

Veracyte, Inc. (VCYT)

Overweight

Positive Outlook? Afirma-tive; Initiating Coverage With Overweight

CONCLUSION

We are initiating coverage of Veracyte with an Overweight rating and \$21 price target (4.6x F2016 EV/Rev). Veracyte's initial focus is penetrating the indeterminate thyroid FNA market (\$500M addressable U.S. market, \$800M worldwide) with its Afirma Thyroid FNA Analysis/GEC test. Unfortunately, the most common approach for dealing with an indeterminate thyroid nodule cytopathology is surgery for additional tumor evaluation. Given 70%-80% of these originally indeterminate tumors are eventually designated as benign translates into unnecessary surgeries. Veracyte's Afirma GEC re-classifies indeterminate thyroid results prior to surgical intervention, enabling physicians to properly classify thyroid nodules, potentially avoiding a \$15,000 surgical procedure (and life-long therapy). Based on our expectations for ongoing penetration and potential addition to ATA guidelines (decision expected 6/20/14), we believe VCYT is poised to meet and potentially beat forward expectations.

- **Veracyte's GEC Makes Sense For Payers And Patients:** Veracyte's Afirma GEC is a proprietary, 142-gene signature test used to re-classify the 15%-30% of thyroid nodules identified as "indeterminate" by cytopathology as benign or suspicious. An indeterminate cytopathology typically results in the surgical removal of either all or part of the thyroid, a procedure costing \$15,000 on average. Importantly, an estimated 70%-80% of indeterminate thyroid cytopathology is benign and Veracyte has shown use of Afirma GEC yields a significant reduction in surgical intervention in this patient segment, resulting in an average cost savings to the healthcare system of \$2,600 per GEC (PJC estimate: \$2,058). Veracyte's Afirma GEC test already has favorable coverage decisions in place with several large payers including Aetna, Cigna, Humana, Medicare and UnitedHealthcare (~129M covered lives based on diligence) and we anticipate ongoing publications, Veracyte's compelling value proposition as well as potential guideline inclusion to drive additional favorable coverage decisions going forward.
- **We See Room For Upside; ATA Guidelines Potential Near-Term Catalyst:** Veracyte's 1Q14 included a 33.6% yoy thyroid FNA volume increase to 14,373 and a 70.5% revenue increase to \$7.5M, although adjusting for unfavorable weather (9% impact at mid-point) 1Q14 volume was ~15,300. Management's F2014 outlook remains unchanged, with its recently increased sales force expected to offset the 1Q14 weather impact. Management recently increased its Afirma GEC guidance to 20%-22% of thyroid FNAs received (was 18%-20%). We view potential ATA guideline inclusion (American Thyroid Association; update expected 6/20/14) as potential upside to our volume and revenue projections, with GEC addition expected to favorably impact private payer coverage decisions and physician acceptance, in our opinion.

RISKS TO ACHIEVEMENT OF PRICE TARGET

Veracyte risks include GEC adoption, private payer coverage and competition.

COMPANY DESCRIPTION

Veracyte develops molecular cytology tests; initially focusing on the thyroid FNA market.

YEAR	REVENUE (US\$ m)						EARNINGS PER SHARE (US\$)					
	Mar	Jun	Sep	Dec	FY	FY RM	Mar	Jun	Sep	Dec	FY	FY P/E
2014E	7.5A	9.4	10.5	13.5	40.9	7.9x	(0.32)A	(0.33)	(0.33)	(0.32)	(1.30)	NM
2015E	16.0	18.3	19.9	22.9	77.1	4.2x	(0.28)	(0.26)	(0.23)	(0.20)	(0.97)	NM
2016E	—	—	—	—	117.4	2.7x	—	—	—	—	(0.30)	NM

PRICE: US\$14.94

TARGET: US\$21.00

4.6x F2016 EV/Rev (net cash/share: \$1.82, s/o: 27.5M)

William R. Quirk, CFA

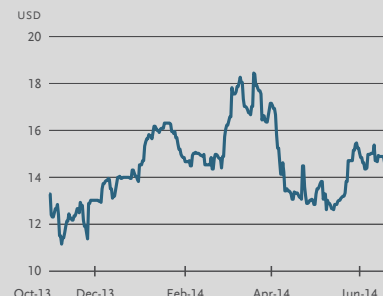
Sr Research Analyst, Piper Jaffray & Co.
612 303-6858, william.r.quirk@pjc.com

David C. Clair, CFA

Research Analyst, Piper Jaffray & Co.
612 303-6747, david.c.clair@pjc.com

Changes	Previous	Current
Rating		Overweight
Price Tgt		US\$21.00
FY15E Rev (mil)	—	US\$77.1
FY16E Rev (mil)	—	US\$117.4
FY15E EPS	—	US\$(0.97)
FY16E EPS	—	US\$(0.30)
52-Week High / Low	US\$19.00 / US\$10.88	
Shares Out (mil)	21.6	
Market Cap. (mil)	US\$322.7	
Avg Daily Vol (ooo)	50	
Book Value/Share	US\$2.38	
Net Cash Per Share	US\$2.81	
Debt to Total Capital	9%	
Div (ann)	US\$0.00	
Fiscal Year End	Dec	

Price Performance - 1 Year



Source: Bloomberg

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Investment Thesis

We are initiating on Veracyte (VCYT) with an Overweight rating. Our Overweight rating is based on expectations for Veracyte to continue to penetrate the indeterminate thyroid nodule opportunity with its Afirma GEC (Gene Expression Classifier) test and develop additional molecular cytology applications longer-term. Our \$21 price target is based on 4.6x F2016 EV/revenue, a 50% premium to its small-to-mid-cap diagnostic/specialty lab peer group. Veracyte's Afirma GEC provides clarity on the estimated 15%-30% of thyroid nodule cytopathology results that are indeterminate. An indeterminate cytopathology result leaves the patient uncertain if the thyroid growth is malignant or benign, typically resulting in the surgical removal of either all or part of the thyroid, a procedure costing \$15,000 on average. Importantly, an estimated 70%-80% of indeterminate thyroid cytopathology is benign and Veracyte has shown use of Afirma GEC yields a significant reduction in surgical intervention in this patient segment, resulting in an average cost savings to the healthcare system of \$2,600 per GEC (includes test price). We believe a premium multiple is warranted given our expectations for continued Afirma GEC adoption within the endocrinology community as well as ongoing favorable reimbursement decisions from private payers. Veracyte's Afirma GEC test already has favorable coverage decisions in place with several large payers including Aetna, Cigna, Humana, Medicare and UnitedHealthcare (~129M covered lives), and we anticipate ongoing publications, Veracyte's compelling value proposition as well as potential guideline inclusion to drive additional favorable coverage decisions going forward.

We believe Veracyte is positioned to meet and potentially beat our forward revenue projections, please see Exhibit 1 for a F2014 scenario analysis. Veracyte's recently reported 1Q14 results included a 33.6% year over year thyroid FNA volume increase to 14,373 coupled with a 70.5% revenue increase to \$7.5 million. Importantly, unfavorable weather impacted Veracyte's 1Q14 test volume by an estimated 8%-10%, implying adjusted 1Q14 volume of ~15,300 (at mid-point, i.e., 9% weather impact). Management anticipates its recently increased sales force will be able to make up for the 1Q14 weather-related impact and full year 2014 guidance remains unchanged following 1Q14 results. Separately, management recently increased its Afirma GEC guidance to 20%-22% of thyroid FNAs received (was 18%-20%), with an increasing number of samples submitted specifically for Afirma GEC from academic centers as the driver behind the raised outlook. Additionally, we view potential inclusion in ATA (American Thyroid Association; update expected June 20, 2014) or AACE (American Association of Clinical Endocrinologists) guidelines as potential upside to our volume and revenue projections, with GEC addition to these guidelines expected to favorably impact private payer coverage decisions and physician acceptance, in our opinion. We would also note, Veracyte recently introduced two additional thyroid assays, Afirma Malignancy Classifiers, for the identification of a rare form of thyroid cancer (medullary thyroid cancer or MTC) as well as BRAF genetic mutations, with better than anticipated adoption representing an additional source of potential upside to expectations.

Exhibit 1

SCENARIO ANALYSIS

Afirma 2014 Revenue Scenarios			
High Case	Low Case	2014 Estimates	Fine Needle Aspirations (FNA) Market
525K	525K	525K	Fine Needle Aspirations (FNAs) Performed Yearly
15.7%	11.7%	13.7%	Veracyte Market Penetration
82K	61K	76K	FNAs Veracyte Receives
8%	8%	8%	FNAs for GEC Test Only
76K	57K	72K	FNAs Headed To Cytopathology
6.6K	4.9K	4.6K	FNAs Headed Directly To GEC Test
High Case	Low Case	2014 Estimates	Cytopathology Business
5%	10%	7.5%	FNAs With Insufficient Cellular Material To Perform The Test
72K	51K	66K	Cytopathology Tests Performed
\$490	\$490	\$490	Cytopathology Average Test Price
42%	42%	42%	Cytopathology Average Reimbursement
\$15M	\$10M	\$13M	Cytopathology Revenue
\$38K	\$57K	\$54K	Insufficient Cellular Material Revenue
\$15M	\$10M	\$14M	Total Cytopathology Revenue
High Case	Low Case	2014 Estimates	Gene Expression Classifiers (GEC) Business
17%	14%	17%	Cytopathology Tests With An Indeterminate Result
19K	12K	16K	Total Indeterminate & GEC-Only Tests
5.0%	10.0%	7.5%	Samples Received Without RNA
18K	11K	15K	GEC Tests Performed
\$4,725	\$4,725	\$4,725	GEC Average Test Price
38%	38%	38%	GEC Average Reimbursement
\$32M	\$20M	\$26M	GEC Test Revenue
High Case	Low Case	2014 Estimates	Malignancy Classifiers (MC) Business
6%	3%	4%	Cytopathology Tests Which Report A Malignant Result
3.2K	1.1K	2.4K	Standalone Malignant Classifiers Test Opportunity
5%	5%	5%	Malignant Classifiers Penetration
162	57	121	Malignant Classifiers Tests Performed
\$950	\$950	\$950	Malignant Classifiers Average Test Price
16%	16%	16%	Malignant Classifiers Average Reimbursement
\$24K	\$9K	\$18K	Malignant Classifiers Revenue
\$47M	\$30M	\$40M	Total US Afirma Revenue
\$1.1M	\$0.7M	\$0.9M	Brazil Afirma Revenue
\$0.0M	\$0.0M	\$0.0M	Interstitial Lung Disease Revenue
\$48M	\$31M	\$41M	Total Revenue

Afirma 2016 Revenue Scenarios			
High Case	Low Case	2016 Estimates	Fine Needle Aspirations (FNA) Market
546K	546K	546K	Fine Needle Aspirations (FNAs) Performed Yearly
28.3%	24.3%	26.3%	Veracyte Market Penetration
155K	133K	144K	FNAs Veracyte Receives
8%	8%	8%	FNAs for GEC Test Only
142K	122K	132K	FNAs Headed To Cytopathology
12.4K	10.6K	11.5K	FNAs Headed Directly To GEC Test
High Case	Low Case	2016 Estimates	Cytopathology Business
5%	10%	7.5%	FNAs With Insufficient Cellular Material To Perform The Test
135K	110K	122K	Cytopathology Tests Performed
\$490	\$490	\$490	Cytopathology Average Test Price
53%	53%	53%	Cytopathology Average Reimbursement
\$35M	\$29M	\$32M	Cytopathology Revenue
\$71K	\$122K	\$99K	Insufficient Cellular Material Revenue
\$35M	\$29M	\$32M	Total Cytopathology Revenue
High Case	Low Case	2016 Estimates	Gene Expression Classifiers (GEC) Business
17%	14%	17%	Cytopathology Tests With An Indeterminate Result
35K	26K	32K	Total Indeterminate & GEC-Only Tests
5.0%	10.0%	7.5%	Samples Received Without RNA
34K	23K	30K	GEC Tests Performed
\$4,875	\$4,875	\$4,875	GEC Average Test Price
53%	53%	53%	GEC Average Reimbursement
\$86M	\$60M	\$77M	GEC Test Revenue
High Case	Low Case	2016 Estimates	Malignancy Classifiers (MC) Business
6%	3%	5%	Cytopathology Tests Which Report A Malignant Result
6.1K	2.5K	5.5K	Standalone Malignant Classifiers Test Opportunity
18%	18%	18%	Malignant Classifiers Penetration
1099	447	994	Malignant Classifiers Tests Performed
\$950	\$950	\$950	Malignant Classifiers Average Test Price
40%	40%	40%	Malignant Classifiers Average Reimbursement
\$417K	\$170K	\$377K	Malignant Classifiers Revenue
\$122M	\$89M	\$110M	Total US Afirma Revenue
\$7.0M	\$6.1M	\$6.5M	Brazil Afirma Revenue
\$1.8M	\$1.0M	\$1.4M	Interstitial Lung Disease Revenue
\$131M	\$96M	\$117M	Total Revenue

Source: Company reports, Piper Jaffray estimates

Valuation

Our \$21 price target is based on 4.6x our F2016 EV/Revenue estimate (F2016: \$117.4 million in revenue, 27.5 million shares outstanding, \$1.82 in net cash/share), a 50% premium to Veracyte's small-to-mid-cap diagnostic/specialty lab peer group. We believe a premium multiple is justified given the existing market opportunity as well as potential pipeline products in adjacent markets, private payer momentum, its higher growth profile as well as the potential positive impact from inclusion in ATA/AACE guidelines.

Exhibit 2

VALUATION

Company Name	Ticker	Price	Market Cap	Cash	Debt	Shares Out	EV	Consensus			Revenue Growth		EV/Rev		
								2014 Rev	2015 Rev	2016 Rev	2-Year CAGR	3-Year CAGR	F2014	F2015	F2016
Veracyte	VCYT	14.94	316.0	64.2	4.9	21.1	256.6	40.6	76.6	116.4	89%	69%	6.32	3.35	2.20
Genomic Health	GHDX	27.99	864.9	28.2	-	30.9	836.7	281.9	316.1	363.2	12%	13%	3.0	2.6	2.3
Illumina	ILMN	171.01	25,651.5	518.5	848.0	150.0	25,981.0	1756.1	2094.3	2473.9	19%	19%	14.8	12.4	10.5
Sequenom	SQNM	3.61	414.4	56.3	139.2	114.8	497.3	199.5	236.1	NM	18%	NM	2.5	2.1	NM
Myriad Genetics	MYGN	37.00	2,826.8	228.7	-	76.4	2,598.1	775.5	814.3	811.7	5%	2%	3.4	3.2	3.2
Oxford Immunotec	OXFD	18.09	313.0	67.6	0.5	17.3	245.8	49.8	67.4	85.5	35%	31%	4.9	3.6	2.9
Median													3.35	3.19	3.04

Priced: Market Close 6/18/2014

2016 EV/Rev

Median	3.0	F2016:	
Premium	50%	Cash	\$54.9M
EV/Sales Multiple	4.6	Debt	\$4.9M
FY16 Rev	\$117.4M	Net Cash	\$1.82
Price Target	\$21	Shares Out	27.5M
Upside	42.4%		

Source: Thomson One, Company Reports & Piper Jaffray Estimates

Company Overview

Headquartered in South San Francisco, CA, Veracyte's initial product, the Afirma Thyroid FNA Analysis, includes the Gene Expression Classifier or GEC test. GEC is a proprietary, 142-gene signature test used to re-classify thyroid nodules (bumps under the skin around the thyroid gland) identified as "indeterminate" by cytopathology (i.e., unknown if benign or malignant) as benign or suspicious. As background, patients with thyroid nodules greater than 1cm are typically referred to an endocrinologist for additional evaluation. The endocrinologist uses a procedure called fine needle aspiration or FNA to collect thyroid nodule cells for evaluation. An FNA utilizes a hollow needle inserted into the growth to collect cells for evaluation. Next, a pathologist stains the cells and uses a microscope to determine if the growth is benign or malignant. The overwhelming majority of thyroid nodule FNAs (60%-75%) are determined to be benign, although an estimated 15%-30% yield an "indeterminate" result, meaning the pathologist is unable to determine if the sample is benign or malignant. Unfortunately, the most common approach for dealing with an indeterminate thyroid nodule cytopathology result is surgical removal of all or part of the thyroid for additional evaluation and subjecting the patient to life-long hormone therapy. Moreover, 70%-80% of these originally indeterminate tumors are eventually designated as benign and accordingly, the patient underwent an unnecessary surgery. Veracyte's Afirma GEC provides additional information on these indeterminate thyroid results before any surgical intervention, enabling physicians to properly classify thyroid nodules previously classified as indeterminate, potentially avoiding a \$15,000 surgical procedure (and life-long therapy).

Following the January 2011 launch of its Afirma GEC assay, Veracyte has enjoyed robust revenue growth, generating \$2.6 million in 2011, increasing 339.6% in 2012 to \$11.6 million and 88.8% in 2013 to \$21.9 million (1Q14: +70.5% yoy to \$7.5M). At the same time, private payer and Medicare coverage decisions have also been increasing, with payers representing ~129 million lives currently with favorable Afirma GEC coverage decisions. From a clinical perspective, Afirma GEC is well validated, in our opinion, with data suggesting ~1 surgery reduction for every 2 GEC's tests run on indeterminate thyroid FNA cytopathology (Thyroid, 2012). Separately, researchers from Johns Hopkins University prepared a health economics study on the impact of utilizing Afirma GEC in clinical practice, with the results showing a direct cost savings of \$1,453 per GEC (management

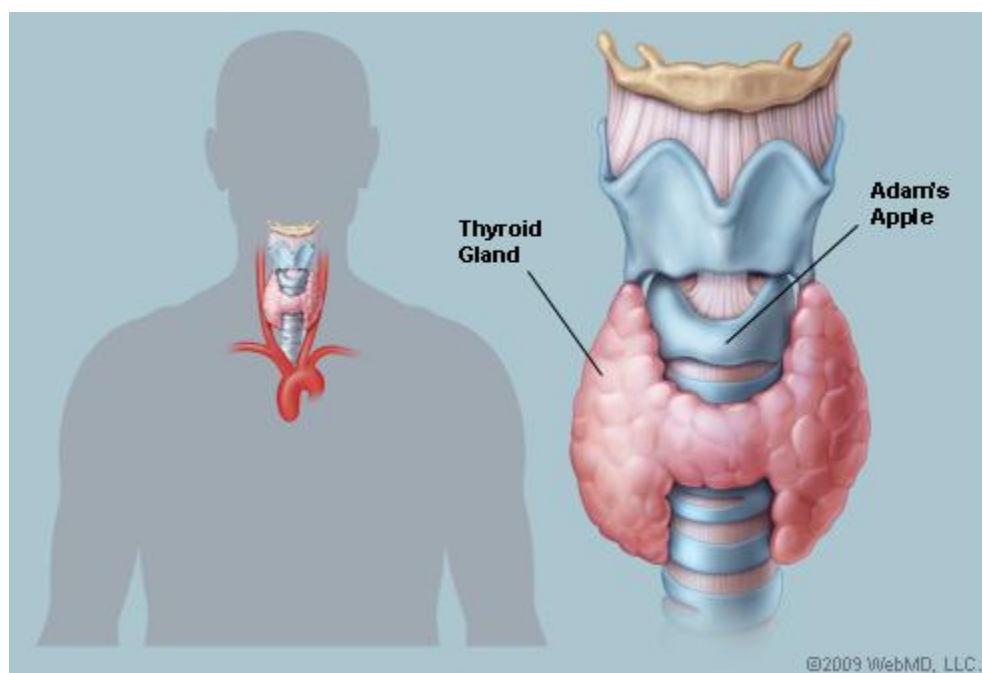
notes a \$2,600 saving for every GEC adjusting for a lower surgery rate reported in subsequent studies). We anticipate additional clinical and economic study publications will drive GEC penetration, favorable private payer coverage decisions and robust revenue growth going forward.

Thyroid Background

The thyroid is a member of a series of glands producing regulating hormones called the endocrine system. Located in the lower part of the front of the neck, the thyroid gland absorbs iodine from the bloodstream, utilizing this chemical to manufacture hormones influencing body temperature, metabolism, growth and development. The primary hormones secreted by the thyroid are triiodothyronine (T_3) and thyroxine (T_4). Under normal conditions the thyroid cannot be felt, although an iodine insufficiency can enlarge the thyroid, resulting in a condition called goiter. Excess thyroxine production leads to hyperthyroidism, a condition impacting ~2% of women, with common symptoms including sudden weight loss, rapid heartbeat (tachycardia), increased appetite, tremors and sweating, with these symptoms often mimicking other conditions, complicating diagnosis.

Exhibit 3

THYROID GLAND



Source: WebMd

Thyroid Nodule Evaluation (Old Paradigm)

Thyroid nodules are lumps occurring within the thyroid gland, with the resulting growth called a thyroid neoplasm or tumor. The majority of patients with thyroid nodules fall into the 25-65 age group, with the condition more common in women than men. The thyroid nodule diagnostic paradigm typically involves a visit to a general practitioner where the growth is evaluated. The next step involves referral to an endocrinologist, thyroidologist or ear, nose & throat specialist (otolaryngologist or ENT) where an ultrasound is used to confirm the growth and a fine needle aspiration (FNA) is performed to collect cells for cytological evaluation to determine if the growth is benign or malignant (cancerous). An

FNA is a minimally invasive procedure (typically outpatient), involving the insertion of a hollow needle into the growth for the collection of tumor-specific cells (cytology sample), with the resulting sample then evaluated by cytopathology. The cytopathologist processes the FNA sample onto slides, with the use of stains and visual inspection by a microscope used to differentiate benign vs. cancerous thyroid nodules. An estimated 15%-30% of thyroid nodules evaluated are indeterminate, meaning a diagnosis of benign or malignant is not possible by evaluating the cytology sample. Given a 20%-30% malignancy risk in these indeterminate cytology samples, clinical guidelines recommend surgery to remove all or part of the thyroid for further evaluation. These surgeries are estimated to cost an average of \$15,000 per case and unfortunately, with a malignancy rate of only 20%-30% (i.e., 70%-80% benign), the majority of these surgeries are unnecessary. Following thyroid removal, patients will need thyroid replacement therapy for the rest of their lives taking thyroxine tablets to keep metabolism in check. Patients will also require consistent monitoring of hormone levels, requiring blood tests to check therapy efficacy and check if any changes to the treatment regimen are necessary. This unnecessary financial and patient burden creates the need for a diagnostic tool to correctly stratify these indeterminate results, with Veracyte's Afirma GEC improving the diagnostic paradigm.

**Veracyte's Solution
To Indeterminate
Thyroid Nodule
Results (Paradigm
Shift)**

Veracyte developed its Afirma GEC test to answer the indeterminate thyroid nodule question, providing cytopathologists and patients with actionable information. The majority of Veracyte's thyroid FNA samples come from community hospitals, with 3rd party Thyroid Cytology Partners or TCP handling the staining and initial cytological FNA sample evaluation and Veracyte running GEC on indeterminate results. TCP is co-located in Veracyte's Austin, TX lab and receives a fixed price per thyroid FNA cytology sample, although TCP reimburses Veracyte for a portion of facility rent and operating costs. Veracyte utilizes its Austin, TX facility to process samples for cytology review, with FNA samples found indeterminate by TCP shipped to its South San Francisco facility for GEC testing. Veracyte pays TCP ~\$72 per cytology sample it processes and generates ~20%-30% gross margin on this volume. Veracyte also accepts samples directly from academic centers, with these more sophisticated centers typically performing initial cytopathology evaluation and any indeterminate results reflexed to Veracyte for GEC testing. We would note, volumes from academic centers have been rising and were the primary driver behind Veracyte increasing its anticipated GEC penetration into its thyroid FNA samples from 18%-20% to 20%-22% in conjunction with its recently reported 1Q14 results. Importantly, Afirma GEC lowers the amount of unnecessary surgeries performed on patients indeterminate, with ~50% of initially indeterminate samples re-classified as benign. Historically, 74% of indeterminate thyroid FNAs reflex to surgery. However, using GEC, the surgery rate dropped to 7.6% in benign FNA tumors, representing an 89.7% reduction in surgical procedures in benign thyroid FNAs. All in, Veracyte estimates usage of Afirma GEC lowers overall costs by ~\$2,600 per test run (including test cost). Our updated analysis applying a higher surgical cost, the recent GEC list price increase to \$4,875 (assuming ASP of \$4,144, 15% discount to list), the cost of hormone therapy (estimated \$5,000 over patient life span) and a more conservative assumption that 100% of GEC suspicious results reflex to surgery, suggests a savings of \$2,058 per GEC, slightly lower than management's \$2,600, but still representing a compelling economic argument, in our opinion (see Exhibit 4). Encouragingly, Afirma GEC is proving to be very sticky with its physician base, with 85% of the greater than 500 doctors shipping at least 15 FNAs to Veracyte in 2011-2012 continuing to use the service in 2013. We would note, Veracyte increased its GEC list price to \$4,875 in January 2014 (was \$4,275), which could provide a tailwind to F2014 top-line growth.

Exhibit 4

GEC HEALTHCARE SAVINGS ANALYSIS

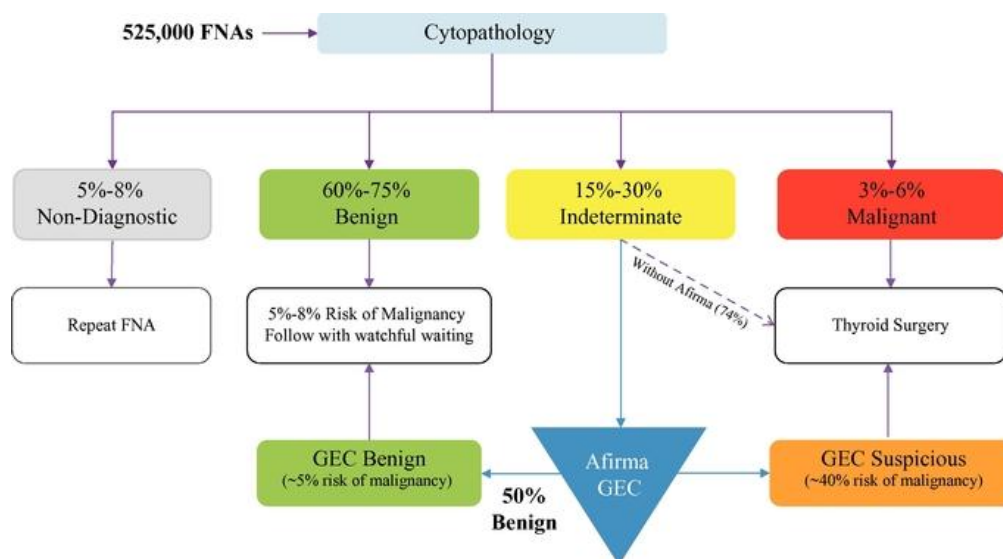
Indeterminate thyroid nodule costs before GEC	
Thyroid FNAs	525,000
Indeterminate Percentage	16.0%
Indeterminate FNAs	84,000
Reflex to surgery	74.0%
Number of surgeries	62,160
Average cost per surgery	\$15,000
Estimated lifetime drug therapy costs	\$5,000
Total cost ('000s)	\$1,243,200
Indeterminate thyroid nodule costs assuming full GEC penetration	
Thyroid FNAs	525,000
Indeterminate Percentage	16.0%
Indeterminate FNAs	84,000
Less: Inadequate RNA yield/quality (10.5%)	(8,820)
Total FNA available for GEC	75,180
Afirma GEC (15% discount to list price)	\$4,144
Total GEC spend ('000s)	\$311,527
Benign GEC results (52.3%)	39,319
Benign GEC undergoing surgery	7.6%
Number of surgeries	2,988
Average cost per surgery	\$15,000
Estimated lifetime drug therapy costs	\$5,000
Total benign surgery cost ('000s)	\$59,765
GEC suspicious results (47.7%)	35,861
GEC suspicious undergoing surgery	100.0%
Number of surgeries	35,861
Average cost per surgery	\$15,000
Estimated lifetime drug therapy costs	\$5,000
Total GEC suspicious surgery cost ('000s)	\$717,217
Total GEC spend ('000s)	\$311,527
Total benign surgery cost ('000s)	\$59,765
Total GEC suspicious surgery cost ('000s)	\$717,217
Total cost ('000s)	\$1,088,509
Healthcare cost savings assuming full GEC penetration	
Total cost without GEC ('000s)	\$1,243,200
Total cost with full GEC penetration ('000s)	\$1,088,509
Total savings with GEC ('000s)	\$154,691
Total costs saved per GEC	\$2,058

Source: Company Reports & Piper Jaffray Estimates

Given the large volume of thyroid FNA samples flowing through Veracyte and TCP, management's go forward strategy includes additional expansion into tangential endocrinology opportunities. Consistent with this strategy, Veracyte recently introduced its Afirma Malignancy Classifiers products, including a test for treatment guidance in medullary thyroid (MTC) and other rare, potentially aggressive, thyroid cancers as well as an assay for BRAF gene mutation status. The Afirma Malignancy Classifiers for MTC will be automatically included in any GEC going forward (indeterminate cytology) and is also available as a separate test for FNAs determined malignant by cytopathology (list price: \$975). Veracyte's BRAF test is available for GEC suspicious or malignant FNAs, with a list price of \$475. Given Veracyte's existing reach into the endocrinologist office, we view add on opportunities leveraging its current channel as a high value strategy.

Exhibit 5

THYROID NODULE DIAGNOSTIC EVALUATION WITH AFIRMA GEC



Source: Company Reports

Thyroid Nodule Testing Market

In 2011, there were an estimated 525,000 thyroid FNAs performed in the U.S., increasing significantly from the ~250,000 performed in 2006 (CAGR of 16%). Not surprisingly, the number of thyroid nodule surgeries has also been increasing, growing from ~100,000 in 2006 to ~135,000 in 2011. The presence of thyroid nodules increases with age and are present in 10% of the adult population, with the aging U.S. population contributing to the increasing rate of thyroid FNAs over recent years. Veracyte estimates its addressable thyroid FNA annual U.S. market opportunity is ~\$500 million, comprised of \$100 million in cytology, \$350 million in Afirma GEC performed on indeterminate thyroid FNA cytology samples and \$40 million in Afirma Malignancy Classifiers. Afirma GEC represents a \$300 million OUS market, translating into an \$800 million global thyroid nodule market opportunity. We estimate Veracyte is 15% (F2014) penetrated into the domestic GEC opportunity and based on our expectations for continued favorable private payer coverage decisions we are modeling continued progress penetrating the U.S. thyroid nodule market. Internationally, we anticipate steady progress as Veracyte launches Afirma GEC into additional global markets, although we anticipate the bulk of Veracyte's business to remain domestic for the foreseeable future.

Reimbursement

Veracyte has leveraged its clinical and analytical validation studies as well as its compelling economic proposition into multiple coverage decisions for its Afirma GEC test. Specifically, Veracyte has coverage decisions in place with several large private payers including UnitedHealthcare (March 2013), Aetna (June 2013), Humana (July 2013), Cigna (December 2013) as well as reimbursement in place with Medicare. Despite having favorable coverage decisions, not all of these payers have contracted reimbursement rates, with Aetna, Cigna, Humana and UnitedHealthcare all fitting into this category. Reimbursement levels remain consistent with these payers, although this does introduce the potential for reimbursement rate changes with these important payers. For Medicare, Veracyte continues to bill under the “Z-code” originally issued by Medicare Administrative Contractor (MAC) Palmetto, although its MAC changed to Noridian in September 2013. We would note, there has been no change to CMS reimbursement levels following the MAC transition to Noridian, although management has noted some payment delays and a slower payment cycle in general following the switch.

Additionally, Veracyte recently received a favorable coverage decision from its first Blue Cross/Blue Shield plan (Premiera Blue Cross); we view traction with this important association as an important driver of GEC volume and revenue going forward (37 separate BCBS companies, covering ~100 million lives). All in, Veracyte management describes favorable coverage decisions in place with payers representing ~125 million covered lives, although our analysis (see below) uncovered a slightly higher number (129 million).

Afirma reimbursement is comprised of two components, routine cytology and in the case of an indeterminate result, GEC. The overwhelming majority of samples are billed for routine cytology, with Veracyte filing claims for the technical and professional components under traditional CPT codes (88173). For GEC, Veracyte uses unique or miscellaneous CPT codes for billing and continues to bill CMS under the Z-code issued originally by Palmetto.

Veracyte’s Afirma GEC was added to National Comprehensive Cancer Network (NCCN) guidelines in 2013 and we view the potential addition to American Thyroid Association (ATA) guidelines (anticipated June 20, 2014) as a potential catalyst for additional favorable private payer coverage decisions.

Exhibit 6

GEC COVERAGE DECISIONS

			Medical Policy			Updated: June 2014	
ID	Managed Care Entity	Membership Est. (mm's)	Covered	Not Covered	NA	Effective Date	Comments
1	Palmetto GBA	49.3	X			Jan-12	Medically necessary for assessing samples from thyroid nodules that are indeterminate. Test also reimbursed for thyroid nodules with a history or characteristics suggesting malignancy.
2	United	33.8	X			Apr-13	Medically necessary for assessing samples from thyroid nodules that are indeterminate. The policy does not mention malignancy classifiers; assume no payment for this extra procedure.
3	WellPoint	31.1		X		Nov-13	Not medically necessary and considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
4	Aetna	19.6	X			Jun-13	Medically necessary for assessing samples from thyroid nodules that are indeterminate. The policy does not mention malignancy classifiers; assume no payment for this extra procedure.
5	Cigna	13.7	X			Dec-13	Medically necessary for assessing samples from thyroid nodules that are indeterminate. The policy does not mention malignancy classifiers; assume no payment for this extra procedure.
6	HCSC	10.1		X		Aug-12	Not medically necessary and considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
7	Kaiser Permanente	7.1			X		Medical policies not available for review
8	Humana	6.8	X			Jan-14	Medically necessary for assessing samples from thyroid nodules that are indeterminate. Multiple tests are not covered. The policy does not mention malignancy classifiers; assume no payment for this extra procedure.
9	Independence BC	5.7		X		Jan-14	Experimental and investigational
10	BCBS of Michigan	4.4		X			No coverage policy, assume no coverage
11	Highmark	4.1		X		Apr-14	Experimental and investigational
12	Highmark	4.0		X		Jun-13	Experimental and investigational
13	Florida Blue	3.3		X		Feb-14	Experimental and investigational
14	BCBS of North Carolina	2.9		X		Aug-13	Considered investigational to use gene expression for molecular marker evaluation of thyroid nodules. Next review 8/2014
15	Horizon BCBS of NJ	2.8		X		Jun-13	Considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
16	EmblemHealth	2.6	X			Apr-14	Covered, no additional information given. Assume MTC is not reimbursed.
17	CareFirst	2.6		X		Apr-14	Not medically necessary and considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
18	BCBS of Tennessee	2.3		X		Oct-13	Not medically necessary and considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
19	BCBS of Alabama	2.3		X		Apr-13	Considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
20	BS of California	2.3		x			No coverage policy, assume no coverage
21	BCBS of Massachusetts	2.1		X		May-13	Considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
22	BCBS of Minnesota	2.0		X			No coverage policy, assume no coverage
23	Molina Healthcare	2.0			X		Medical policies not available for review
24	Regence	1.9		X		Jul-13	Gene expression classifiers for FNA indeterminate, atypical, or suspicious results are investigational
25	Premera	1.4	X			Apr-14	Medically necessary for assessing samples from thyroid nodules that are indeterminate, atypical, or suspicious. The policy does not mention malignancy classifiers; assume no payment for this extra procedure.
26	Wellmark BCBS	1.4	X			Mar-14	Medically necessary for assessing samples from thyroid nodules that are indeterminate. The policy does not mention malignancy classifiers; assume no payment for this extra procedure.
27	Excellus BCBS	1.4		x			No coverage policy, assume no coverage
28	BCBS of South Carolina	1.3		X		Feb-14	Considered investigational to use gene expression for molecular marker evaluation of thyroid nodules. Next review 4/2015
29	WellCare	1.2		X			No coverage policy, assume no coverage
30	Medical Mutual of Ohio	1.2		X			No coverage policy, assume no coverage
31	Health Net	1.2	X			Jun-13	Medically necessary for assessing samples from thyroid nodules that are indeterminate. The policy does not mention malignancy classifiers; assume no payment for this extra procedure.
32	Medica	1.1		X		May-14	Not medically necessary and considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
33	BCBS of Arizona	1.0		X		May-14	Considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
34	BCBS of Louisiana	1.0		X		Dec-12	Coverage policy retired, no new policy published. Assume no coverage
35	Harvard Pilgrim	0.9		X			No coverage policy, assume no coverage
36	BCBS of Mississippi	0.8		X		Jan-13	Considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
37	Arkansas BCBS	0.8		X			No coverage policy, assume no coverage
38	BCBS of Kansas City	0.8		X		Mar-14	Considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
39	Capital BC	0.8		X			No coverage policy, assume no coverage
40	Tufts Health Plan	0.8		X		Apr-13	Experimental and investigational
41	BCBS of Kansas	0.7		X		Mar-13	Considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
42	HMSA (BCBS of Hawaii)	0.6			X		Medical policies not available for review
43	BC of Idaho	0.5		X		Jan-12	Considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
44	BCBS of Nebraska	0.5		X		Aug-13	Not scientifically validated
45	BCBS of Oklahoma	0.5			X		Medical policies not available for review
46	Group Health Cooperative	0.5		X		Jan-14	Insufficient evidence to show that this service is as safe as standard services and/or provides better long-term outcomes than current standard services
47	BCBS of Rhode Island	0.5		X			No coverage policy, assume no coverage
48	BCBS of Western NY	0.5			X		Medical policies not available for review
49	BC of NE Pennsylvania	0.4		X		Jul-13	Considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
50	Centene	0.4		X			No coverage policy, assume no coverage
51	BCBS of North Dakota	0.4		X			No coverage policy, assume no coverage
52	BCBS of Montana	0.2		X		Aug-12	Considered investigational, experimental, and unproven to use gene expression for molecular marker evaluation of thyroid nodules.
53	WPS	0.2		X			No coverage policy, assume no coverage
54	BS of NE NY	0.1			X		Medical policies not available for review
55	BCBS of Vermont	0.1		X			No coverage policy, assume no coverage
56	BCBS of Wyoming	0.1		X		Jan-13	Considered investigational to use gene expression for molecular marker evaluation of thyroid nodules.
Source: Medical policy guidelines sourced from managed care websites and Piper Jaffray estimates							
Source: Membership information sourced from managed care websites, SEC filings and Piper Jaffray estimates							
Note: Excluding Palmetto, membership estimates have been adjusted based on Piper Jaffray estimates to exclude Medicare, MA and PDP enrollment figures							

Source: Company reports, Piper Jaffray estimates

Pipeline Opportunities

Veracyte is targeting additional markets for its molecular cytology solutions, with an initial lung product expected to launch in 2016. Veracyte's pipeline focus is on interstitial lung disease or ILD, with the company currently working on late stage biomarker discovery to support a product launch. Veracyte anticipates its initial ILD product will aid in the diagnosis of idiopathic pulmonary fibrosis (IPF), a condition causing deep lung tissue scarring, impacting the organ's ability to successfully supply organs with sufficient oxygenated blood. Current IPF diagnostics are inadequate, with less invasive bronchoscopy and/or high-resolution CAT scans typically falling short for a definitive IPF diagnosis, while more invasive diagnostic methods (e.g., thoracic surgery) introduce executional and co-morbidity risks, creating the need for a sensitive minimally invasive alternative. Veracyte estimates the broad ILD opportunity represents a \$500 million market overall. Additionally, Veracyte has identified multiple other potential markets for its molecular cytology technology, with skin, esophagus, liver, breast, pancreas, prostate, kidney, bladder, ovary, testicular, ovary and endometrial all representing attractive longer-term growth opportunities. We model very modest ILD revenue (\$1.4 million in F2016) initially, with successful pipeline launches representing potential upside to our estimates.

Sales & Marketing

Veracyte utilizes 14 direct sales force reps to target the ~3,500 domestic endocrinologists specializing in the treatment and diagnosis of thyroid diseases, carving the U.S. into three regions and 14 territories. We believe Veracyte can fully address its domestic market with 30-40 direct sales reps. Additionally, Veracyte has a co-marketing arrangement with Genzyme, where Veracyte leverages the Genzyme sales reps specializing in endocrinology (est. 15-30 reps) to penetrate the endocrinologist market. As background, Genzyme developed and currently markets Thyrogen, an adjunctive diagnostic agent utilized as a follow-up in patients with well differentiated thyroid cancer and following thyroid removal to destroy any remaining thyroid tissue. Veracyte's relationship with Genzyme began in January 2012, with the arrangement providing Genzyme co-exclusive marketing rights to Afirma in the U.S. and 40 other countries in exchange for a \$10 million upfront fee (amortized in Sales & Marketing over 4-years, recorded as a S&M expense offset) and an initial 50% co-marketing fee on Afirma revenue. The Genzyme co-marketing fee declined to 40% in January 2013, decreasing to 32% on March 1, 2014, with the current 32% level representing the go forward rate. Importantly, either party can terminate the co-marketing arrangement for any reason with 6-months advanced notice, although Veracyte will be responsible for repaying Genzyme \$4 million of the upfront fee if terminating in 2014 or \$3 million in 2015, dropping to zero after January 2016. We view the Genzyme relationship as mutually beneficial, although given the high co-marketing fee (32%) we would not be surprised to see Veracyte bring its selling process completely in-house when the business reaches critical mass.

Veracyte is currently launching its Afirma GEC assay OUS, with Brazil representing the company's initial international market. Veracyte entered into a partnership with Fleury Health and Medicine, a leading diagnostic lab offering FNA biopsy testing and cytology services in Brazil. We would note, both Genzyme and Fleury Health will be actively promoting Afirma in Brazil. There are an estimated 100,000 thyroid FNAs performed annually in Brazil and applying the 15%-30% indeterminate rate suggests a \$30 million-\$60 million Brazilian GEC opportunity. Veracyte is expected to announce additional OUS Afirma launches in 2014, targeting markets where Genzyme has a strong presence and minimal logistical hurdles exist.

Management

We view management's diagnostics background as a solid foundation for successfully penetrating the thyroid FNA market and commercializing molecular cytology pipeline products. We are particularly impressed with management's execution since launching Afirma and anticipate ongoing hitting/beating internal and external targets going forward.

Bonnie Anderson, Chief Executive Officer: Bonnie Anderson has served as Chief Executive Officer of Veracyte since February 2008. Previously, Ms. Anderson was an independent strategic consultant and provided strategic consulting services to Veracyte before joining the company. Ms. Anderson's background also includes Vice President at Beckman Coulter from 2000-2006.

Shelly Guyer, Chief Financial Officer: Shelly Guyer joined Veracyte in April 2013 as its Chief Financial Officer. Previously, Ms. Guyer was Chief Financial Officer of medical device company iRhythm Technologies from 2008-2012. Ms. Guyer's background also includes experience in healthcare investment banking.

Christopher Hall, Chief Commercial Officer: Christopher Hall has served as Veracyte's Chief Commercial Officer since joining the company in March 2010. Previously, Mr. Hall was Chief Business Officer of Celera Diagnostics from 2008-2010 and served in a variety of executive roles at Berkeley HeartLab prior to it being acquired by Celera.

Financials

Income Statement

Relative to Veracyte's 2014 revenue guidance of \$38-\$43M (comprised of 76,000-83,000 FNA samples), we are modeling F2014 revenue of \$40.9 million, reflecting expectations for a 53.4% increase in FNA samples received to 76,192 and a 20.8% GEC penetration rate. Our F2014 estimate includes a modest OUS contribution, with our forecast including \$0.9M in Brazilian revenue. Going forward, we anticipate OUS to become a more significant contributor as Veracyte expands into additional geographies, although we are keeping our overall OUS expectations modest initially. We would note, Veracyte recognizes the majority of its revenue on a cash basis (~68% of 1Q14 revenue), with sales recognized when notified of intention to pay by a private payer or receipt of cash, unless a predictable pattern of collectability and/or a contracted reimbursement rate has been established (e.g. Medicare). We anticipate the percentage of revenue recognized on an accrual basis to increase steadily over time as Veracyte receives favorable private payer coverage decisions and view collection on its revenue backlog (\$48.5 million as of 3/31/14) as a source of potential upside to our forward projections. For F2015, our forecast includes a 53.3% yoy thyroid FNA increase to 116,806 combined with a 21.6% GEC penetration rate, translating into a 88.6% year over year revenue increase to \$77.1 million. In 2016, we are modeling 52.3% top-line growth to \$117.4M, reflecting a 23.0% year over year thyroid FNA volume increase to 143,722 and a 22.5% GEC penetration rate. We would note, Brazil is the only OUS market currently in our estimate, although management has described plans to launch into additional OUS markets in F2014. We see multiple sources of upside to our forward estimates, with inclusion in ATA guidelines representing a potential private payer catalyst and OUS traction ahead of our modest expectations a longer-term source of potential upside.

For gross margin, we are modeling 50.8% in F2014, increasing to 54.0% in F2015, growing to 59.4% in F2016, reflecting increasing thyroid FNA and GEC volumes. For sales & marketing, we are forecasting 22.3% of revenue in F2014 and 14.2% in F2015 as Veracyte builds its commercial infrastructure to drive GEC market penetration. We are modeling sales & marketing leverage in F2015 and F2016 as the sales reps added in F2014 gain traction and fully ramp within their territories. We anticipate general & administrative leverage going forward, as expenses associated with being a public company are offset by

the rapid top-line growth. For the bottom line, we are modeling a loss per share of (\$1.30) in F2014, followed by (\$0.97) in F2015 and (\$0.30) in F2016.

Balance Sheet and
Cash Flow Statement

Following Veracyte's 4Q13 capital raise (\$59.2M in net proceeds), we are forecasting a 2Q14 net cash position of \$56.8 million. We are modeling DSOs in the 52-61 day range, DIO in the 56-61 days range and days payable to be in the 72-66 day range.

We are modeling operating cash flow of (\$26.9) million and (\$22.5) million in F2014 and F2015, respectively. Our forecast includes F2014 incremental working capital of \$0.3 million and \$0.7 million in capital expenditures, translating into (\$27.9) million in free cash flow. For F2015, we are modeling \$1.8 million in incremental working capital combined with \$0.8 million in capital expenditures, yielding (\$25.1) million in free cash flow. Given our expectations for continued negative cash flow as Veracyte builds its business and furthers its pipeline, we are currently forecasting an additional equity raise of \$40 million in 1Q15 (~\$37 million in net proceeds).

Risks

Competition

Asuragen, a CLIA lab offering molecular diagnostic testing services launched miRinform to aid in the classification of indeterminate thyroid FNAs, although recent data suggests mixed test performance. Veracyte also faces competition in BRAF, with several companies (e.g., Quest Diagnostics, LabCorp) also offering BRAF testing services. Rosetta Genomics recently announced a collaboration with Moffitt Cancer Center to develop a microRNA-based test for thyroid neoplasia, with the assay extracting miRNA from FNA samples to determine malignant vs. benign modules. Rosetta's assay is expected to launch before the end of 2015 and given the early development stage it is unclear how competitive this product will be with Veracyte's Afirma GEC.

Market Adoption

Our forward estimates are contingent on continued progress penetrating the thyroid FNA market. Penetration or customer retention rates below our expectations represent a risk to our forward estimates.

New Product
Adoption

Veracyte is developing additional molecular cytology tests, entering lung disease in 2016 with the launch of an assay to aid diagnosis of idiopathic pulmonary fibrosis or IPF. Failure to successfully commercialize pipeline products represents a risk for Veracyte, although our model includes a modest pipeline contribution (\$1.4 million in 2016).

Profitability

We are forecasting negative operating income and net losses for Veracyte through 2016. Failure to hit our top-line projections or higher-than-expected operating expenses could delay profitability.

FDA Oversight of
LDTs

Lab developed tests or LDTs are regulated under by CMS under CLIA. FDA has described interest in potential oversight of LDTs, with the agency taking a "risk based" approach in determining where to initially focus. We suspect cancer diagnostics would likely be at the top of the list from a potential regulatory perspective, although given the amount of work necessary to implement combined with agency resource constraints we view potential FDA regulation of LDTs as a long-term risk.

Revenue
Concentration

Certain payers represent a large percentage of Veracyte's revenue base, with CMS and UnitedHealthcare representing 32% and 18% of 2013 revenue (50% combined), respectively. We anticipate these payers to represent a less prominent component of Veracyte's revenue mix as the company gains favorable coverage decisions from additional payers, but any disruption or change in reimbursement rates from any of Veracyte's large payers represents a risk to our forward projections.

Veracyte

Income Statement

Fiscal Year End: December 31

(\$ in Thousands)

Updated as of 6/19/2014

William Quirk 612-303-6858

Piper Jaffray & Co.

	2013A				2014E				2015E				Annual				
	Mar Qtr 1 A	Jun Qtr 2 A	Sep Qtr 3 A	Dec Qtr 4 A	Mar Qtr 1 A	Jun Qtr 2 E	Sep Qtr 3 E	Dec Qtr 4 E	Mar Qtr 1 E	Jun Qtr 2 E	Sep Qtr 3 E	Dec Qtr 4 E	2012A	2013A	2014E	2015E	2016E
Product Revenue	4,384	5,068	5,594	6,838	7,476	9,438	10,506	13,470	16,033	18,292	19,873	22,913	11,628	21,884	40,889	77,111	117,415
Total Revenue	4,384	5,068	5,594	6,838	7,476	9,438	10,506	13,470	16,033	18,292	19,873	22,913	11,628	21,884	40,889	77,111	117,415
Cost of Goods Sold	2,773	3,231	3,132	3,471	3,607	4,635	5,206	6,654	7,815	8,689	9,038	9,916	7,584	12,607	20,102	35,459	47,622
COGS - Product	2,773	3,231	3,132	3,471	3,607	4,635	5,206	6,654	7,815	8,689	9,038	9,916	7,584	12,607	20,102	35,459	35,180
Gross Profit	1,611	1,837	2,462	3,367	3,869	4,803	5,300	6,815	8,218	9,603	10,835	12,997	4,044	9,277	20,787	41,652	69,793
Operating Expenses:																	
Research & Development	2,010	1,902	2,028	1,870	2,126	2,265	2,311	2,425	2,565	2,744	2,782	2,864	6,608	7,810	9,127	10,955	13,156
Sales & Marketing	2,703	2,615	3,291	3,931	4,336	5,474	6,022	7,376	8,094	9,037	9,597	10,839	8,447	12,540	23,208	37,568	47,274
General & Administrative	2,791	2,737	3,244	3,328	3,982	4,153	4,097	4,041	4,249	4,390	4,372	4,468	7,918	12,100	16,273	17,479	16,875
Total Operating Expense	7,504	7,254	8,563	9,129	10,444	11,892	12,431	13,842	14,908	16,171	16,751	18,171	22,973	32,450	48,608	66,002	77,305
Operating Income (Loss)	(5,893)	(5,417)	(6,101)	(5,762)	(6,575)	(7,088)	(7,131)	(7,027)	(6,691)	(6,569)	(5,916)	(5,174)	(18,929)	(23,173)	(27,821)	(24,350)	(7,512)
Interest Income (Expense)	0	(5)	(126)	(97)	(111)	(138)	(157)	(174)	(190)	(117)	(130)	(145)	2	(228)	(581)	(581)	(670)
Other Income (Expense)	(1,002)	(1,068)	(76)	(33)	12	0	0	0	0	0	0	0	278	(2,179)	12	0	0
Pretax Income (Loss)	(6,895)	(6,490)	(6,303)	(5,892)	(6,674)	(7,226)	(7,288)	(7,201)	(6,880)	(6,686)	(6,046)	(5,319)	(18,649)	(25,580)	(28,390)	(24,931)	(8,182)
Provision for Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Income (Loss) - Reported	(6,895)	(6,490)	(6,303)	(5,892)	(6,674)	(7,226)	(7,288)	(7,201)	(6,880)	(6,686)	(6,046)	(5,319)	(18,649)	(25,580)	(28,390)	(24,931)	(8,182)
Non-Reoccurring Items	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Income (Loss) - Ongoing	(6,895)	(6,490)	(6,303)	(5,892)	(6,674)	(7,226)	(7,288)	(7,201)	(6,880)	(6,686)	(6,046)	(5,319)	(18,649)	(25,580)	(28,390)	(24,931)	(8,182)
Diluted EPS (Reported)	(\$9.04)	(\$7.53)	(\$6.59)	(\$0.42)	(\$0.32)	(\$0.33)	(\$0.33)	(\$0.32)	(\$0.28)	(\$0.26)	(\$0.23)	(\$0.20)	(\$28.66)	(\$6.19)	(\$1.30)	(\$0.97)	(\$0.30)
Diluted EPS (Ongoing, Inc. SBC)	(\$9.04)	(\$7.53)	(\$6.59)	(\$0.42)	(\$0.32)	(\$0.33)	(\$0.33)	(\$0.32)	(\$0.28)	(\$0.26)	(\$0.23)	(\$0.20)	(\$28.66)	(\$6.19)	(\$1.30)	(\$0.97)	(\$0.30)
Avg. Share Outstanding, Diluted	763	862	956	13,944	21,148	21,648	22,148	22,648	24,837	25,337	25,837	26,337	650	4,131	21,898	25,587	27,512
Expense Variables:																	
Cost of Goods Sold (Product)	63.3%	63.7%	56.0%	50.8%	48.3%	49.1%	49.6%	49.4%	48.7%	47.5%	45.5%	43.3%	65.2%	57.6%	49.2%	46.0%	40.6%
Cost of Goods Sold (Royalties/License)	NM	NM	NM	NM	NM	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	NM	NM	NM	NM	NM
Research & Development	45.8%	37.5%	36.3%	27.3%	28.4%	24.0%	22.0%	18.0%	16.0%	15.0%	14.0%	12.5%	56.8%	35.7%	22.3%	14.2%	11.2%
Sales & Marketing	61.7%	51.6%	58.8%	57.5%	58.0%	58.0%	57.3%	54.8%	50.5%	49.4%	48.3%	47.3%	NM	35.7%	22.3%	14.2%	11.2%
General & Administrative	63.7%	54.0%	58.0%	48.7%	53.3%	44.0%	39.0%	30.0%	26.5%	24.0%	22.0%	19.5%	68.1%	55.3%	39.8%	22.7%	14.4%
Total Operating Expenses	171.2%	143.1%	153.1%	133.5%	139.7%	126.0%	118.3%	102.8%	93.0%	88.4%	84.3%	79.3%	197.6%	148.3%	118.9%	85.6%	65.8%
Effective Interest Rate, Debt	0.0%	0.0%	0.0%	0.0%	2.2%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	6.1%	0.0%	0.3%	1.3%	1.0%	1.2%
Ongoing 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%	0.0%	0.0%	0.0%
Margin Analysis:																	
Gross Margin (Product Sales)	36.7%	36.3%	44.0%	49.2%	51.7%	50.9%	50.4%	50.6%	51.3%	52.5%	54.5%	56.7%	34.8%	42.4%	50.8%	54.0%	59.4%
Operating Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Pretax Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Net Income Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
YoY Growth Rates:																	
Product Revenue	298.6%	204.5%	173.5%	153.4%	170.5%	186.2%	187.8%	197.0%	214.5%	193.8%	189.2%	170.1%	NM	88.2%	86.8%	88.6%	52.3%
Net Income (Ongoing)	62.3%	40.3%	27.6%	21.8%	-3.2%	11.4%	15.6%	22.2%	3.1%	-7.5%	-17.0%	-26.1%	NM	37.2%	11.0%	-12.2%	-67.2%
EPS (Ongoing)	32.6%	6.3%	-12.0%	-94.2%	-96.5%	-95.6%	-95.0%	-24.8%	-12.2%	-21.0%	-28.9%	-36.5%	NM	-78.4%	-79.1%	-24.8%	-69.5%
Other Data:																	
Days Sales Outstanding	NM	71.4	46.6	61.0	58.2	56.2	60.8	52.1	52.1	45.6	42.4	42.9	NM	19.1	18.4	13.4	12.9
EBITDA Per Share	(\$7.34)	(\$5.99)	(\$6.01)	(\$0.40)	(\$0.30)	(\$0.31)	(\$0.31)	(\$0.30)	(\$0.26)	(\$0.25)	(\$0.22)	(\$0.19)	(\$27.68)	(\$5.34)	(\$1.22)	(\$0.91)	(\$0.24)
Free Cash Flow Per Share	(\$8.09)	(\$3.85)	(\$5.39)	(\$0.25)	(\$0.32)	(\$0.35)	(\$0.32)	(\$0.28)	(\$0.32)	(\$0.21)	(\$0.23)	(\$0.22)	(\$29.05)	(\$4.92)	(\$1.28)	(\$0.98)	(\$0.10)
Net Debt (Cash) Per Share	(\$9.42)	(\$18.54)	(\$11.17)	(\$4.76)	(\$2.81)	(\$2.40)	(\$2.04)	(\$1.72)	(\$2.74)	(\$2.48)	(\$2.20)	(\$1.95)	(\$21.72)	(\$16.12)	(\$1.78)	(\$2.01)	(\$1.82)
S&M Expenses																	
% of Revenue Shared With Genzyme	40%	40%	40%	40%	37%	32%	32%	32%	32%	32%	32%	32%	50%	40%	32%	30%	30%
Genzyme Promotion Expense	1,754	2,027	2,238	2,735	2,791	2,973	3,291	4,144	4,888	5,562	6,020	6,944	5,814	8,754	13,198	23,413	35,051
Genzyme Fee Amortized	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)	(625)					
Core S&M Expense	1,574	1,213	1,678	1,821	2,170	2,501	2,732	3,233	3,207	3,475	3,577	3,895	5,133	6,286	10,636	14,154	12,223
Total S&M Expense	2,703	2,615	3,291	3,931	4,336	5,474	6,022	7,376	8,094	9,037	9,597	10,839	8,447	12,540	23,208	37,568	47,274
Core S&M Expense % of Revenue	36%	24%	30%	27%	29%	27%	26%	24%	20%	19%	18%	17%	44%	29%	26%	18%	10%

Current disclosure information for this company is located at

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Notes: The boxes on the Rating and Price Target History chart above indicate the date of the Research Note, the rating, and the price target. Each box represents a date on which an analyst made a change to a rating or price target, except for the first box, which may only represent the first Note written during the past three years.

Legend:

I: Initiating Coverage
R: Resuming Coverage
T: Transferring Coverage
D: Discontinuing Coverage
S: Suspending Coverage
OW: Overweight
N: Neutral
UW: Underweight
NA: Not Available
UR: Under Review

Distribution of Ratings/IB Services Piper Jaffray				
Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [OW]	355	61.85	87	24.51
HOLD [N]	204	35.54	21	10.29
SELL [UW]	15	2.61	0	0.00

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Analyst Certification — William R. Quirk, CFA, Sr Research Analyst — David C. Clair, CFA, Research Analyst

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