral
Positive and will be useful.
Good test at helping predict recurrence risk
High gene throughput, but generalizability still requires prospective followup
genomic profiles are important in how breast cancer patients are treated
another good test to order for breast cancer patients
Interesting data that supports using our standard ER/PR/etc as well as oncotype
Large trial from which we can gain important information on biomarkers - which ultimatley predicts outcome - Ie - who needs chemo Data supports Prosigna use for risk stratification
interesting, compelling
It is validated.
Very important to know that the recurrence score is an independent predictor of distant relapse. Practice changing.
Supports the contention that the Prosigna Score adds prognostic information about the risk of 10-year distant recurrence in addition to that provided by standard clinical-pathological variables in the analysis of all patients studies
Prediction of recurrence risk seems possible based on a 21-gene signature. No prospective data to show that reduction of risk is possible with adjuvant therapy.
Solid data but not so much different than other trials
Positive about the long term applicability but needs to have more trials
adding RS in N0 and node pos HR pos patients, adds to our previous ideas
Needs further studies
I think it will help identify node positive breast cancer patients that do not need chemotherapy.
Promising.
looks promising
It is a good predictor of recurrence of breast cancer.
IHC is also good predictive value. In our center Ki-67 is very accurate and counted vs guesstimated so it's more helpful in making therapeutic decisions
we have begun to extrapolate in selected patients based upon this data
Helpful to determine recurrence risk when receiving hormone therapy

Note: These survey comments have been reproduced in their original form and have not been edited. Survey comments should not be attributed to J.P. Morgan and are not necessarily representative of its views.

Source: J.P. Morgan Research Survey.

Usage of Prosigna if FDA approved

We asked the physicians how willing they would be to use Prosigna if it received FDA approval and 47 of the 54 (or 87%) physicians said they would consider using it. As a follow-up, we asked the physicians what factors would influence their

decision to use the test; the most frequent answers related to more clinical data and the price of the test. The full responses are below.

Figure 7: What Other Factors (Other than FDA Approval) Would Influence Your Decision of Whether to Use the Prosigna Breast Cancer Panel?

Ease of use, reimbursement
low cost
reliablity and timely of the test result
Coverage by insurance companies
peer usage
need to review data
Cost and coverage
usefullness and supporting data
coverage by payers. Peer review and prognostic and predictive information if available
patient preference
more information
clinical data
more data and more leaders relying on it to help in treatment decisions
comparative results vs other tests we use now
Needs prospective data that supports using it for treatment decisions. Additionally it needs some obvious advantage over oncotype.
additional evidence and publications regarding the predictive value
price
level 1 evidence, support by my colleagues
Clinical data
lower cost
Cost, co-pay, speed of return of results
More data, Peer usage
1. Accuracy. Needs to be more accurate than currently used tests 2. Ability to predict recurrence risk without chemo in patients with positive LN 3. Ability to integrate other clinical data (size of the tumor HER status)in the prognostic model
=-coverage by insurance companies -confirmation of predictive value in another study -prediction of drug response
Price and insurancecoverage
Cost
Would like to see peerreviewed published information
Prospective published data
peer usage as well
cost of test so coverage by pators
payer preference clarity of information
based on the merits and if it is better than oncotypedx
presence/absence of intermediate score, personal experience
=--cost competitive --turnaround time --insurer coverage
Payor acceptance, speed of test results, more data
thought leaders
research backing up the claims
Insurance coverage and out of pocket patient costs
Risk of late failures. Pt age, favorable tumor characteristics.
Insurance coverage
Cost, Reimbursement,Opinion of Key Opinion Leaders
Meaningful difference compared to existing modalities.
prospective data, cost with pt. assistance, ease of ordering, payor coverage
Wider panel
I think this is the future in determining treatment decisions
Clinical data
It would have to be reimbursed by insurance or have a low copay cost so patients can afford the test.
Available data
experience
Data behind it, peers using
Price insurance approval.
Prospective data
insurance coverage
NCCN guideline endorsement, covered by insurance

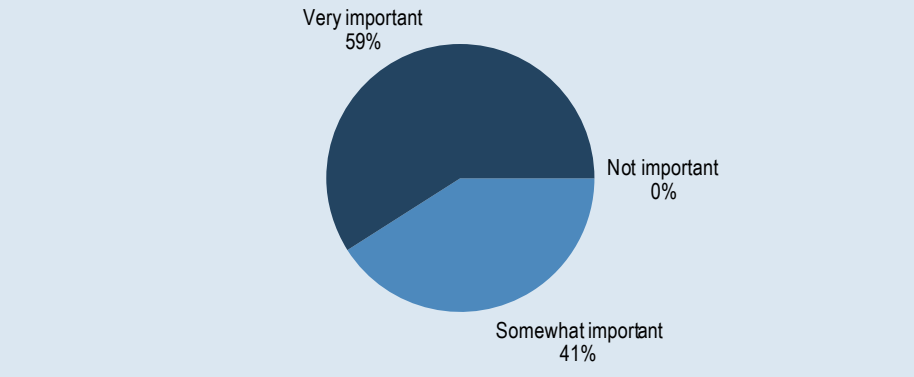
Note: These survey comments have been reproduced in their original form and have not been edited. Survey comments should not be attributed to J.P. Morgan and are not necessarily representative of its views.

Source: J.P. Morgan Research Survey.

Importance of ROR

We also asked the physicians about the significance of the ROR score as we view the key question for NanoString as being how much physicians will value this score in their treatment decisions. When asked how important the ROR score is when dealing with patients, 59% responded that it was "very important" while 41% responded it was "somewhat important"—no physicians replied that it was "not important".

Figure 8: How Important Is Risk of Recurrence (ROR) Score When Dealing with Patients?



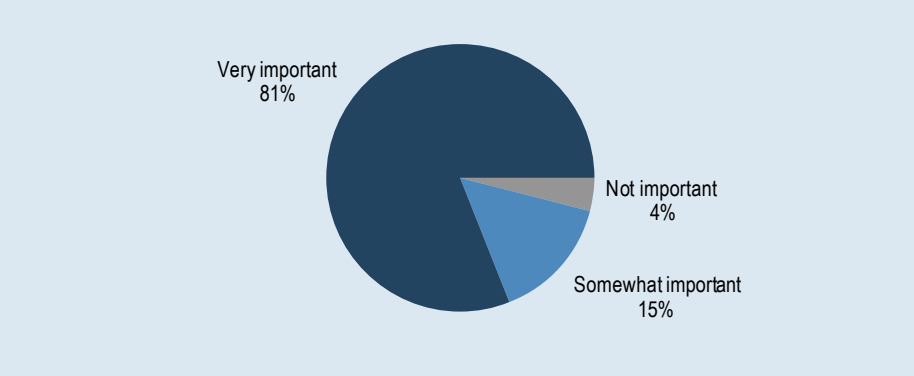
Source: J.P. Morgan Research Survey.

In addition, we asked the physicians if they saw the ROR score as a differentiating factor for whether to use a test such as Prosigna and 59% of the physicians responded that they did see it as a differentiating factor.

Importance of intrinsic sub-typing

Since intrinsic sub-typing is a competitive advantage for Prosigna, we asked the physicians how important they felt it was and if they felt it would be included in the guidelines. Of the 54 physicians, 42 (78%) responded that they believe intrinsic sub-typing will ultimately be written into guidelines. On the importance of intrinsic sub-typing, 44 (81%) responded it was "very important," eight (15%) responded it was "somewhat important" and two (4%) responded it was "not important."

Figure 9: How Important Is Intrinsic Sub-Typing?



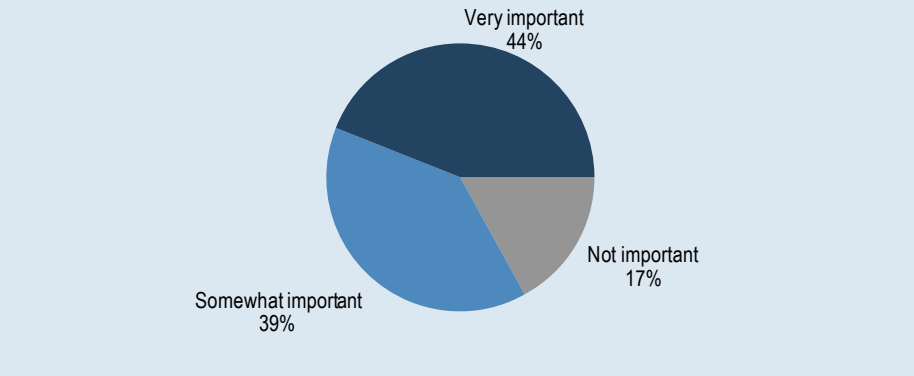
Source: J.P. Morgan Research Survey.

Trials and FDA

As the trials for Oncotype DX and Prosigna have been retrospective, we asked the physicians if they felt that was sufficient or if there was a need for comprehensive

prospective trials. The physicians felt that prospective trials were ultimately needed, with 48 (89%) responding that way while only six (11%) felt that retrospective trials were sufficient. We also asked the physicians how important FDA approval was for a test as Oncotype DX does not have approval but Agendia's MammaPrint does. Physician responses were mixed, with 24 (44%) saying it was "very important," 21 (39%) saying it was "somewhat important" and nine (17%) saying it was "not important." We continue to believe Prosigna gaining FDA approval will be key to the growth trajectory.

Figure 10: How Important Is FDA Clearance for a Test (i.e., MammaPrint Currently Has FDA Clearance While Oncotype Does Not)?

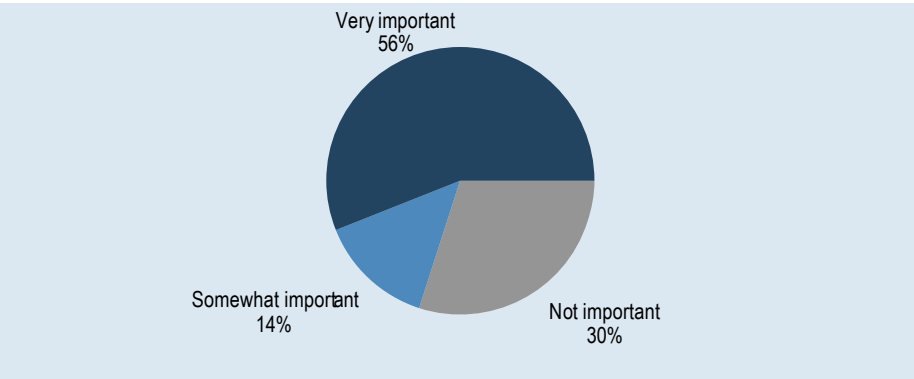


Source: J.P. Morgan Research Survey.

Test processing

As NanoString has highlighted the importance of Prosigna enabling a decentralized testing model, we asked the physicians how important the location of where the test was processed was and, surprisingly, 16 (30%) responded that it was "not important" while 30 (56%) responded it was "very important." We would have anticipated a smaller percentage responding that it is not important.

Figure 11: How Important Is Location of Where the Test Is Processed (in Other Words, at the Genomic Health Facility vs. a Reference Lab or Hospital Lab)?



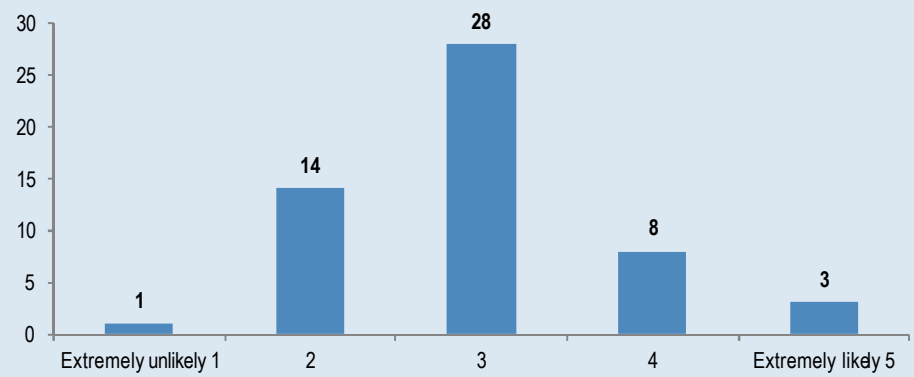
Source: J.P. Morgan Research Survey.

Willingness to convert away from Oncotype DX

An important factor in the market will be how sticky market share is with Oncotype DX having a dominant share. We asked physicians how willing they would be to convert away from Oncotype DX to Symphony/Mammaprint or Prosigna and the

majority of the physicians were unsure, with 28 (52%) responding with a score of 3 out of 5 which is directly in the middle of extremely likely and extremely unlikely, suggesting uncertainty.

Figure 12: How Likely Would You Be to Switch from Oncotype to Either Symphony/MammaPrint or NanoString's Prosigna Test? Please Use a Scale of 1-5 Where 1=Extremely Unlikely and 5=Extremely Likely.



Source: J.P. Morgan Research Survey.

We asked the physicians a follow-up question to explain their choice to the question with the majority citing familiarity with Oncotype DX as a reason to not convert away from it. The full responses are below.

Figure 13: Please Explain Briefly the Reasons Behind Your Choice Above

familiarity is big.
needs to ensure available to my uninsured population first
due to the compelling data
More accurate with less of an indeterminate group
unlikely unless randomised trial
will depend upon depth of data
Comfortable w other assays
oncotype dx has more supporting research
will depend on hopsital's protocol
know and understand Oncotype
I don't know
more familiar with Oncotype
if the data supports its use and if leaders in the field are using it, I will use it too
happy with oncotype
Would need a compelling reason to do so, wouldn't switch without a good reason to do so.
currently happy with oncotype. would need more evidence to switch
i think the pt cohorts and study designs are different in the trials, favoring oncotype
familiarity vs. the unknown
Unsure
i am not bound to any particular brand. i prefer to use the most innovative and cost-effective test
happy with what we have
FDA approval

Source: J.P. Morgan Research Survey.

Figure 14: Please Explain Briefly the Reasons Behind Your Choice Above (Continued)

Need to have more information
better predictive power
It us not easy to collect samples
If more info
I have good follow up and acceptance of OncoType
Better subtyping as long as this is supported as prognostically important in prospective studies.
the validation studies are important with Oncotype DX
if cost for these tests are low we will switch to less expensive test
Per NCCN guidelines all test provide somewhat comparable guidelines and its just the matter fo which one you are comfortable with
need to learn more
If there is reimbursement for pt and I gain experience with tests and develop a comfort level of their accuracy and utility - I would not hesitate to use
I would like to see data showing a real improvement in outcomes with the use of any competitor's test.
At this point - probably not likely, unless there was cost savings, better outcomes, or mandate from payors to use test.
Have a lot of comfort with oncotype that would need to develop with prosigna
I need literature supporting the switch
need more studies
Newly approved test may be more costly to the patients.
Would depend on pathology department. They have specific flow they follow for breast pts. Any practice changes would need to be multidisciplinary decision & backed by hospital.
Unlikely at this time. I would like to see more data.
Adds more prognostic information than Oncotype DX
Require comparative studies or clearly better outcomes
FDA approval esp since over time some low risk pts who decide against chemo will relapse
Easier to perform. Wider panel
I think Symphony is preferable every time vs Oncotype, Prosigna not sure yet, but hopefully yes
Supportive clinical studies
I am comfortable with Oncotype DX and would have to see some comvincing evidence that Prosigna is better before I make the switch. I think Mammaprint requires fresh tissue so it is more difficult to arrange testing.
Need prospective data.
I'm comfortable with oncotype
Molecular sub typing likely to become standard of care
I assume these 3 tests are equally effective in predicting recurrent rate.
I like symphony because you can use it with ER- disease. It's only recently been availae for paraffin embedded tissue so I don't have as much experience with it as OncotypeDx
We would require better cooperation with insurers and longer followup experience either directly or via colleagues
Need FDA approval, insurance coverage, NCCN guideline endorsement

Note: These survey comments have been reproduced in their original form and have not been edited. Survey comments should not be attributed to J.P. Morgan and are not necessarily representative of its views.

Source: J.P. Morgan Research Survey.

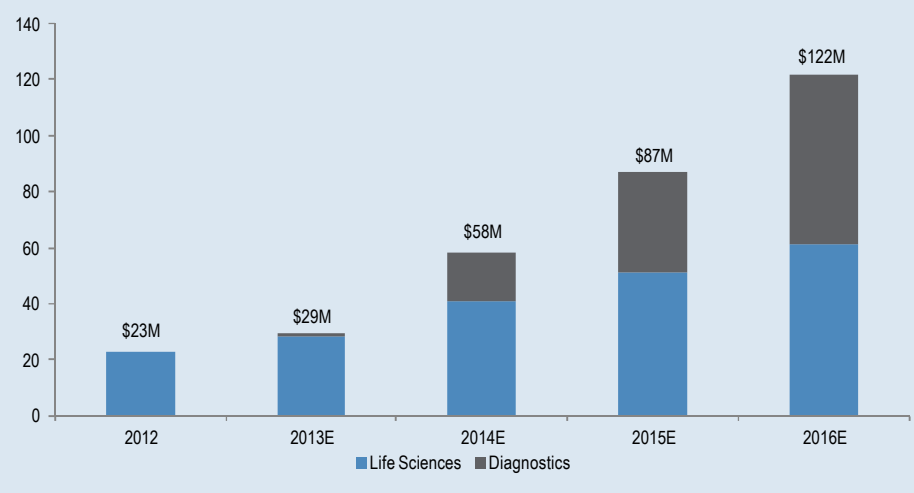
Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

Financial Outlook

Longer-term revenue growth to be driven by Diagnostics

From 2012 to 2016E, we project a revenue CAGR of 52% as NanoString grows revenue from $23M to $122M. While we are expecting strong growth in the Life Sciences business over this time (CAGR of 27%), the primary driver of the growth should be the Diagnostics business which we expect to grow from zero revenue in 2012 to $61M in 2016E with Prosigna having US/OUS revenues of $37M/$24M.

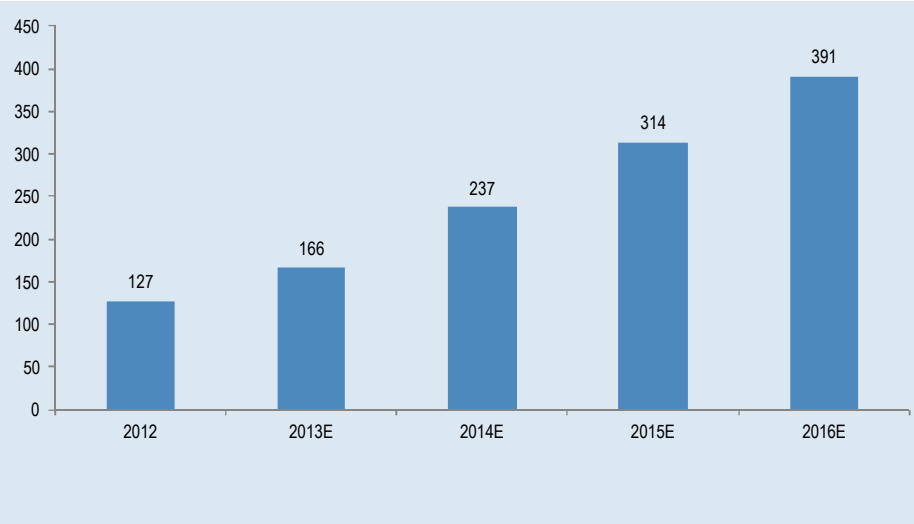
Figure 15: Revenue Growth Breakout



Source: Company data and J.P. Morgan estimates.

In the Life Sciences business, growth will be primarily driven by increasing consumable pull-through, with consumables growing from $12M in 2012 to $35M in 2016E, as instruments grow from $9M in 2012 to $21M in 2016E. For the nCounter installed base, we forecast 391 at the end of 2016, up from 127 at the end of 2012.

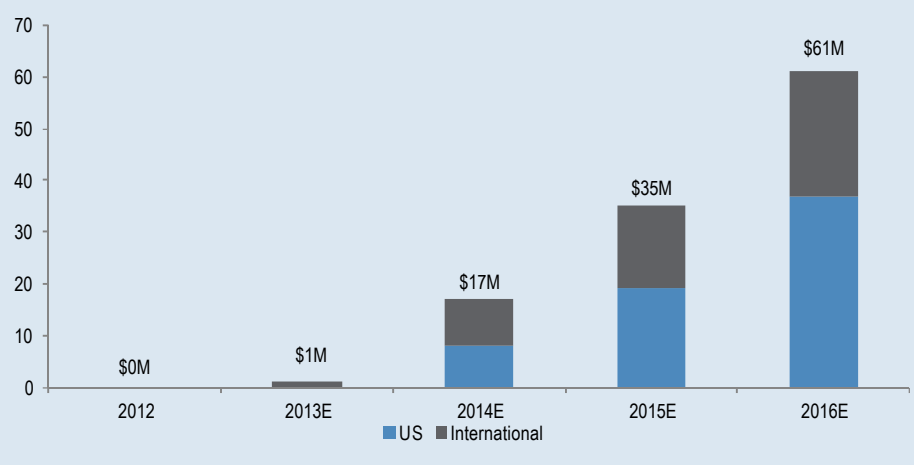
Figure 16: nCounter Installed Base



Source: Company data and J.P. Morgan estimates.

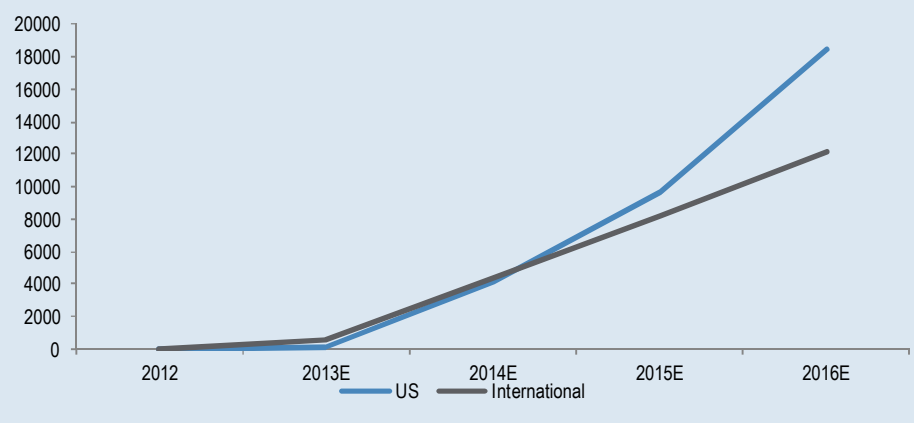
Diagnostics revenue primarily will be driven by U.S. sales which we project to grow from no revenue in 2012 to $37M in 2016E while International also should show strong growth, increasing from no revenue in 2012 to $24M in 2016E. For test volume, we forecast U.S. volume increasing from no tests in 2012 to 18,444 performed in 2016 and international volumes increasing from no tests in 2012 to 12,096 tests performed in 2016.

Figure 17: Diagnostics Revenue



Source: Company data and J.P. Morgan estimates.

Figure 18: Diagnostics Test Volume



Source: Company data and J.P. Morgan estimates.

Progression towards profitability

While NanoString's management team has suggested the company could reach full year profitability in 2016, we have taken a more conservative approach and model the company to be profitable in 2018. We model significant GM expansion in the next few years as high-margin consumables become a larger part of the Life Sciences revenue mix and Prosigna, which will carry substantially higher GMs than the Life Sciences business, begins to contribute meaningful revenue. We model SG&A to tick up in 2013, as the company adds to the sales force (currently 33 reps).

Figure 19: NanoString's Margin Progression

	2012A	2013E	2014E	2015E	2016E
Gross Profit	46.4%	49.5%	59.4%	65.4%	69.1%
SG&A	67.1%	115.6%	99.3%	64.7%	51.6%
R&D	51.2%	57.2%	39.1%	26.7%	24.0%

Source: Company data and J.P. Morgan estimates.

Sensitivity analysis

As much of the revenue growth depends on how quickly ProSigna gains market share, we thought it would be useful to do a sensitivity analysis on how different market share levels in the U.S. breast cancer market could impact the company's forecast revenue in the year 2020.

Figure 20: Sensitivity Analysis

	U.S. Market Share							
	5%	10%	15%	20%	25%	30%	35%	40%
2020 U.S. Diagnostics Revenue	$14M	$29M	$43M	$57M	$71M	$86M	$100M	$114M
2020 Diagnostics Revenue	$63M	$77M	$92M	$106M	$120M	$134M	$149M	$163M
2020 Total NSTG Revenue	$162M	$177M	$191M	$205M	$219M	$234M	$248M	$262M

Source: J.P. Morgan estimates.

Use of IPO proceeds

The company plans to use the proceeds of the IPO (~$55M) primarily to support the launch of Prosigna in the U.S. Management feels the test is highly differentiated and wants to be in a position to fully capitalize on the commercial opportunity once the test is approved. Along with the commercialization of Prosigna, some of the proceeds will also be used to complete the development of the Gen3 system which will come in at a lower price point than the current nCounter level and open up a much larger addressable market. In order to capitalize on the new system, the company plans to devote some capital to expand the sales force.

Valuation

At current levels, NSTG has favorable risk/reward, in our view, and we see room for expansion as the company rapidly grows revenues following the expected approval of ProSigna by early 2014. Our December 2014 price target for NSTG is $14.

Our preferred valuation metric is discounted cash flow of our base-case assumptions, though we sanity check this value against peers (relative valuation).

Absolute valuation

Our 2014 price target of $14 is derived from 10-year discounted cash flow analysis, with a CAPM-derived WACC discount rate of 7.7% and terminal growth of 2.5% (see Figure 24). We show sensitivity analysis for the company's equity on both WACC and the terminal growth rate, the two most subjective metrics of the analysis.

Relative valuation

For relative valuation, we use a combination of Life Sciences and Diagnostics companies as the peer group and use an EV/Sales metric, as most companies (NSTG included) are early stage and do not have positive EBITDA. On a 2014 EV/Sales basis, NanoString currently trades at a 36% discount to its peer average.

Our December 2014 price target of $14 implies a 5.4x EV/Sales multiple on 2014 estimates, a 50% premium to the group which we believe is justified given NanoString's above-peer growth rate (52% CAGR from 2012 to 2016E).

Figure 21: NanoString Comp Table

Company	Ticker	Price 7/18/13	Mkt Cap $M	EV $M	EV/Sales 2012A	EV/Sales 2013E	EV/Sales 2014E	EV/Sales 2015E	EV/EBITDA 2012A	EV/EBITDA 2013E	EV/EBITDA 2014E	Revenue Growth 2012A	Revenue Growth 2013E	Revenue Growth 2014E	Revenue Growth 2015E
Group 1															
AFFYMETRIX INC	AFFX	$4.34	309	456	1.5x	1.4x	1.4x	1.4x	N/A	12.1x	10.4x	11%	8%	2%	1%
CEPHEID INC	CPHD	$34.71	2,329	2,235	6.7x	5.8x	5.0x	4.1x	164.4x	126.6x	46.6x	19%	16%	18%	21%
FLUIDIGM CORP	FLDM	$16.89	429	349	6.7x	5.4x	4.4x	3.9x	N/A	N/A	N/A	22%	23%	24%	13%
GENOMIC HEALTH INC	GHDX	$35.36	1,068	969	4.1x	3.7x	3.3x	2.9x	69.7x	146.6x	73.4x	14%	11%	13%	13%
GENMARK DIAGNOSTICS INC	GNMK	$9.97	327	276	13.5x	9.3x	6.7x	4.2x	N/A	N/A	N/A	309%	45%	39%	60%
LUMINEX CORP	LMNX	$23.27	968	914	4.5x	4.1x	3.7x	3.3x	24.6x	20.0x	16.6x	10%	11%	11%	13%
MERIDIAN BIOSCIENCE INC	VIVO	$22.40	929	897	5.0x	4.7x	4.3x	3.7x	15.3x	14.2x	12.4x	10%	8%	9%	15%
MYRIAD GENETICS INC	MYGN	$31.05	2,473	2,019	3.7x	3.2x	2.8x	2.7x	9.8x	8.3x	7.4x	23%	17%	14%	2%
ORASURE TECHNOLOGIES INC	OSUR	$5.20	289	201	2.3x	2.1x	1.8x	1.5x	N/A	N/A	N/A	7%	9%	17%	17%
SEQUENOM INC	SQNM	$4.69	540	519	5.8x	2.6x	1.9x	1.4x	N/A		1606.1x	60%	122%	40%	35%
QUIDEL CORP	QDEL	$29.43	993	989	6.3x	5.4x	4.8x	4.1x	30.8x	20.5x	17.3x	-2%	18%	11%	17%
				All Peer Average:	5.5x	4.3x	3.6x	3.0x	52.4x	56.0x	254.2x	47%	28%	20%	21%
NANOSTRING TECHNOLOGIES INC	NSTG	$9.50	139	138	6.0x	4.7x	2.4x	1.6x	N/A	N/A	N/A	29%	28%	97%	50%
				NSTG Premium (Discount) to Peer Average:	9%	8%	(34%)	(47%)	N/A	N/A	N/A	(39%)	(1%)	394%	142%
				JPMorgan Dec 2014 target price of $14:	13.7x	10.7x	5.4x	3.6x	N/A	N/A	N/A				
				Premium (Discount) to Peer Average at $14:	150%	147%	50%	21%	N/A	N/A	N/A				

Source: Company data, Bloomberg and J.P. Morgan estimates.

Appendix I: Questions for Management

- How confident are you in FDA approval and what is your view on what timeline is most likely? Is it possible that the 1Q14 launch date proves to be conservative?
- What are your priorities for use of the IPO proceeds?
- Will you see any impact on the competitive landscape as a result of the renewed discussion regarding the regulation of LDTs by the FDA?
- How confident are you that you will be able to report an ROR score? What would the implications be if you are unable to report an ROR score?
- What is the regulatory pathway for sub-typing in the U.S. and can you discuss your plans in that aspect?
- What are your plans with respect to reimbursement in the U.S.?
- What are your expectations for pricing in the U.S. market?
- What are you currently seeing with the mix of purchases vs. reagent rental for nCounter? What do you see as the long-term mix?
- What do you expect your mix of instruments vs. consumables to be in 5 years?

- What do you think Genomic Health's response to the statement that your data is better would be?
- Can you discuss the target labs for your test and how large you believe the addressable market is?
- What is your current relationship with Quest and LabCorp?
- If you reached an agreement with Quest or LabCorp, how long would it take them to get up to speed and trained to run your test?
- How large do you believe the diagnostics sales force needs to be to appropriately compete in this market?
- There is some concern with a decentralized test that the results are not consistent and accurate; how confident are you that this will not be the case with Prosigna?
- You have talked about a next-generation instrument to follow nCounter—can you discuss this and what the most significant modifications are? How much of an increase in R&D is needed to support this?
- How large do you believe the Life Science market is for nCounter in terms of installed base and revenue?
- The larger part of the market which you have discussed is qPCR; what price does nCounter need to be at to compete there?
- When looking into the future, what other assays can we possibly expect to see and when?
- How much of an impact has sequestration had on your business and when do you expect this to normalize?
- What type of metrics should we expect you to report going forward on a quarterly basis?
- What is the timing for profitability? What could accelerate that timing? What could push it farther out?
- When looking at your income statement, what are the biggest variables we should be looking at for sources of leverage?

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

J.P.Morgan

Appendix II: Financial Model

Figure 22: Income Statement

Income Statement USD $M	2011A	1QA Mar	2QA Jun	3QA Sep	4QA Dec	2012A	1QA Mar	2QE Jun	3QE Sep	4QE Dec	2013E	2014E	2015E	CAGR 10-15
Molecular Diagnostics	0	0	0	0	0	0	0	0	0	1	1	17	36	N/A
Life Sciences	18	5	6	6	6	23	6	7	7	9	28	41	51	34.1%
Total Revenue	**18**	**5**	**6**	**6**	**6**	**23**	**6**	**7**	**7**	**10**	**29**	**58**	**87**	**49.2%**
Gross Profit	8	2	3	3	3	11	3	3	4	5	15	34	57	85.2%
SG&A	(10)	(3)	(3)	(4)	(5)	(15)	(6)	(7)	(9)	(12)	(34)	(57)	(56)	47.5%
R&D	(9)	(2)	(3)	(3)	(3)	(12)	(3)	(4)	(4)	(6)	(17)	(23)	(23)	25.1%
EBITA (Operating Income)	(10)	(4)	(4)	(4)	(5)	(16)	(6)	(8)	(9)	(13)	(36)	(46)	(23)	N/A
EBITDA	(9)	(3)	(3)	(4)	(5)	(15)	(6)	(8)	(9)	(13)	(35)	(45)	(22)	N/A
Pre-Tax Income	(11)	(4)	(4)	(5)	(6)	(18)	(7)	(9)	(9)	(13)	(39)	(47)	(27)	
Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	
Adjusted Net Income	(16)	(5)	(5)	(7)	(8)	(25)	(10)	(10)	(9)	(13)	(42)	(47)	(27)	N/A
Diluted Shares Outstanding	10.4	10.5	10.8	11.4	12.2	11.2	17.2	15.9	19.2	19.8	18.0	21.5	24.3	
GAAP Diluted EPS	(1.56)	(0.52)	(0.50)	(0.57)	(0.63)	(2.23)	(0.56)	(0.60)	(0.49)	(0.68)	(2.34)	(2.20)	(1.13)	
Adjusted Diluted EPS (incl. ESO)	**$ (1.56)**	**$ (0.52)**	**$ (0.50)**	**$ (0.57)**	**$ (0.63)**	**$ (2.23)**	**$ (0.56)**	**$ (0.60)**	**$ (0.49)**	**$ (0.68)**	**$ (2.33)**	**$ (2.18)**	**$ (1.11)**	
Gross Margin	45.1%	41.0%	43.9%	48.9%	50.3%	46.4%	49.2%	46.8%	50.9%	50.6%	49.5%	59.4%	65.4%	8.7%
change in gross margin (y/y, bp)	+2289	-70	-532	+509	+533	+137	+821	+293	+202	+28	+308	+992	+600	
SG&A	53.5%	70.3%	54.7%	69.1%	74.3%	67.1%	107.9%	103.7%	121.1%	124.3%	115.6%	99.3%	64.7%	
R&D	50.5%	48.8%	50.0%	51.1%	53.9%	51.2%	53.9%	61.0%	54.1%	58.9%	57.2%	39.1%	26.7%	
Operating Margin	-59.0%	-78.1%	-60.8%	-71.4%	-77.9%	-71.8%	-112.6%	-117.9%	-124.3%	-132.7%	-123.4%	-79.3%	-26.4%	16.8%
change in op margin (y/y, bp)	+5162	-596	-1365	-1253	-1876	-1284	-3447	-5707	-5298	-5479	-5157	+4408	+5286	
EBITDA Margin	-50.8%	-67.4%	-52.5%	-63.2%	-71.4%	-63.6%	-105.4%	-112.3%	-119.5%	-129.5%	-118.5%	-77.6%	-25.3%	15.4%
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%	
Profit Margin	-90.9%	-120.0%	-91.1%	-108.4%	-119.0%	-109.2%	-169.1%	-141.8%	-130.1%	-137.3%	-142.8%	-81.3%	-31.2%	22.9%
Reported Revenue Growth y/y	51.7%	3.6%	21.8%	55.0%	38.6%	29.1%	26.1%	13.4%	18.8%	50.8%	27.9%	96.6%	49.9%	

Source: Company data and J.P. Morgan estimates.

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

J.P.Morgan

Figure 23: Balance Sheet and Cash Flow

Balance Sheet and Cash Flow		1QA	2QA	3QA	4QA		1QA	2QE	3QE	4QE				CAGR
USD $M	2011A	Mar	Jun	Sep	Dec	2012A	Mar	Jun	Sep	Dec	2013E	2014E	2015E	10-15
Balance Sheet														
Cash + ST Investments	11	14	9	5	22	22	12	59	50	34	34	15	22	
Receivables	3	3	4	4	3	3	4	4	5	6	6	12	13	
Inventories	3	4	4	4	5	5	5	4	4	7	7	11	13	
Current Assets	19	22	19	16	32	32	24	70	61	49	49	41	51	
PP&E	5	5	4	4	4	4	3	3	3	3	3	3	4	
Non-Current Assets	6	5	5	4	6	6	6	6	5	5	5	6	6	
Accounts Payable	2	2	2	2	3	3	2	2	2	4	4	7	8	
Current Liabilities	7	6	6	9	12	12	11	8	8	9	9	12	13	
Long-Term Debt	1	7	7	7	10	10	9	13	13	13	13	48	83	
Non-Current Liabilities	6	13	12	12	12	12	15	19	19	19	19	54	89	
Shareholders Equity	12	8	5	0	13	13	3	49	40	26	26	(19)	(45)	
Net Cash (Debt)	**9**	**6**	**2**	**(2)**	**9**	**9**	**(1)**	**46**	**37**	**21**	**21**	**(33)**	**(60)**	
per share	0.87	0.59	0.16	(0.20)	0.73	0.79	(0.06)	2.90	1.92	1.07	1.18	(1.51)	(2.48)	
Net Debt/EBITDA	1.0x	0.7x	0.2x	-0.2x	0.6x	0.6x	-0.1x	2.1x	1.4x	0.6x	0.6x	-0.7x	-2.8x	
Cash Conversion Cycle (days)	75	119	105	123	113	118	157	115	121	118	130	121	115	
Cash Flow														
Cash Flow from Operations	(11)	(3)	(4)	(4)	(4)	(15)	(9)	(7)	(9)	(15)	(40)	(53)	(26)	N/A
Capex	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(1)	(1)	(2)	-2.2%
Cash Flow from Investments	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(1)	(1)	(2)	
Sale (Repurchase) of Equity	20	0	0	0	15	15	0	54	0	0	54	0	0	
Issuance (Reduction) of Debt	0	6	(0)	(0)	5	11	(0)	0	0	0	(0)	35	35	
Dividends Paid	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cash Flow from Financing	20	6	(0)	0	20	26	(1)	54	0	0	53	35	35	
Free Cash Flow	**(13)**	**(3)**	**(4)**	**(4)**	**(4)**	**(15)**	**(9)**	**(7)**	**(9)**	**(16)**	**(41)**	**(54)**	**(28)**	**N/A**
FCF Per Share	(1.29)	(0.29)	(0.40)	(0.36)	(0.31)	(1.36)	(0.53)	(0.43)	(0.49)	(0.78)	(2.27)	(2.51)	(1.14)	
FCF Growth y/y														
Dividend per Share	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Source: Company data and J.P. Morgan estimates.

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

J.P.Morgan

Figure 24: Discounted Cash Flow Analysis

Target Period: **Dec 2014**

Projected FY Ending Dec	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Revenue ($M)	29	58	87	122	156	180	201	223	244	266	284	300
growth y/y		97%	50%	40%	28%	16%	12%	11%	10%	9%	7%	6%
EBIT ($M)	(36)	(46)	(23)	(9)	(2)	4	12	20	31	42	48	55
EBIT margin	-124%	-79%	-26%	-7%	-2%	2%	6%	9%	13%	16%	17%	18%
Tax-affected EBIT ($M)	(36)	(46)	(23)	(9)	(2)	2	8	13	20	28	32	36
Free Cash Flow	**(40)**	**(54)**	**(25)**	**(15)**	**(8)**	**(1)**	**5**	**11**	**18**	**25**	**30**	**34**
growth y/y								94%	66%	43%	20%	14%

Discount Rate	Discounted Cash Flows ($M) 2015-2024	PV of Terminal Value ($M) at a Perpetual Growth Rate of 1.5%	2.0%	2.5%	3.0%	3.5%	Enterprise Value ($M) 1.5%	2.0%	2.5%	3.0%	3.5%	Equivalent Terminal EBITDA Multiple (forward 12 mos) 1.5%	2.0%	2.5%	3.0%	3.5%
6.7%	(17)	387	431	484	552	642	370	414	468	536	625	6.9x	7.7x	8.7x	10.0x	11.7x
7.2%	(18)	339	374	416	468	534	321	356	398	449	515	6.0x	6.6x	7.4x	8.4x	9.6x
7.7%	(20)	300	328	**361**	402	452	280	308	**342**	382	432	5.2x	5.8x	**6.4x**	7.1x	8.1x
8.2%	(21)	267	290	317	349	388	246	269	296	328	367	4.6x	5.0x	5.5x	6.1x	6.8x
8.7%	(22)	239	258	280	306	337	216	235	258	284	315	4.0x	4.4x	4.8x	5.3x	5.9x

Net Debt (Cash) ($M)	Equity Value ($M) 1.5%	2.0%	2.5%	3.0%	3.5%	Equity Value per Share 1.5%	2.0%	2.5%	3.0%	3.5%	Terminal Value as a % of Enterprise Value 1.5%	2.0%	2.5%	3.0%	3.5%
33	338	381	435	503	593	$15.72	$17.74	$20.24	$23.41	$27.58	104%	104%	104%	103%	103%
33	289	323	365	417	483	$13.43	$15.04	$16.98	$19.40	$22.46	106%	105%	105%	104%	104%
33	248	276	**309**	349	399	$11.53	$12.83	**$14.38**	$16.26	$18.59	107%	106%	**106%**	105%	105%
33	213	236	263	295	334	$9.92	$10.99	$12.24	$13.74	$15.56	109%	108%	107%	106%	106%
33	184	203	225	251	282	$8.55	$9.44	$10.47	$11.69	$13.13	110%	109%	109%	108%	107%

Source: Company data and J.P. Morgan estimates.

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

Appendix III: Management and Board of Directors

Figure 25: Management

Name / Title	Age	Compensation ($) Salary	Bonus	Equity	Ownership Shares (#)	Value (%)	Experience
R. Bradley Gray *President, CEO and Director*	36	$338,802	$104,000	$242,246	12,156,619	4.0%	– President, CEO and member of Board Directors since June 2010 – Served in various positions at Genzyme from 2004 to 2010 – Prior to Genzyme, served as a healthcare industry management consultant for McKinsey & Co from 2000 to 2004 – B.A. in Economics and Management from Oxford University, S.B. in Chemical Engineering from MIT
Mary Tedd Allen, Ph.D. *Vice President of Manufacturing*	50				1,842,333		– VP of Manufacturing since 2007 – VP of Advanced Manufacturing and Development group at Applied Biosystems from 2002 to 2005 – Prior to joining NanoString, served as Director of Research and Programs at Washington Technology Center from 2006 to 2007 – More than 20 years of experience managing product development and manufacturing groups for both semiconductor and biotech applications – B.A. in Chemistry from Mount Holyoke College, Ph.D. in Chemistry from University of Rochester
Joseph M. Beechem, Ph.D. *Senior Vice President of Research and Development*	55				265,500		– SVP of R&D since April 2012 – Prior to NanoString, held various positions including Chief Technology Officer at Life Technologies from 2007 to 2012 – Prior to Life Technologies, served as Chief Scientific Officer at Invitrogen from 2000 to 2003 – Led an NIH-funded research lab for 11 years as a tenured professor at Vanderbilt University – Has authored/co-authored over 100 peer-reviewed papers, named on nearly 30 US patents or applications, and has served on a number of editorial and scientific advisory boards – B.S. in Chemistry and Biology from Northern Kentucky University, Ph.D. in Biophysics from The Johns Hopkins University
Wayne Burns *Senior Vice President, Operations and Administration*	56				3,510,833	1.2%	– SVP, Operations and Administration since October 2012 and CFO from April 2007 to September 2012 – Served as COO and CFO at Action Engine, a developer of a mobile application platform, from 2001 to 2006 -Served as founder and CEO of SafariDog, VP of Operations and CFO of NetPodium, and VP of Business Development at various points from 1999 to 2001 – Served as CFO and VP of Finance for three venture-backed companies from 1990 to 1996 – Spent five years with PricewaterhouseCoopers in the US and Italy – B.A. in Business Administration with a concentration in Accounting from the University of Washington

Source: Company reports.

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

Figure 26: Management (Continued)

Name / Title	Age	Compensation ($) Salary	Bonus	Equity	Ownership Shares (#)	Value (%)	Experience
J. Wayne Cowens, M.D. *Chief Medical Officer*	65	$262,500	$120,000	$41,168	2,842,000		– Chief Medical Officer since February2011 – Prior to joining the company, served in a series of senior medical positions at Genomic Health from 2004 to 2010, including VP of Clinical Oncology – Prior to Genomic Health, held senior product development positions at several pharma companies, including Chiron and Ribozyme Pharmaceuticals and also worked as an oncology consultant to pharma and biotech companies – Licensed medical oncologist and author of 70 scientific abstracts and papers – H.A.B. in Classical Languages and Mathematics from Xavier University, M.S. in Mathematics from Northwestern University, M.D. from Johns Hopkins University
James A. Johnson *Chief Financial Officer*	56				2,655,000		– CFO since October 2012 – Served as CFO at Relypsa Inc., a privately-held clinical-stage biopharma company from 2011 to 2012 – Served as Executive VP, CFO, Treasurer and Secretary of ZymoGenetics, Inc., a biopharma company, and various other positions at the company from 2001 to 2011 – Served as CFO, Treasurer and Secretary of Targeted Genetics Corporation from 1994 to 2001 – Served as VP of Finance at Immunex Corporation from 1988 to 1994 – B.A. in Business Administration from the University of Washington
Nalini Murdter, Ph.D. *Chief Business Officer*	54				2,229,000		– Chief Business Officer since April 2010 – Prior to NanoString, held various positions at Agilent Technologies, most recently as Global Product Marketing Manager in the Life Sciences and Chemical Analysis division from 2005 to 2009 – Prior to Agilent, served as the Director of Product and Business Development at Adeza Biomedical, a developer of diagnostic tests for pregnancy related and reproductive health disorders – Senior Research Fellow at the California Institute of Technology from 1985 to 1990 – M.Sc in Chemistry from the Indian Institute of Technology, Kanpur, India, Ph.D. in Biochemistry from the University of Maryland, M.B.A. from the Haas School of Business at University of California, Berkeley
Barney Saunders, Ph.D. *Senior Vice President & General Manager, Life Sciences*	49				2,074,062		– SVP & General Manager of Life Sciences since September 2012 and Chief Commercial Officer since September 2010 – Prior to NanoString, served as Chief Commercial Officer at Microchip Biotechnologies (now IntegenX) from 2005 to 2010 – Served as General Manager at Agilent Technologies from 2000 to 2004 – Began his career with Amersham International in 2004 where he held a variety of commercial positions in the US and Europe from 1988 to 2000 – B.Sc in Biological Sciences and Ph.D. in Rice Resistance Gene Expression from Birmingham University, England
Bruce J. Seeley *Senior Vice President & General Manager, Diagnostics*	49	$185,385	$28,000	$158,150	2,655,000		– SVP and General Manager of Diagnostics since May 2012 – Prior to NanoString, served as Executive VP, Commercial, at Seattle Genetics from 2009 to 2012 – Served in various roles at Genentech, Inc, a biotechnology company acquired by Roche, from 2004 to 2009 – Served in various positions at Aventis Pharmaceuticals including Senior Director of New Product Commercialization and Licensing for Oncology Global Marketing from 2000 to 2004 – Prior to Aventis, held various marketing and sales positions at Rhone-Poulenc Rorer and Bristol-Myers Squibb – B.A. in Sociology from the University of California at Los Angeles

Source: Company reports.

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

Figure 27: Board of Directors

Name / Title	Committees			Experience
	Audit	Govern.	Comp.	
William D. Young *Chairman of the Board*	Chairman			– Chairman of the Board since January 2010 and a member of the audit committee since November 2011 – Serves as a Venture Partner at Clarus Ventures, a health care and life sciences venture capital firm, since 2010 – Served as Chairman of the board and CEO of Monogram Biosciences from 1999 to 2009 – Joined Genentech in 1980 as Director of Manufacturing and Process Sciences and became VP in 1983 – Held various positions in production and process engineering at Eli Lilly & Co. for 14 years prior to joining Genentech – Elected to the National Academy of Engineering in 1993 for his contributions to biotechnology – B.S. in Chemical Engineering from Purdue University, M.B.A. from Indiana University, Honorary Doctorate of Engineering from Purdue University
R. Bradley Gray *President, CEO and Director*				– President, CEO, and Director since June 2010 – Served in various positions at Genzyme from 2004 to 2010 – Prior to Genzyme, served as a healthcare industry management consultant for McKinsey & Co from 2000 to 2004 – B.A. in Economics and Management from Oxford University, S.B. in Chemical Engineering from MIT
Jennifer Scott Fonstad *Director*			Member	– Member of the Board since July 2004 and member of the compensation committee since June 2009 – Serves as a Managing Director at Draper Fisher Jurvetson, a venture capital firm, which she joined in 1997, becoming partner in 1998 – Began her career at Bain & Company – Serves as Chairman of the Somaly Mam Foundation – B.S. in International Economics from Georgetown University, M.B.A. from Harvard Business School
Nicholas Galakatos, Ph.D. *Director*		Member	Chairman	– Member of the Board, Chairman of the compensation committee, and member of the nominating and corporate governance committee since June 2009 – Serves as a Managing Director of Clarus Ventures, which he co-founded in 2005 – Began his venture capital career at Venrock Associates from 1992 to 1997 and then at MPM Capital since 2000 – Has founded multiple biopharmaceutical companies – B.A. in Chemistry from Reed College, Ph.D. in Organic Chemistry from MIT, performed postdoctoral studies at Harvard Medical School

Source: Company reports.

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

Figure 28: Board of Directors (Continued)

Name / Title	Committees: Audit	Govern.	Comp.	Experience
Finny Kuruvilla, M.D., Ph.D. *Director*				– Member of the Board of Directors since November 2011 and member of the Scientific Advisory Board since 2009 – Principal of Clarus Ventures, which he joined in 2008 – Worked as a research fellow at the Broad Institute of Harvard and MIT from 2004 to 2008 – From 2003 to 2007, completed residency and fellowship at the Brigham & Women's Hospital and Children's Hospital Boston – B.S. in Chemistry from MIT, M.D. from Harvard Medical School, Ph.D. in Chemistry and Chemical Biology from Harvard University
Gregory Norden *Director*	Member			– Member of the Board and chairman of the audit committee since July 2012 – From 1989 to 2010, held various senior positions with Wyeth/American Home Products, most recently as Wyeth's SVP and CFO – Prior to those roles, he was Executive VP and CFO of Wyeth Pharmaceuticals – Served on the board of WelchAllyn, a leading global provider of medical diagnostic equipment, and is a former director of Human Genome Sciences – M.S. in Accounting from Long Island University - C.W. Post, B.S. in Management/Economics from the State University of New York - Plattsburgh
Charles P. Waite *Director*	Member	Member	Member	– Member of the Board since July 2004 and member of the audit committee, compensation committee, and nominating and corporate governance committee since June 2009 – Served as a General Partner of OVP Venture Partners II and VP of Northwest Venture Services Corp since 1987, and held various other General Partners positions – Prior to joining OVP, held a General Partner position at Hambrecht & Quist Venture Partners from 1984 to 1988 – A.B. in history from Kenyon College, M.B.A. from Harvard University

Source: Company reports.

Tycho W. Peterson
(1-212) 622-6568
tycho.peterson@jpmorgan.com

J.P.Morgan

NanoString: Summary of Financials

Income Statement - Annual	FY12A	FY13E	FY14E	FY15E
Revenues	23	29	58	87
Cost of products sold	(12)	(15)	(23)	(30)
Gross profit	-	-	-	-
SG&A	(15)	(34)	(57)	(56)
R&D	(12)	(17)	(23)	(23)
Operating income	(16)	(36)	(46)	(22)
EBITDA	(15)	(35)	(45)	(21)
Net interest (income) / expense	(1)	(1)	(3)	(6)
Other income / (expense)	-	-	-	-
Income taxes	0	0	0	0
Net income	(33)	(45)	(47)	(27)
Diluted shares outstanding	-	-	-	-
Diluted EPS	-	-	-	-

Income Statement - Quarterly	1Q13A	2Q13E	3Q13E	4Q13E
Revenues	6A	7	7	10
Cost of products sold	(3)A	(4)	(4)	(5)
Gross profit	-	-	-	-
SG&A	(6)A	(7)	(9)	(12)
R&D	(3)A	(4)	(4)	(6)
Operating income	(6)A	(8)	(9)	(13)
EBITDA	(6)A	(8)	(9)	(13)
Net interest (income) / expense	(0)A	(0)	(0)	(0)
Other income / (expense)	-	-	-	-
Income taxes	0A	0	0	0
Net income	(8)A	(11)	(9)	(12)
Diluted shares outstanding	-	-	-	-
Diluted EPS	-	-	-	-

Balance Sheet and Cash Flow Data	FY12A	FY13E	FY14E	FY15E
Cash and cash equivalents	22	34	15	22
Accounts receivable	3	6	12	13
Inventories	5	7	11	13
Other current assets	1	2	2	2
Current assets	32	49	41	51
PP&E	-	-	-	-
Total assets	34	52	44	54
Total debt	13	13	48	83
Total liabilities	24	28	66	102
Shareholders' equity	13	26	(19)	(45)
Net income (including charges)	(18)	(39)	(47)	(27)
D&A	2	1	1	1
Change in working capital	(0)	(5)	(8)	(1)
Other	0	1	0	0
Cash flow from operations	(16)	(41)	(54)	(28)
Capex	(0)	(1)	(1)	(2)
Free cash flow	(16)	(42)	(55)	(29)
Cash flow from investing activities	(0)	(1)	(1)	(2)
Cash flow from financing activities	26	53	35	35
Dividends	0	0	0	0
Dividend yield	-	-	-	-

Ratio Analysis	FY12A	FY13E	FY14E	FY15E
Sales growth	29.1%	27.9%	96.6%	49.9%
EBIT growth	57.2%	119.6%	25.9%	(50.8%)
EPS growth	-	-	-	-
Gross margin	-	-	-	-
EBIT margin	(71.8%)	(123.4%)	(79.3%)	(26.4%)
EBITDA margin	(63.6%)	(118.5%)	(77.6%)	(25.3%)
Tax rate	0.0%	0.0%	0.0%	0.0%
Net margin	(142.0%)	(154.1%)	(81.3%)	(31.2%)
Net Debt / EBITDA	61.2%	61.1%	(72.5%)	(275.2%)
Net Debt / Capital (book)	(200.2%)	(410.9%)	247.9%	396.8%
Return on assets (ROA)	(122.8%)	(105.5%)	(97.9%)	(55.5%)
Return on equity (ROE)	(262.0%)	(227.4%)	(1339.0%)	83.8%
Enterprise value / sales	-	-	-	-
Enterprise value / EBITDA	-	-	-	-
Free cash flow yield	-	-	-	-

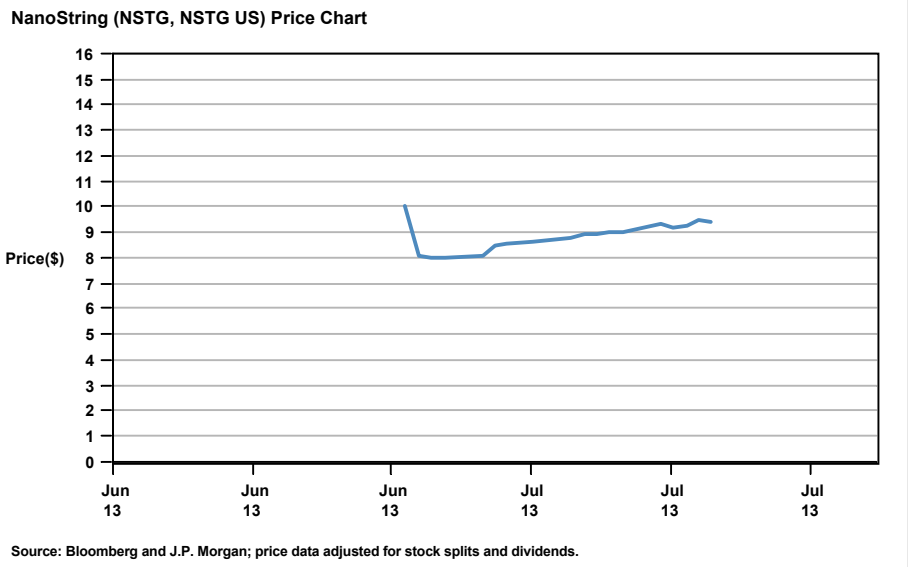
Source: Company reports and J.P. Morgan estimates.
Note: $ in millions (except per-share data).Fiscal year ends Dec

Analyst Certification: The research analyst(s) denoted by an "AC" on the cover of this report certifies (or, where multiple research analysts are primarily responsible for this report, the research analyst denoted by an "AC" on the cover or within the document individually certifies, with respect to each security or issuer that the research analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect his or her personal views about any and all of the subject securities or issuers; and (2) no part of any of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst(s) in this report.

Important Disclosures

- **Market Maker:** JPMS makes a market in the stock of NanoString.
- **Lead or Co-manager:** J.P. Morgan acted as lead or co-manager in a public offering of equity and/or debt securities for NanoString within the past 12 months.
- **Client:** J.P. Morgan currently has, or had within the past 12 months, the following company(ies) as clients: NanoString.
- **Client/Investment Banking:** J.P. Morgan currently has, or had within the past 12 months, the following company(ies) as investment banking clients: NanoString.
- **Investment Banking (past 12 months):** J.P. Morgan received in the past 12 months compensation from investment banking NanoString.
- **Investment Banking (next 3 months):** J.P. Morgan expects to receive, or intends to seek, compensation for investment banking services in the next three months from NanoString.

Company-Specific Disclosures: Important disclosures, including price charts, are available for compendium reports and all J.P. Morgan–covered companies by visiting https://mm.jpmorgan.com/disclosures/company, calling 1-800-477-0406, or e-mailing research.disclosure.inquiries@jpmorgan.com with your request. J.P. Morgan's Strategy, Technical, and Quantitative Research teams may screen companies not covered by J.P. Morgan. For important disclosures for these companies, please call 1-800-477-0406 or e-mail research.disclosure.inquiries@jpmorgan.com.



The chart(s) show J.P. Morgan's continuing coverage of the stocks; the current analysts may or may not have covered it over the entire period.
J.P. Morgan ratings or designations: OW = Overweight, N= Neutral, UW = Underweight, NR = Not Rated

Explanation of Equity Research Ratings, Designations and Analyst(s) Coverage Universe:
J.P. Morgan uses the following rating system: Overweight [Over the next six to twelve months, we expect this stock will outperform the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Neutral [Over the next six to twelve months, we expect this stock will perform in line with the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Underweight [Over the next six to twelve months, we expect this stock will underperform the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Not Rated (NR): J.P. Morgan has removed the rating and, if

applicable, the price target, for this stock because of either a lack of a sufficient fundamental basis or for legal, regulatory or policy reasons. The previous rating and, if applicable, the price target, no longer should be relied upon. An NR designation is not a recommendation or a rating. In our Asia (ex-Australia) and U.K. small- and mid-cap equity research, each stock's expected total return is compared to the expected total return of a benchmark country market index, not to those analysts' coverage universe. If it does not appear in the Important Disclosures section of this report, the certifying analyst's coverage universe can be found on J.P. Morgan's research website, www.jpmorganmarkets.com.

Coverage Universe: Peterson, Tycho W: Accuray (ARAY), Affymetrix (AFFX), Agilent Technologies (A), Bruker Corporation (BRKR), Cepheid (CPHD), Charles River Laboratories (CRL), Covance (CVD), FEI Company (FEIC), GenMark Diagnostics (GNMK), Genomic Health (GHDX), Hologic (HOLX), ICON Plc (ICLR), Illumina, Inc. (ILMN), Intuitive Surgical, Inc. (ISRG), Life Technologies Corporation (LIFE), Luminex (LMNX), Mettler-Toledo (MTD), Myriad Genetics Inc. (MYGN), Pacific Biosciences Inc. (PACB), PerkinElmer (PKI), Qiagen N.V. (QGEN), Quidel (QDEL), Quintiles Transnational (Q), Sigma Aldrich (SIAL), Sirona Dental Systems Inc (SIRO), Thermo Fisher Scientific (TMO), Varian Medical (VAR), Waters (WAT), WuXi PharmaTech (WX), Zeltiq Aesthetics (ZLTQ)

J.P. Morgan Equity Research Ratings Distribution, as of June 28, 2013

	Overweight (buy)	Neutral (hold)	Underweight (sell)
J.P. Morgan Global Equity Research Coverage	44%	44%	12%
IB clients*	56%	50%	40%
JPMS Equity Research Coverage	42%	50%	8%
IB clients*	76%	66%	55%

*Percentage of investment banking clients in each rating category.
For purposes only of FINRA/NYSE ratings distribution rules, our Overweight rating falls into a buy rating category; our Neutral rating falls into a hold rating category; and our Underweight rating falls into a sell rating category. Please note that stocks with an NR designation are not included in the table above.

Equity Valuation and Risks: For valuation methodology and risks associated with covered companies or price targets for covered companies, please see the most recent company-specific research report at http://www.jpmorganmarkets.com, contact the primary analyst or your J.P. Morgan representative, or email research.disclosure.inquiries@jpmorgan.com.

Equity Analysts' Compensation: The equity research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

Other Disclosures

J.P. Morgan ("JPM") is the global brand name for J.P. Morgan Securities LLC ("JPMS") and its affiliates worldwide. J.P. Morgan Cazenove is a marketing name for the U.K. investment banking businesses and EMEA cash equities and equity research businesses of JPMorgan Chase & Co. and its subsidiaries.

All research reports made available to clients are simultaneously available on our client website, J.P. Morgan Markets. Not all research content is redistributed, e-mailed or made available to third-party aggregators. For all research reports available on a particular stock, please contact your sales representative.

Options related research: If the information contained herein regards options related research, such information is available only to persons who have received the proper option risk disclosure documents. For a copy of the Option Clearing Corporation's Characteristics and Risks of Standardized Options, please contact your J.P. Morgan Representative or visit the OCC's website at http://www.optionsclearing.com/publications/risks/riskstoc.pdf

Legal Entities Disclosures
U.S.: JPMS is a member of NYSE, FINRA, SIPC and the NFA. JPMorgan Chase Bank, N.A. is a member of FDIC and is authorized and regulated in the UK by the Financial Services Authority. **U.K.:** J.P. Morgan Securities plc (JPMS plc) is a member of the London Stock Exchange and is authorized and regulated by the Financial Services Authority. Registered in England & Wales No. 2711006. Registered Office 25 Bank Street, London, E14 5JP. **South Africa:** J.P. Morgan Equities South Africa Proprietary Limited is a member of the Johannesburg Securities Exchange and is regulated by the Financial Services Board. **Hong Kong:** J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong. **Korea:** J.P. Morgan Securities (Far East) Ltd, Seoul Branch, is regulated by the Korea Financial Supervisory Service. **Australia:** J.P. Morgan Australia Limited (JPMAL) (ABN 52 002 888 011/AFS Licence No: 238188) is regulated by ASIC and J.P. Morgan Securities Australia Limited (JPMSAL) (ABN 61 003 245 234/AFS Licence No: 238066) is regulated by ASIC and is a Market, Clearing and Settlement Participant of ASX Limited and CHI-X. **Taiwan:** J.P.Morgan Securities (Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. **India:** J.P. Morgan India Private Limited, having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz East, Mumbai - 400098, is a member of the National Stock Exchange of India Limited (SEBI Registration Number - INB 230675231/INF 230675231/INE 230675231) and Bombay Stock Exchange Limited (SEBI Registration Number - INB 010675237/INF 010675237) and is regulated by Securities and Exchange Board of India. **Thailand:** JPMorgan Securities (Thailand) Limited is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission. **Indonesia:** PT J.P. Morgan Securities Indonesia is a member of the Indonesia Stock Exchange and is regulated by the BAPEPAM LK. **Philippines:** J.P. Morgan Securities Philippines Inc. is a Trading Participant of the Philippine Stock Exchange and a member of the Securities Clearing Corporation of the Philippines and the Securities

Investor Protection Fund. It is regulated by the Securities and Exchange Commission. **Brazil:** Banco J.P. Morgan S.A. is regulated by the Comissao de Valores Mobiliarios (CVM) and by the Central Bank of Brazil. **Mexico:** J.P. Morgan Casa de Bolsa, S.A. de C.V., J.P. Morgan Grupo Financiero is a member of the Mexican Stock Exchange and authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. **Singapore:** This material is issued and distributed in Singapore by J.P. Morgan Securities Singapore Private Limited (JPMSS) [MIC (P) 049/04/2013 and Co. Reg. No.: 199405335R] which is a member of the Singapore Exchange Securities Trading Limited and is regulated by the Monetary Authority of Singapore (MAS) and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore) which is regulated by the MAS. **Japan**: JPMorgan Securities Japan Co., Ltd. is regulated by the Financial Services Agency in Japan. **Malaysia:** This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X) which is a Participating Organization of Bursa Malaysia Berhad and a holder of Capital Markets Services License issued by the Securities Commission in Malaysia. **Pakistan:** J. P. Morgan Pakistan Broking (Pvt.) Ltd is a member of the Karachi Stock Exchange and regulated by the Securities and Exchange Commission of Pakistan. **Saudi Arabia:** J.P. Morgan Saudi Arabia Ltd. is authorized by the Capital Market Authority of the Kingdom of Saudi Arabia (CMA) to carry out dealing as an agent, arranging, advising and custody, with respect to securities business under licence number 35-07079 and its registered address is at 8th Floor, Al-Faisaliyah Tower, King Fahad Road, P.O. Box 51907, Riyadh 11553, Kingdom of Saudi Arabia. **Dubai:** JPMorgan Chase Bank, N.A., Dubai Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - Building 3, Level 7, PO Box 506551, Dubai, UAE.

Country and Region Specific Disclosures
U.K. and European Economic Area (EEA): Unless specified to the contrary, issued and approved for distribution in the U.K. and the EEA by JPMS plc. Investment research issued by JPMS plc has been prepared in accordance with JPMS plc's policies for managing conflicts of interest arising as a result of publication and distribution of investment research. Many European regulators require a firm to establish, implement and maintain such a policy. This report has been issued in the U.K. only to persons of a kind described in Article 19 (5), 38, 47 and 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (all such persons being referred to as "relevant persons"). This document must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is only available to relevant persons and will be engaged in only with relevant persons. In other EEA countries, the report has been issued to persons regarded as professional investors (or equivalent) in their home jurisdiction. **Australia:** This material is issued and distributed by JPMSAL in Australia to "wholesale clients" only. This material does not take into account the specific investment objectives, financial situation or particular needs of the recipient. The recipient of this material must not distribute it to any third party or outside Australia without the prior written consent of JPMSAL. For the purposes of this paragraph the term "wholesale client" has the meaning given in section 761G of the Corporations Act 2001. **Germany:** This material is distributed in Germany by J.P. Morgan Securities plc, Frankfurt Branch and J.P.Morgan Chase Bank, N.A., Frankfurt Branch which are regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht. **Hong Kong:** The 1% ownership disclosure as of the previous month end satisfies the requirements under Paragraph 16.5(a) of the Hong Kong Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission. (For research published within the first ten days of the month, the disclosure may be based on the month end data from two months prior.) J.P. Morgan Broking (Hong Kong) Limited is the liquidity provider/market maker for derivative warrants, callable bull bear contracts and stock options listed on the Stock Exchange of Hong Kong Limited. An updated list can be found on HKEx website: http://www.hkex.com.hk. **Japan:** There is a risk that a loss may occur due to a change in the price of the shares in the case of share trading, and that a loss may occur due to the exchange rate in the case of foreign share trading. In the case of share trading, JPMorgan Securities Japan Co., Ltd., will be receiving a brokerage fee and consumption tax (shouhizei) calculated by multiplying the executed price by the commission rate which was individually agreed between JPMorgan Securities Japan Co., Ltd., and the customer in advance. Financial Instruments Firms: JPMorgan Securities Japan Co., Ltd., Kanto Local Finance Bureau (kinsho) No. 82 Participating Association / Japan Securities Dealers Association, The Financial Futures Association of Japan, Type II Financial Instruments Firms Association and Japan Investment Advisers Association. **Korea:** This report may have been edited or contributed to from time to time by affiliates of J.P. Morgan Securities (Far East) Ltd, Seoul Branch. **Singapore:** JPMSS and/or its affiliates may have a holding in any of the securities discussed in this report; for securities where the holding is 1% or greater, the specific holding is disclosed in the Important Disclosures section above. **India:** For private circulation only, not for sale. **Pakistan:** For private circulation only, not for sale. **New Zealand:** This material is issued and distributed by JPMSAL in New Zealand only to persons whose principal business is the investment of money or who, in the course of and for the purposes of their business, habitually invest money. JPMSAL does not issue or distribute this material to members of "the public" as determined in accordance with section 3 of the Securities Act 1978. The recipient of this material must not distribute it to any third party or outside New Zealand without the prior written consent of JPMSAL. **Canada:** The information contained herein is not, and under no circumstances is to be construed as, a prospectus, an advertisement, a public offering, an offer to sell securities described herein, or solicitation of an offer to buy securities described herein, in Canada or any province or territory thereof. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the dealer registration requirement in the relevant province or territory of Canada in which such offer or sale is made. The information contained herein is under no circumstances to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient. To the extent that the information contained herein references securities of an issuer incorporated, formed or created under the laws of Canada or a province or territory of Canada, any trades in such securities must be conducted through a dealer registered in Canada. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed judgment upon these materials, the information contained herein or the merits of the securities described herein, and any representation to the contrary is an offence. **Dubai:** This report has been issued to persons regarded as professional clients as defined under the DFSA rules. **Brazil**: Ombudsman J.P. Morgan: 0800-7700847 / ouvidoria.jp.morgan@jpmorgan.com.

General: Additional information is available upon request. Information has been obtained from sources believed to be reliable but JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) do not warrant its completeness or accuracy except with respect to any disclosures relative to JPMS and/or its affiliates and the analyst's involvement with the issuer that is the subject of the research. All pricing is as of the close of market for the securities discussed, unless otherwise stated. Opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Past performance is not indicative of future results. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. The recipient of this report must make its own independent decisions regarding any securities or financial instruments mentioned herein. JPMS distributes in the U.S. research published by non-U.S. affiliates and accepts responsibility for its contents. Periodic updates may be provided on companies/industries based on company specific developments or announcements, market conditions or any other publicly available information. Clients should contact analysts and execute transactions through a J.P. Morgan subsidiary or affiliate in their home jurisdiction unless governing law permits otherwise.

"Other Disclosures" last revised May 4, 2013.