

# Veracyte, Inc.

## **Initiating Coverage With an Outperform Rating**

**First-mover advantage in thyroid cancer market gives Veracyte access to large, growing market opportunity.** Through its proprietary molecular gene expression assay (Afirma GEC), Veracyte can reclassify roughly 50% of indeterminate cytopathology results as benign from thyroid fine needle aspirates (FNAs), thereby avoiding unnecessary surgery in those cases since patients are switched to a routine monitoring paradigm (as is the standard of care in benign FNA cytology). The Afirma GEC (Gene Expression Classifier) is the first molecular cytology solution within thyroid cancer, which is the fastest-growing cancer in the United States at 6% to 7% annually. The company's target market is the 3,500 endocrinologists operating in the United States, which translates to an \$800 million market opportunity (including international).

Clinical validation, guideline recommendations, and tangible cost savings have yielded rapid payer adoption and volume trajectory. Veracyte's Afirma GEC assay is supported through six peer-reviewed publications (including clinical validation and utility studies). In 2012, for the first time the National Comprehensive Cancer Network (NCCN) recommended use of a molecular assay for patients with indeterminate cytology in thyroid cancer. Building clinical validation and utility support has yielded positive payer coverage decisions (by Medicare, UnitedHealthcare, Aetna, and Humana) and rapid physician adoption. We expect this growth can continue; we project revenue to expand from \$22 million in 2013 to \$74 million in 2015.

**Potential upside in model should drive upward earnings revisions.** Upside to our numbers could come from better-than-expected market penetration, a switch to accrual accounting once there is sufficient collection history with individual payers, international expansion (aided by the company's exclusive sales-and-marketing agreement with Genzyme), and new test launches. We believe switching to accrual accounting could pull forward roughly \$5 million to \$10 million in revenue annually.

**Stock thoughts and valuation.** The stock is trading at an enterprise value of 3.2 times projected sales (discounting 2015 revenue by 15%), versus 3.5 times for the comp group. The company's first-mover advantage, rapid coverage adoption, clinical validity, and potential for international expansion provide strong opportunities for growth. Thus, we are initiating coverage with an Outperform rating.

**Risks include:** 1) potential for reimbursement pressure, 2) reliance on business partner Genzyme and thyroid cytology partners, and 3) increased competition.

Veracyte is a diagnostics company that specializes in the field of molecular cytology transforming patient care and aims to save the healthcare system unnecessary costs from overtreatment of diseases.

Amanda Murphy, CFA +1 312 364 8951 amurphy@williamblair.com JP McKim +1 312 364 8991 jpmckim@williamblair.com November 26, 2013 **Basic Report** (13-139)

Stock Rating: Outperform
Company Profile: Aggressive Growth

Symbol: VCYT (NASDAQ)
Price: \$11.36 (52-Wk.: \$11-\$14)
Market Value (mil.): \$264
Fiscal Year End: December
Long-Term EPS Growth Rate: NM
Dividend/Yield: None

Estimates	2012A	2013E	2014E
EPS FY	-\$0.89	-\$1.19	-\$1.21
Sales (mil.)	\$11.6	\$21.8	\$41.5
Valuation			

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0.057

EU/Caloc

EV/S	saies	17.0X	9.0x	4.8X
Trac	ling Data			
Shar	es Outstan	ding (mil.)		21.1
Floa	t (mil.)			6.9
Aver	age Daily V	olume		75,000

Financial Data	
Book Value Per Share	2.5x
Enterprise Value (mil.)	\$200
EBITDA (mil.)	-\$23

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# **Executive Summary**

Incorporated in 2006, Veracyte is a CLIA-based laboratory located in South San Francisco. The company's business model is to identify areas within healthcare where there is overtreatment and then develop and commercialize a diagnostic solution to help reduce healthcare costs to the system; thus, the company chose the name Veracyte, which translates roughly from the Latin for "truth in cells."

The company has initially focused on thyroid cancer, which is one of the fastest-growing cancers in terms of new cases (growing 6% to 7% annually), but one that has been limited in diagnostic innovation beyond morphological methods. Of the 525,000 fine needle aspirates (FNAs) performed in the United States each year, 15% to 30% are deemed indeterminate by classic cytology (e.g., irregular borders, presence of microclassifications, solidity of nodule), or blood marker levels; in other words, the pathologist cannot convincingly classify the cells as benign based on appearance. The standard of care has been typically to send patients with indeterminate cytology to surgery; however, in post-surgery analysis, 66% to 80% prove to be benign. The overtreatment of thyroid cancer for indeterminate patients costs the healthcare system more than half a billion dollars annually.

Veracyte launched its Afirma Gene Expression Classifier (GEC) test in January 2011. The Afirma GEC test is a proprietary molecular assay that measures the gene expression of 142 genes using an Affymetrix array and proprietary algorithm. Via the GEC, Veracyte is able to reclassify roughly 50% of the indeterminate cytopathology results as benign, thereby avoiding unnecessary surgery in those cases, since patients are switched to a routine monitoring paradigm (the standard of care in benign FNA cytology). Veracyte's Afirma GEC assay is supported through six peer-reviewed publications, including clinical validation and utility studies. Its marquee validation study was published in the New England Journal of Medicine in 2012; this study prospectively validated the assay in 4,500 patients. There have also been two health economics studies published on Veracyte's Afirma solution (one by Johns Hopkins), which suggest that the assay saves payers on average \$2,600 per test.

In 2012, the National Comprehensive Cancer Network (NCCN) updated its thyroid cancer guidelines to suggest that molecular assays may be useful to reclassify patients with indeterminate cytology as benign or more likely to be malignant. These guidelines were updated in 2013 to add the qualification, "if molecular testing predicts a risk of malignancy seen with a benign FNA cytology (about 5% or less), consider observation." It is our understanding that Veracyte's Afirma GEC assay is the only molecular assay available that is able to meet the latter criteria of being able to provide a negative predictive value of roughly greater than 95%.

Since the commercial launch of Afirma in January 2011, the test has also attained rapid coverage adoption, which has been in part driven by the NCCN guideline recommendation as well as building clinical validity of the GEC assay through multiple research and study publications. Relative to other genetic-based tests, Veracyte's Afirma has obtained quicker coverage from both public and private payers. Medicare announced coverage for Veracyte on January 9, 2012—one year after its launch, which is relatively rapid; most molecular diagnostic companies take 18 to 24 months to obtain Medicare coverage for a lab-developed test (LDT).

Medicare coverage has led to private payer adoption. We estimate that Afirma has coverage for about 117 million lives 11 quarters after commercial launch; Oncotype DX, a breast cancer assay, had 82 million lives during a similar time frame.

The company's target market is endocrinology (an internal medicine subspecialty that is focused on diagnosis and treatment of diseases related to hormones), which is responsible for roughly 60% of the FNAs in the United States, yielding a market size of about \$800 million (including international). Total revenue grew 340% from 2011 to 2012, to \$11.6 million. We project total revenue to grow 87% in 2013, to \$21.8 million; 90%, to \$41.5 million, in 2014; and 79%, to \$74.2 million, in 2015.

The company performs both the FNA cytology (via an exclusive relationship with independent pathology group Thyroid Cytopathology Partners) and the Afirma GEC (automatically reflexing to the GEC if the cytology is indeterminate). Our numbers assume the company is able to secure about 20% of the \$100 million FNA cytology market by 2015 and that GECs performed as a percentage of total FNA received increase from 18% to 21% over time (with the increase mostly driven by international adoption).

Upside to our numbers could come from a switch to accrual accounting as the company builds sufficient collection history with individual payers, better-than-expected market penetration (driven by additional payer coverage and international expansion), and introduction of new tests. While reimbursement is the key risk for many diagnostic services companies, as discussed in more detail below, a shift to accrual-based accounting represents upside to our model, in our view. Veracyte recognizes revenue on a cash basis, with the exception of Medicare (roughly 22% of revenue), for which it accrues revenue assuming roughly a \$3,000 to \$3,500 average selling price per Afirma GEC. Based on filings, Veracyte has \$31 million of revenue for tests already performed that it has not yet recognized. We believe switching to accrual accounting could pull forward roughly \$5 million to \$10 million in revenue annually if the company has an accrual ramp-up similar to Genomic Health.

In addition, international expansion—a \$300 million market opportunity—could become an important driver for the long-term growth of Veracyte. We believe the partnership with Genzyme is essential to adoption of the GEC outside the United States because Genzyme currently sells Thyrogen, a prescription medication used in the treatment of thyroid cancer, in 42 countries.

Lastly, Veracyte has a number of products in the pipeline, including the Afirma Malignant GEC and a test for interstitial lung disease, which we have not included in our revenue estimates. More broadly, the company is focused on identifying areas within healthcare where there is opportunity to reduce costs via improved diagnostic assays. The company has developed a core competency in extracting genomic DNA from small samples (heterogeneous, degraded genetic material, very small sample size of  $15\,\mu m$ ), applying information gleaned from surgical tissue to clinical biopsies, and optimizing methods for amplification of RNA in small quantities. The company also is proficient at performing biomarker discovery using a whole genome approach followed by development and analytical validation on a customized 3,000-marker chip and applying multidimensional, "machine-learning" algorithms employed to develop a classifier, which it can leverage in other indications.

Veracyte is trading at a 3.2 times enterprise-value-to-sales multiple (discounting 2015 estimates by 15%), which compares with other proprietary diagnostic companies at 3.5 times excluding outliers (see exhibit 1, on the following page, for comparable companies). We view the valuation as reasonable given that the company is forecast to increase revenue by greater than 70% annually through 2016. The stock has traded down 14% since the IPO on October 30, 2013. We recommend building a position at these valuation levels based on the company's first-mover advantage, rapid coverage adoption, and excellent management team with an ability to execute on long-term goals. Potential future positive catalysts for the company include recommendation in the American Thyroid Association (ATA) and American Association of Clinical Endocrinologists (AACE) guidelines as well as positive earnings results. We expect at least one of these associations to release updated guidelines in 2014, which could include use of a molecular-based diagnostic for indeterminate FNA samples. We are initiating coverage with an Outperform rating.

Exhibit 1							
Comparable	Company	Analysis					

Comparable Company / maryole									
	Market Revenue (m) Earnings								
Name	Ticker	Cap (m)	2013E	2014E	2013E	2014E	EV/Sales	Price/Sales	
Clinical Laboratories									
Quest Diagnostics Incorporated	DGX	\$8,947	\$7,142	\$7,180	\$3.92	\$4.26	1.69	1.25	
Laboratory Corporation of America Holdings	LH	\$9,086	\$5,824	\$5,984	\$7.04	\$7.66	1.93	1.53	
NeoGenomics, Inc.	NEO	\$182	\$66	\$75	\$0.04	\$0.07	2.48	2.36	
Average		\$6,072	\$4,344	\$4,413	\$3.67	\$4.00	2.04	1.71	
Proprietary Diagnostics									
Genomic Health, Inc.	GHDX	\$1,080	\$263	\$293	-\$0.05	\$0.11	3.30	3.62	
Exact Sciences Corporation	EXAS	\$763	\$4	\$27	-\$0.71	-\$0.50	8.54	9.18	
Nanostring Technologies, Inc.	NSTG	\$173	\$31	\$54	-\$2.98	-\$2.14	2.57	3.25	
Myriad Genetics, Inc.	MYGN	\$2,062	\$715	\$735	\$2.12	\$1.88	2.32	2.95	
Foundation Medicine, Inc.	FMI	\$655	\$28	\$54	-\$4.32	-\$1.62	5.81	6.55	
Veracyte, Inc.	VCYT	\$264	\$22	\$41	-\$1.19	-\$1.21	3.16	4.10	
Average		\$833	\$177	\$201	-\$1.19	-\$0.58	4.28	4.94	
Total Average		\$2,579	\$1,566	\$1,605	\$0.43	\$0.95	3.53	3.87	

Sources: Company reports, William Blair & Company, L.L.C. estimates, and FactSet

Exhibit 2 Veracyte, Inc. Valuation Analysis

2015 Scenarios								
	Bear	Base	Bull	WB Estimates				
Sales	\$70,000	\$80,000	\$90,000	\$74,222				
Cash	\$67,000	\$67,000	\$67,000	\$67,000				
Debt	\$4,826	\$4,826	\$4,826	\$4,826				
Shares	23,100	23,100	23,100	23,100				
Discount	20%	15%	10%	15%				

Bear         Base         Bull         WB Estimates           3.00x         \$168,000         \$204,000         \$243,000         \$189,266           3.25x         \$182,000         \$221,000         \$263,250         \$205,038           3.50x         \$196,000         \$238,000         \$283,500         \$220,810           3.75x         \$210,000         \$255,000         \$303,750         \$236,583           4.00x         \$224,000         \$272,000         \$324,000         \$252,355           4.25x         \$238,000         \$289,000         \$344,250         \$268,127	Enterprise Value								
3.25x       \$182,000       \$221,000       \$263,250       \$205,038         3.50x       \$196,000       \$238,000       \$283,500       \$220,810         3.75x       \$210,000       \$255,000       \$303,750       \$236,583         4.00x       \$224,000       \$272,000       \$324,000       \$252,355         4.25x       \$238,000       \$289,000       \$344,250       \$268,127		Bear	Base	Bull	WB Estimates				
3.50x       \$196,000       \$238,000       \$283,500       \$220,810         3.75x       \$210,000       \$255,000       \$303,750       \$236,583         4.00x       \$224,000       \$272,000       \$324,000       \$252,355         4.25x       \$238,000       \$289,000       \$344,250       \$268,127	3.00x	\$168,000	\$204,000	\$243,000	\$189,266				
3.75x       \$210,000       \$255,000       \$303,750       \$236,583         4.00x       \$224,000       \$272,000       \$324,000       \$252,355         4.25x       \$238,000       \$289,000       \$344,250       \$268,127	3.25x	\$182,000	\$221,000	\$263,250	\$205,038				
4.00x       \$224,000       \$272,000       \$324,000       \$252,355         4.25x       \$238,000       \$289,000       \$344,250       \$268,127	3.50x	\$196,000	\$238,000	\$283,500	\$220,810				
4.25x \$238,000 \$289,000 \$344,250 \$268,127	3.75x	\$210,000	\$255,000	\$303,750	\$236,583				
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4 FO:	4.25x	\$238,000	\$289,000	\$344,250	\$268,127				
4.50X \$252,000 \$306,000 \$364,500 \$283,899	4.50x	\$252,000	\$306,000	\$364,500	\$283,899				

Share Price								
	Bear	Base	Bull	WB Estimates				
3.00x	\$9.96	\$11.52	\$13.21	\$10.88				
3.25x	\$10.57	\$12.26	\$14.09	\$11.57				
3.50x	\$11.18	\$12.99	\$14.96	\$12.25				
3.75x	\$11.78	\$13.73	\$15.84	\$12.93				
4.00x	\$12.39	\$14.47	\$16.72	\$13.62				
4.25x	\$12.99	\$15.20	\$17.59	\$14.30				
4.50x	\$13.60	\$15.94	\$18.47	\$14.98				

Sources: Company reports and William Blair & Company, L.L.C. estimates

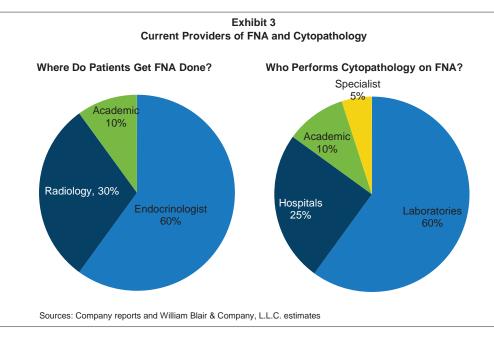
# **Investment Highlights**

Veracyte is a rapidly growing molecular cytology diagnostics company that is expected to increase revenue at an 80% to 90% rate through 2015. We forecast growth to be driven by the Afirma GEC test's first-mover advantage, clinical validity, increased payer coverage, international expansion, and product pipeline. The company is run by a skilled management team and board of directors with prior experience in commercializing genetic-based tests.

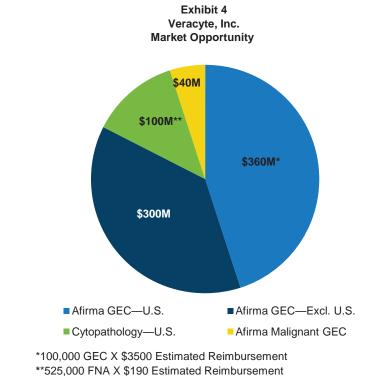
# First-Mover Advantage in Growing Thyroid Cancer Market Gives Veracyte Access to Large, Growing Market Opportunity

Veracyte's Afirma offering is a complete solution used in the diagnosis of thyroid cancer, including both FNA cytology and the Afirma GEC assay. An FNA biopsy is a routine medical procedure that is used to diagnose nodules (lumps) found around the thyroid gland; FNA biopsies can be performed in the doctor's office by an endocrinologist (roughly 60% of overall FNA volume), in a radiologist office (roughly 30% of volume), or in an academic center or hospital setting (roughly 10% of overall FNA volume).

The company's target market is the endocrinologist physician; Veracyte's goal is to capture the sample in lieu of the endocrinologist sending the sample to an independent laboratory such as LabCorp or Quest Diagnostics. Veracyte also offers an enabled model whereby Veracyte provides the GEC for academic centers/hospitals that perform the FNA cytology in-house, although this represents a small percentage of volume (roughly 5%).



There are roughly 3,500 endocrinologists in the United States, which provides a focused target market for Veracyte and Genzyme sales representatives. Assuming an average selling price of about \$3,000, this translates into a current market opportunity for the Afirma solution of about \$800 million, with \$360 million from the GEC (Gene Expression Classifier) in the United States, \$300 million from the GEC internationally, \$100 million for FNA cytology, and \$40 million for Malignant GEC.



Sources: Company reports and William Blair & Company, L.L.C. estimates

While incidence rates of thyroid cancer are relatively low, according to the American Cancer Society, thyroid cancer is the fastest-growing cancer in both men and women. The American Cancer Society estimates there will be around 60,220 new cases of thyroid cancer in the United States in 2013, 75% of which will be in women. Also, the American Cancer Society estimates there will be 1,850 thyroid cancer deaths in the United States in 2013. To put this in perspective, thyroid cancer will account for roughly 3.6% of new cancer cases and roughly 0.3% of cancer deaths this year. As a percent of new cancer diagnosis, thyroid cancer's 3.6% compared with lung at 13.7%, breast at 14.1%, prostate at 14.4%, and colon at 6.2%. Of all the major cancers, when comparing five-year survival rate, thyroid cancer is near the top at 98%, just below prostate cancer at 99%.

Exhibit 5 Estimated Number of New Cancer Cases and Deaths, U.S, 2013

	Estimated New Cases				Estimated Deaths			
	% Total	Both Sexes		Female	% Total	Both Sexes		Female
All Sites	100%	1,660,290	854,790	805,500	100%	580,350	306,920	273,430
Oral cavity & pharynx	2.5%	41,380	29,620	11,760	1.4%	7,890	5,500	2,390
Tongue	0.8%	13,590	9,900	3,690	0.4%	2,070	1,380	690
Mouth	0.7%	11,400	6,730	4,670	0.3%	1,800	1,080	720
Pharynx	0.8%	13,930	11,200	2,730	0.4%	2,400	1,790	610
Other oral cavity	0.1%	2,460	1,790	670	0.3%	1,640	1,260	380
Digestive system	17.5%	290,200	160,750	129,450	24.9%	144,570	82,700	61,870
Esophagus	1.1%	17,990	14,440	3,550	2.6%	15,210	12,220	2,990
Stomach	1.3%	21,600	13,230	8,370	1.9%	10,990	6,740	4,250
Small intestine	0.5%	8,810	4,670	4,140	0.2%	1,170	610	560
Colon	6.2%	102,480	50,090	52,390	8.8%	50,830	26,300	24,530
Rectum	2.4%	40,340	23,590	16,750	0.0%	00,000	20,000	21,000
Anus, anal canal, & anorectum	0.4%	7,060	2,630	4,430	0.2%	880	330	550
Liver & intrahepatic bile duct	1.8%	30,640	22,720	7,920	3.7%	21,670	14,890	6,780
Gallbladder & other biliary	0.6%	10,310	4,740	5,570	0.6%	3,230	1,260	1,970
Pancreas	2.7%	45,220	22,740	22,480	6.6%	38,460	19,480	18,980
Other digestive organs	0.3%	5,750	1,900	3,850	0.6%	2,130	870	1,260
Respiratory system	14.8%	246,210	131,760	114,450	28.2%	163,890	90,600	73,290
Larynx	0.7%	12,260	9,680	2,580	0.6%	3,630	2,860	73,290
Lung & bronchus	13.7%	228,190	118,080	110,110	27.5%	159,480	87,260	72,220
Other respiratory organs	0.3%	5,760	4,000	1,760	0.1%	780	480	300
	0.3%			-				630
Bones & joints		3,010	1,680	1,330	0.2%	1,440	810	
Soft tissue	0.7% 5.0%	11,410	6,290	5,120	0.8%	4,390	2,500	1,890
Skin		82,770	48,660	34,110	2.2%	12,650	8,560	4,090
Melanoma-skin	4.6%	76,690 6,080	45,060	31,630	1.6% 0.5%	9,480	6,280	3,200 890
Other nonepithelial skin	0.4%		3,600	2,480		3,170	2,280	
Breast Conital ayetem	14.1%	234,580	2,240	232,340	6.9%	40,030	410	39,620
Genital system	20.5%	339,810	248,080	91,730	10.1%	58,480	30,400	28,080
Uterine cervix	0.7%	12,340		12,340	0.7%	4,030		4,030
Uterine corpus	3.0%	49,560		49,560	1.4%	8,190		8,190
Ovary	1.3%	22,240		22,240	2.4%	14,030		14,030
Vulva	0.3%	4,700		4,700	0.2%	990		990
Vagina & other genital, female	0.2%	2,890	000 500	2,890	0.1%	840	00.700	840
Prostate	14.4%	238,590	238,590		5.1%	29,720	29,720	
Testis	0.5%	7,920	7,920		0.1%	370	370	
Penis & other genital, male	0.1%	1,570	1,570	40.000	0.1%	310	310	0.070
Urinary system	8.5%	140,430	96,800	43,630	5.1%	29,790	20,120	9,670
Urinary bladder	4.4%	72,570	54,610	17,960	2.6%	15,210	10,820	4,390
Kidney & renal pelvis	3.9%	65,150	40,430	24,720	2.4%	13,680	8,780	4,900
Ureter & other urinary organs	0.2%	2,710	1,760	950	0.2%	900	520	380
Eye & orbit	0.2%	2,800	1,490	1,310	0.1%	320	120	200
Brain & other nervous system	1.4%	23,130	12,770	10,360	2.4%	14,080	7,930	6,150
Endocrine system	3.8%	62,710	16,210	46,500	0.5%	2,770	1,270	1,500
Thyroid	3.6%	60,220	14,910	45,310	0.3%	1,850	810	1,040
Other endocrine	0.1%	2,490	1,300	1,190	0.2%	920	460	460
Lymphoma	4.8%	79,030	42,670	36,360	3.5%	20,200	11,250	8,950
Hodgkin lymphoma	0.6%	9,290	5,070	4,220	0.2%	1,180	660	520
Non-Hodgkin lymphoma	4.2%	69,740	37,600	32,140	3.3%	19,020	10,590	8,430
Myeloma	1.3%	22,350	12,440	9,910	1.8%	10,710	6,070	4,640
Leukemia	2.9%	48,610	27,880	20,730	4.1%	23,720	13,660	10,060
Acute lymphocytic leukemia	0.4%	6,070	3,350	2,720	0.2%	1,430	820	610
Chronic lymphocytic leukemia	0.9%	15,680	9,720	5,960	0.8%	4,580	2,750	1,830
Acute myeloid leukemia	0.9%	14,590	7,820	6,770	1.8%	10,370	5,930	4,440
Chronic myeloid leukemia	0.4%	5,920	3,420	2,500	0.1%	610	340	270
Other leukemia	0.4%	6,350	3,570	2,780	1.2%	6,730	3,820	2,910
Other & unspecified primary sites	1.9%	31,860	15,450	16,410	7.8%	45,420	25,020	20,400

Source: American Cancer Society

Exhibit 6
Five-Year Relative Survival Rates

	All	Local	Regional	Distant
Pancreas	6%	23%	9%	2%
Liver	15%	28%	10%	3%
Lung & bronchus	16%	52%	25%	4%
Esophagus	17%	38%	20%	3%
Stomach	27%	62%	28%	4%
Ovary	44%	92%	72%	27%
Larynx	61%	76%	42%	35%
Oral cavity & pharynx	62%	82%	57%	35%
Colon & rectum	64%	90%	70%	12%
Uterine cervix	68%	91%	57%	16%
Kidney	71%	91%	64%	12%
Urinary bladder	78%	70%	33%	6%
Uterine corpus	82%	95%	67%	16%
Breast (female)	89%	98%	84%	24%
Melanoma of the skin	91%	98%	62%	15%
Testis	95%	99%	96%	73%
Thyroid	98%	100%	97%	54%
Prostate	99%	100%	100%	28%

Note: Local means confined within that area. Regional means that the cancer has spread to nearby lymph nodes. Distant means that the cancer has spread to other organs of the body.

Source: American Cancer Society

In comparison with thyroid cancer, a lot of attention and research dollars have been spent on breast, prostate, lung, and colon cancer because of the potential market size, number of new cases annually, and fatality rates. In fact, according to the National Cancer Institute (NCI) budget, thyroid cancer research received \$15.6 million in funding in 2010 and \$16.2 million in 2011. In 2012, thyroid cancer research received \$16.5 million in funding from the NCI compared with breast at \$602.7 million, lung at \$314.6 million, prostate at \$265.1 million, and colon at \$256.3 million.

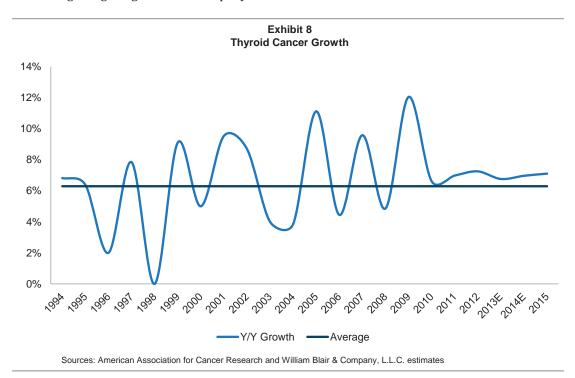
Exhibit 7
NCI Spending for Specific Cancers

(\$millions)	201	10	201	1	2012		
Breast	12.38%	\$631.2	12.36%	\$625.1	11.89%	\$602.7	
Lung	5.53%	\$281.9	5.87%	\$296.8	6.21%	\$314.6	
Prostate	5.89%	\$300.5	5.70%	\$288.3	5.23%	\$265.1	
Colorectal	5.30%	\$270.4	5.24%	\$265.1	5.06%	\$256.3	
Non-Hodgkin Lymphoma	2.40%	\$122.4	2.50%	\$126.4	2.36%	\$119.5	
Melanoma	2.01%	\$102.3	2.29%	\$115.6	2.39%	\$121.2	
Kidney	0.87%	\$44.6	0.91%	\$46.2	0.97%	\$49.0	
Bladder	0.44%	\$22.6	0.41%	\$20.6	0.46%	\$23.4	
Thyroid	0.31%	\$15.6	0.32%	\$16.2	0.33%	\$16.5	
Endometrial (Uterine)	0.28%	\$14.2	0.31%	\$15.9	0.38%	\$19.1	
NCI Annual Budget	\$5,098.1		\$5,05	8.1	\$5,067.3		

Source: National Cancer Institute

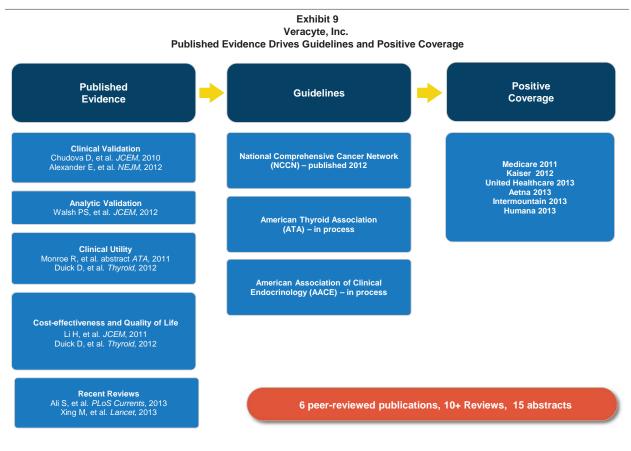
Not only is Veracyte a first mover in using molecular cytology for thyroid cancer, but also the lack of attention and funding could suggest depressed levels of competition in the market. We believe this makes sense, since most researchers want to find a solution for the deadliest diseases (thyroid cancer has a 98% survival rate) or the most common (thyroid represents 3.6% of new cancers in the United States).

An important overlooked statistic is that—growing by 6% to 7% annually—thyroid cancer is the fastest-growing cancer. A paper published in the American Association for Cancer Research journal *Cancer Epidemiology, Biomarkers, and Prevention,* titled "The Clinical and Economic Burden of a Sustained Increase in Thyroid Cancer Incidence," estimates that by 2019, papillary thyroid cancer will double in incidence and become the third-most-common cancer in women. Growth in underlying thyroid cancer incidence rates should provide a level of underlying utilization growth in the mid- to high single digits for the company.



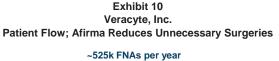
## Clinical Validation, Guideline Recommendations, and Tangible Cost Savings Have Yielded Rapid Payer Adoption and Volume Trajectory

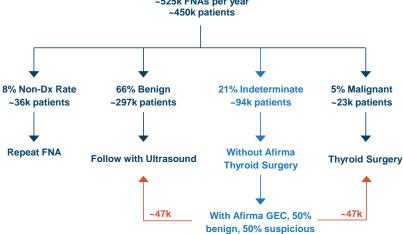
Veracyte's Afirma solution is supported through six peer-reviewed publications, including clinical validation and utility studies. Its marquee validation study was published in the *New England Journal of Medicine* in 2012; this study prospectively validated the assay in 4,500 patients. There have also been two health economics studies published on Veracyte's Afirma solution (one by Johns Hopkins), which suggest that the assay saves payers on average \$2,600 per test. Afirma is also backed by one patent and six pending applications. Building clinical validation and utility support has yielded a steep ramp-up in physician ordering for the tests, which we expect to continue, yielding an estimated 99% growth in billed GEC volume in 2013, 68% in 2014, and 54% in 2015.



Sources: Company reports and William Blair & Company, L.L.C. estimates

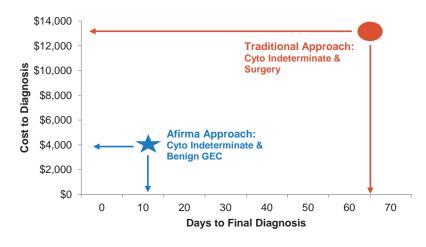
The Afirma GEC test has high sensitivity and negative predictive value for a benign call; accuracy rates are greater than 94% when identifying a benign nodule ruled inconclusive by cytology. Via the GEC, Veracyte is able to reclassify roughly 50% of the indeterminate cytopathology results as benign, thereby avoiding unnecessary surgery in those cases, since patients are switched to a routine monitoring paradigm (the standard of care in benign FNA cytology). Benefits include cost savings to the system, improved quality of life for the patient, and quicker time to diagnosis and treatment.





Sources: Company reports and William Blair & Company, L.L.C. estimates

#### Exhibit 11 Veracyte, Inc. Improves Patient Experience and Cost

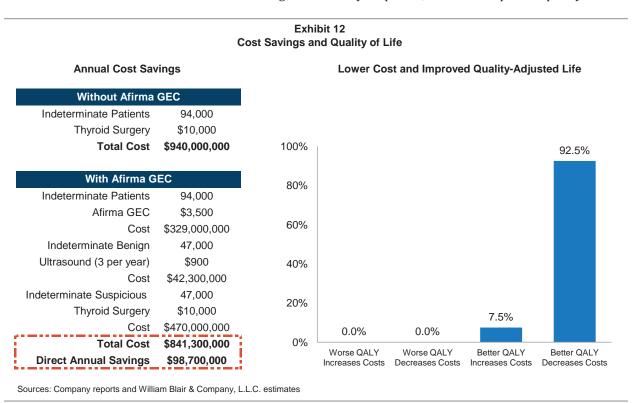


Sources: Company reports and William Blair & Company, L.L.C. estimates

In 2012, the National Comprehensive Cancer Network (NCCN) updated its thyroid cancer guidelines to suggest molecular assays may be useful to reclassify patients with indeterminate cytology as benign or more likely to be malignant. These guidelines were updated in 2013 to add the qualification, "if molecular testing predicts a risk of malignancy seen with a benign FNA cytology (5% or less), consider observation." It is our understanding that Veracyte's Afirma GEC assay is the only molecular assay available that is able to meet the latter criteria of being able to provide negative predictive value of about 95%. Potential future positive catalysts for the company would include guideline recommendation in the American Thyroid Association and American Association of Clinical Endocrinologists guidelines. We expect at least one of the associations to release updated guidelines in 2014, which could include use of a molecular-based diagnostic for indeterminate FNA samples.

## William Blair & Company, L.L.C.

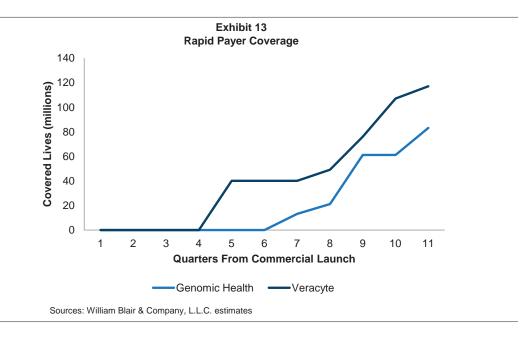
Assuming thyroid surgery costs roughly \$10,000 per patient, we calculate this could save the healthcare system about \$100 million annually. Health economics studies published by Johns Hopkins suggest the Afirma GEC assay saves \$2,600 for each Afirma test performed, which yields \$600 million in direct medical savings over a five-year period, as well as improved quality of life.



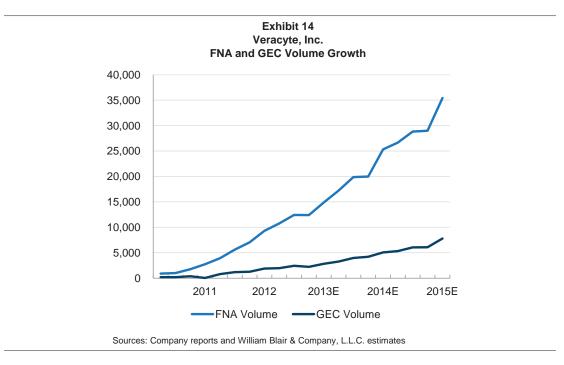
Since the commercial launch of Afirma in January 2011, the test has attained rapid coverage adoption, which has been in part driven by the NCCN guideline recommendation, clear cost savings, and building the clinical validity of the GEC assay through multiple research and study publications. Relative to other genetic-based tests, Veracyte's Afirma has obtained quicker coverage from both public and private payers. Medicare announced coverage for Veracyte on January 9, 2012—one year after its launch, which is relatively rapid; most molecular diagnostic companies take 18 to 24 months to obtain Medicare coverage for an LDT.

Medicare coverage has led to private payer adoption. We estimate that Afirma has coverage for about 117 million lives 11 quarters after commercial launch; Oncotype DX had 82 million lives during a similar time frame (see exhibit 13).

Given that the company performs both the routine cytology (referred to as FNA) and the Afirma GEC, we project both in our revenue build. Total FNA volume received quadrupled from 2011 to 2012, from 6,402 FNAs received to 25,890. In the second quarter of 2013, total FNAs received was 12,424, which annualized would be 49,696. We project a sequential pickup in FNAs throughout the remainder of 2013 to reach a total of 50,111, almost doubling 2012 volumes. In 2014, we forecast total FNAs to grow 62%, to 81,215, and to grow 46% in 2015, to 118,195. This growth would suggest FNA market penetration of about 19% in 2015.



From 2011 to 2012, the number of GECs performed nearly tripled from 1,326 to 5,127. In the second quarter of 2013, 2,436 GEC tests were performed, which would be 9,744 annualized. For full year 2013, we forecast 9,642 tests, as the third quarter tends to include slower growth sequentially. In 2014, we forecast growth of 69%, to 16,276, and 53% in 2015, to 24,908. Indeterminate cytology results are identified in roughly 15% to 30% of the cases; we assume about 19% of FNAs will be indeterminate and reflexed to the GEC test in 2013. We assume the number of GECs as a percentage of FNAs received increases to 21% in 2015, primarily driven by international expansion (since volume from outside the United States will be GEC only).



#### Exhibit 15 Veracyte, Inc. Market Penetration

Thyroid Cancer Growth	6%	2012	2013E	2014E	2015E
Endocrinologist	60%	315,000	333,900	353,934	375,170
Radiology	30%	157,500	166,950	176,967	187,585
Academic	10%	52,500	55,650	58,989	62,528
Total FNAs		525,000	556,500	589,890	625,283
Endocrino	ologist	5%	11%	18%	27%
Rad	Radiology		6%	7%	7%
Acad	Academic		5%	6%	6%
	Total	5%	9%	14%	19%
William Blair Estir	mates	25,890	50,111	82,215	118,195

Sources: Company reports and William Blair & Company, L.L.C. estimates

# Potential Upside in the Model Could Be Driven by Improved Payer Contract Terms, International Adoption, and Commercialization of the Company's Pipeline

Total revenue grew 340% from 2011 to 2012, to \$11.6 million. We project total revenue to grow 87% in 2013 to \$21.8 million, grow 90% to \$41.5 million in 2014, and 79% to \$74.2 million in 2015. Upside to our numbers could come from a switch to accrual accounting once the company has built a sufficient collection history with each individual payer. We believe switching to accrual accounting could pull forward roughly \$5 million to \$10 million in revenue annually. In addition, upside could be driven by better-than-expected market penetration driven by additional payer contracts as well as international expansion and introduction of new tests.

**Accrual accounting.** While reimbursement is the key risk for many diagnostic services companies, as discussed in more detail below, a shift to accrual-based accounting represents upside to our GEC ASP expectations, in our view. Veracyte recognizes revenue on a cash basis, with the exception of Medicare (roughly 22% of revenue), for which it accrues revenue assuming roughly a \$3,000 to \$3,500 ASP per Afirma GEC and recognizes revenue upon delivery of a patient report. Revenue recognition for each private payer may be switched to accrual accounting once a contract is in hand and there is sufficient collection history.

Based on filings, Veracyte has \$31 million of revenue it has not recognized. We ran an analysis showing the effects of accrual accounting on estimates assuming a ramp-up similar to Genomic Health and all other variables remaining the same as in our model. We found that switching to accrual accounting could pull forward roughly \$5 million to \$10 million in revenue annually.

#### Exhibit 16 Veracyte, Inc. **Potential Upside From Accruals** Based on Ramp-Up in Genomic Health Accruals as Percentage of Revenue

(\$ thousands)	2013E	2014E	2015E	2016E
Net GEC Performed	8,342	14,452	22,120	31,638
Assumed ASP	\$3.5			
% Accrued	22%	22%	22%	22%
GEC Accrued	1,835	3,179	4,866	6,960
Accrued Revenue	\$6,424	\$11,128	\$17,032	\$24,361
Remaining GEC	6,507	11,273	17,253	24,678
ASP Remaining GEC	\$1.29	\$1.84	\$2.54	\$3.11
Total	\$14,825	\$31,872	\$60,883	\$101,019
% Accrued Based on Genomic Health Ramp	22%	38%	53%	58%
GEC Accrued	1,835	5,542	11,828	18,313
Accrued Revenue	\$6,424	\$19,396	\$41,398	\$64,095
Remaining GEC	6,507	8,911	10,292	13,326
ASP Remaining GEC	\$1.29	\$1.84	\$2.54	\$3.11
Total	\$14,825	\$35,641	\$67,457	\$105,456
Upside	\$0	\$3,769	\$6,574	\$4,437

Sources: Company reports and William Blair & Company, L.L.C. estimates

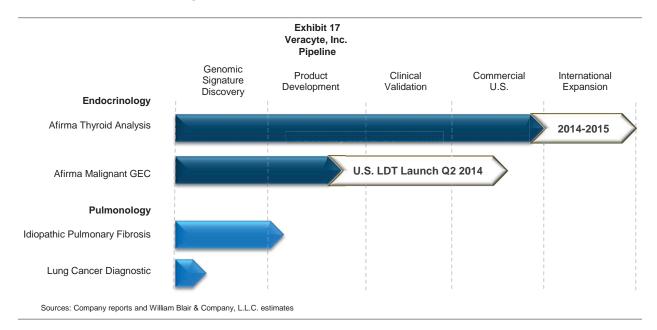
*International expansion*. International expansion is an important driver for the long-term growth of Veracyte, as it is a \$300 million market opportunity. We believe the partnership with Genzyme is essential to international expansion because Genzyme currently sells Thyrogen in 42 countries and thus has existing physician relationships outside the United States.

Prior experience in international expansion is especially important given that every country is complicated and different when it comes to reimbursement coverage. In 2013, Genomic Health's international expansion has been a bright spot of the company's financial performance, and it could bode well for Veracyte's prospects as well. Members of Veracyte's board, Fred Cohen and Samuel Colella, currently sit on Genomic Health's board. Also, Brook Byers, who is currently on the Veracyte board, used to be on Genomic Health's. We believe the knowledge that the current board has regarding international expansion with genetic-based tests as well as its relationship with Genzyme could accelerate the process for Veracyte.

Pipeline. As mentioned, Veracyte is focused on identifying areas within healthcare where there is opportunity to reduce costs via improved diagnostic assays. The company has developed a core competency in extracting genomic DNA from small samples (heterogeneous, degraded genetic material, very small sample size of  $15 \mu m$ ), applying information gleaned from surgical tissue to clinical biopsies, and optimizing methods for amplification of RNA in small quantities. It also is proficient at performing biomarker discovery using a whole genome approach followed by development and analytical validation on a customized 3,000-marker chip and applying multidimensional, "machinelearning" algorithms employed to develop a classifier, which it can leverage in other indications.

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Veracyte has a number of products in the pipeline, including the Afirma Malignant GEC and a test for interstitial lung disease, which we have not included in our revenue estimates.



Afirma Malignant Gene Expression Classifier (MGEC). The Afirma Malignant GEC is a molecular cytology test created to complement the current Afirma offerings and guide surgical strategy. The test evaluates the expression patterns of genes to identify patients with rare forms of thyroid cancer (medullary thyroid cancer) or metastases to the thyroid—again, with the goal to better inform surgical decisions. Medullary thyroid cancer, a rare, aggressive form (3% to 4% of thyroid cases) requires a more complicated surgery, while metastatic cancer from other organic and parathyroid conditions may not be treated with thyroid surgery.

MGEC is projected to launch in the second quarter of 2014 and is an estimated \$40 million market opportunity. The company should be able to leverage its current sales and marketing efforts to sell the malignant version of its Afirma GEC solution, thus requiring little incremental SG&A expense for the launch. We believe there is a potential for publication of Afirma MGEC-related data around the 2014 AACE meeting in mid-May.

• Idiopathic pulmonary fibrosis and lung cancer diagnostic. Lung diseases and cancer are difficult to diagnose without surgery and represent an addressable market of about \$1.5 billion. Veracyte is in the product development stage for an idiopathic pulmonary fibrosis test via molecular cytology with a potential product launch in 2016. Idiopathic pulmonary fibrosis falls within a larger group of diseases called interstitial lung diseases. These diseases involve the scarring of lung tissue, specifically the tissue between air sacs, which, once scarred, inhibits lung function.

It is estimated that pulmonologists perform 350,000 to 400,000 bronchoscopy biopsies to diagnose interstitial lung disease and lung cancer. Of the bronchoscopy biopsies performed, nearly half are unable to deliver an accurate diagnosis, also known as indeterminate. The indeterminate biopsies often lead to costly repeat biopsies and/or mislead patient treatment. Veracyte has targeted institutions where key opinion leaders and guideline authors work to do research and gain access to sample volumes. Veracyte is partnering with these leaders and studies to bring clinical validation to the potential interstitial lung disease tests.

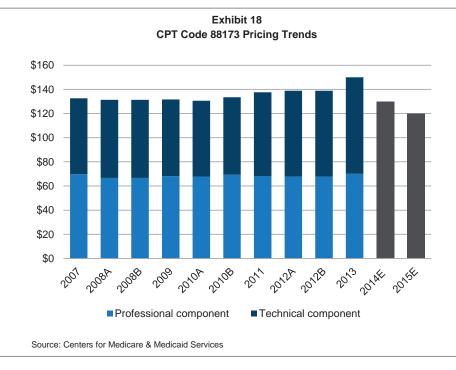
## **Investment Risks**

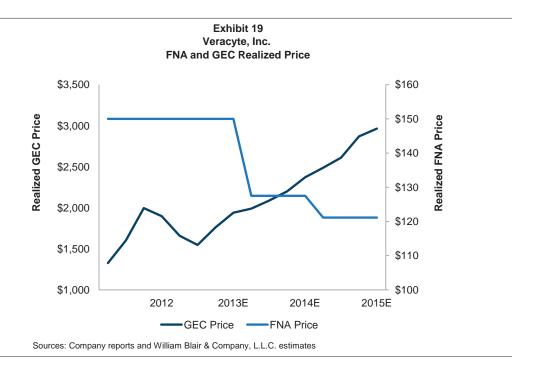
We consider the key risks to Veracyte to be potential for pricing pressure, reliance on business partners, and potential for increased competition.

# Potential for Reimbursement Pressure and Lower-Than-Expected Realized ASP Could Cause the Company to Report Lower-Than-Expected Revenue

Veracyte is participating in the Palmetto MolDx program (established by Palmetto GBA to identify molecular diagnostic tests, determine coverage, and determine reimbursement); it has gone through a tech assessment with Palmetto and has obtained a Z-code for its GEC assay. The company has been successful in obtaining positive coverage decisions to date and received a positive Medicare coverage decision from Palmetto more quickly than most labs we have seen with proprietary LDTs.

Still, we view reimbursement as the key risk for any diagnostic services companies. Veracyte bills payers using existing CPT codes for FNA cytology (specifically 88173 on the Medicare Clinical Lab Fee Schedule). Reimbursement for this service is currently paid at about \$150. More broadly, the labs have faced cuts to the Medicare Clinical Lab Fee Schedule as a pay-for (in pay-as-you-go budgeting, a spending cut or tax increase that covers the budget for a piece of legislation) for implementation of the PPACA as well as the 2013 physician fee fix and sequestration. While reimbursement for 88173 has been trending up over time, we expected the proposed rate for 2014 to be slightly lower than 2013. We project continued reimbursement pressure for FNA cytology over the next few years.





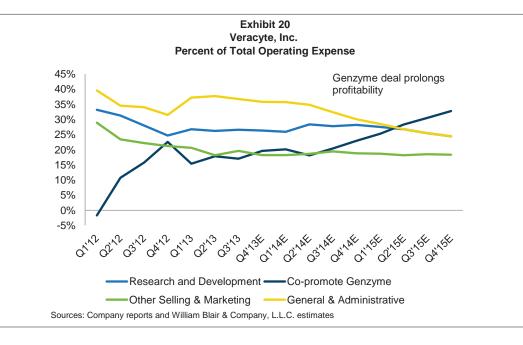
Since commercial launch, Veracyte has experienced rapid coverage expansion from both private and public payers, including positive coverage decisions from Medicare (Palmetto), UnitedHealthcare, Aetna, Humana, and Kaiser. As the company receives such decisions, we expect realized average selling price to increase; coverage decisions typically yield faster reimbursement as well as higher overall cash collections. Without coverage decisions, reimbursement can vary considerably among payers from \$0 to some percentage of the list price (which is \$4,275). Often, the company has to appeal multiple times to receive compensation from a payer. Given that the majority of the company's revenue is recognized on a cash receipt basis, failure of the company to collect from payers could translate into a lower average selling price than we have projected.

In addition, over time the company will also likely go in contract (in network) with payers. While this may positively affect cash collection cycles and volumes, it could result in a lower average selling price for the Afirma GEC than we projected; we assume realized ASP for the GEC increases from \$1,726 in 2013 to \$2,727 in 2015 as the company gains more positive payer coverage decisions and is paid better and more quickly. Another risk concerning payer coverage is the lack of reliable payment history, which would inhibit Veracyte's ability to switch to accrual accounting from cash accounting. The inability to switch to accrual accounting would subject the company to lumpiness in cash collections.

# Reliance on Business Partners Could Negatively Affect Capacity to Perform FNAs (Thyroid Cytology Partners) and/or Profitability Trends (Genzyme)

Veracyte has agreements in place with Thyroid Cytology Partners (to perform the FNA cytology professional read) and Genzyme (for sales and marketing). Any conflict/disruption with either party could result in slower sales and increased business risk.

Currently, Veracyte pays Genzyme 40% of all Afirma-related cash collections, and in return, Genzyme's salesforce promotes the Afirma solution. While this amount is expected to decline (to 32% in 2014 and 2015), payments to Genzyme represent a significant sales-and-marketing expense. Proceeds from the IPO will in part be used to build out an internal salesforce, which could reduce the company's reliance on Genzyme, particularly in domestic markets. Veracyte's ability to break even will depend on its ability to renegotiate its arrangement with Genzyme over time. Both companies have a six-month opt-out option in the agreement.



Thyroid Cytology Partners (TCP) is a specialized group of pathologists that focuses only on thyroid cytology. In 2010, Veracyte formed a partnership with Pathology Resource Consultants, which then created TCP. The positive aspects of the relationship include streamlined workflow (automatic reflex to GEC), a specialized group of pathologists who only look at thyroid samples (leading to a lower indeterminate rate), and faster turnaround time. Given that Afirma is sold as a solution, if TCP were unable to sustain volume increases, Veracyte's business operations could be at risk. Also, when the time comes to renegotiate the partnership agreement, any increase in the processional fee that Veracyte pays TCP could negatively affect gross margin. In addition, regular turnover of TCP staff could lead to inconsistent results and slower turnaround time. Also, knowing that Veracyte's business is dependent on the partnership, TCP may be able to leverage that in future negotiations for fees, leading to above-market costs for Veracyte.

# Failure to Gain Market Share of FNA Cytology Testing and/or Increased Competition Could Drive GEC Adoption to Fall Below Expectations

We assume the company performs 50,111 FNAs in 2013, and we expect that number to grow 62% in 2014 and 46% in 2015. Also, we project Veracyte to run 9,642 GECs in 2013, and we estimate that the total number of GECs will grow 69% in 2014 and 53% in 2015. Slower growth rates for either FNAs or GECs could happen for multiple reasons. There is a risk of doctors not wanting to switch cytopathology providers because of long working relationships. Also, the rapid pace of private payer coverage could slow down, leading to lower adoption and realized price per GEC. We believe a declining GEC percentage of FNAs performed could result in multiple compression, as some investors may not pay a high multiple for routine diagnostic tests.

We are not aware of any test in development by a larger laboratory (such as LabCorp and Quest Diagnostics) that competes with the Afirma GEC assay, although many labs compete for FNA volume. Asuragen is a private company that offers a test called miRinform Thyroid, which is offered as a tool to determine malignancy of the thyroid nodule. MiRinform uses a panel of 17 molecular markers; however, the test is used to identify malignant samples (versus benign, as is the case with Veracyte's Afirma GEC). Use of miRinform Thyroid and cytology gives a specificity of 80% to 90% (versus Veracyte's sensitivity of greater than 94%). Based on published data, it does not seem that the MiRinform assay meets the revised NCCN guidelines; thus, it is less likely to capture market share. Increased competition could cause volumes to ramp up more slowly than we estimate, however.

# **Company Overview**

### **Brief History**

Veracyte began as an incubator company called Calderome, which was incorporated in Delaware in August 2006 and changed its name to Veracyte in March 2008. Veracyte's headquarters is in South San Francisco, California. The company was originally funded by venture capital companies Versant Ventures, Kleiner Perkins Caufield & Byers, and TPG, with an estimated \$22 million raised through five rounds of series A financing.

In July 2007, while Veracyte was still known as Calderome, current CEO Bonnie Anderson joined as a consultant to build a business plan for the company. She did so in a little less than one year and became CEO in February 2008. The company then began biomarker discovery using microarray technology. We believe Chief Scientific Officer Giulia Kennedy's prior experience building custom arrays at Affymetrix influenced the decision to use microarray technology and contributed to the company's success in building an array. The company collected roughly 5,000 samples in two and half years and, in the process, developed the Afirma GEC test.

Prepping for commercial launch, Veracyte completed four rounds of series B financing led by venture capital firm Domain Partners and current investors and raised an estimated \$28 million. In 2010, the company presented its large-scale, prospective, multicenter clinical trial in Paris, France, at the 14th International Thyroid Congress. Later that year, Veracyte released Afirma to a pilot group of academic thought leaders. In early 2011, the company launched commercially in Florida and Texas and targeted community endocrinologists. In September 2011, Veracyte announced a cost-effective study undertaken by researchers at Johns Hopkins University that would later be published in the *Journal of Clinical Endocrinology & Metabolism*.

The commercial launch, clinical trial data, and cost-effective study led to Medicare coverage for the Afirma GEC test in January 2012. Shortly after Afirma received Medicare coverage, the company signed a co-promotion agreement with Genzyme and launched the Afirma test across the United States. In April 2012, Veracyte announced results of its two-year study, which involved 265 indeterminate patients, at The Endocrine Society's ENDO 2012 annual meeting in Houston, Texas, which coincided with the study being published in the *New England Journal of Medicine*. In January 2013, Veracyte announced that the National Comprehensive Cancer Network Clinical Practice Guidelines included molecular testing for indeterminate thyroid nodules.

After positive guideline revisions, private payers began issuing positive coverage decisions, beginning with Kaiser and UnitedHealth and followed four months later by Aetna in July 2013. Earlier in 2013, Shelly Guyer was appointed CFO; Ms. Guyer had prior CFO experience at iRhythm Technologies and a long financial background in healthcare investment banking. From November 2012 to June 2013, Veracyte raised an additional \$28 million in two rounds of series C financing from current investors and added a new investor, GE Capital. The company also obtained a loan agreement for up to \$10 million and drew down \$5 million. In September 2013, Veracyte filed registration statement for an initial public offering. On October 30, the company announced the pricing of 5 million shares and began trading on the Nasdaq on October 31, opening at \$13.00.

#### **Management and Directors**

The management team is led by President and Chief Executive Officer Bonnie Anderson, who has years of experience in the industry and has been highly regarded by suppliers and customers who we spoke with during diligence calls. CFO Shelly Guyer is the newest management team member, but she has a strong financial background and a long history in the healthcare industry. Veracyte has a board of directors with deep industry experience and relationships who also sit on the board of companies like Illumina, Genomic Health, Fluidigm, Foundation Medicine, Pacific Biosciences of California, Five Prime Therapeutics, and Cadence Pharmaceuticals.

**Bonnie. H. Anderson** is president, chief executive officer, and director of Veracyte. Ms. Anderson has been CEO and on the board of directors since February 2008. Before that, she was an independent strategic consultant for Veracyte from July 2007 to January 2008 and previously had worked for Beckman Coulter, Inc., where she was a vice president. Ms. Anderson graduated from Indiana University of Pennsylvania and is a member of the board of trustees of the Keck Graduate Institute of Applied Life Sciences.

**Shelly D. Guyer** is the chief financial officer and secretary. She has been the CFO since April 2013. Before joining Veracyte, Ms. Guyer was the CFO of iRhythm Technologies from April 2008 to December 2012. Ms. Guyer also previously served as vice president of business development and investor relations of Nuvelo Inc. from March 2006 to August 2007. The majority of Ms. Guyer's financial career was in investment banking at J.P. Morgan Securities and its predecessor companies (Hambrecht & Quist). She received an undergraduate degree from Princeton University and holds an M.B.A. from the University of California, Berkeley.

*Christopher M. Hall* has served as chief commercial officer since March 2010. Before joining Veracyte, he was the chief business officer of Celera Corporation from October 2008 to February 2010. In February 2002, he joined Berkeley HeartLab, Inc., which was acquired by Celera. Mr. Hall received a bachelor's degree from DePauw University and an M.B.A. from Harvard.

*Giulia C. Kennedy, Ph.D.*, is the chief scientific officer and has served in this capacity since September 2008. Before joining Veracyte, Dr. Kennedy was a senior director at Affymetrix, Inc., where she worked from January 2000 to March 2008. Affymetrix is a key supplier for Veracyte. Before she worked at Affymetrix, Dr. Kennedy worked at Chiron Corporation and Millennium Pharmaceuticals, Inc. She graduated from Youngstown State University with a bachelor's degree and received a Ph.D. from Case Western.

**Richard B. Lanman, M.D.,** has served as chief medical officer since July 2008. Before joining Veracyte, Dr. Lanman was chief medical officer at diaDexus, Inc. from April 2005 to July 2008. He also served as chief medical officer at Atherotech, Inc. from November 2000 to March 2005. Before Atherotech, Dr. Lanman founded Adesso Healthcare Technology Services, Inc. Dr. Lanman attended Stanford University for his bachelor's degree and Northwestern University for his M.D.

**Brian G. Atwood** has been chairman of the board since February 2008. Mr. Atwood is a managing director and co-founder of Versant Ventures. He is also a director at Cadence Pharmaceuticals, Inc., Clovis Oncology, Inc., and Five Prime Therapeutics, Inc.

**Brook H. Byers** is a director and has served on the board since January 2007. Mr. Byers is a managing partner of Kleiner Perkins Caufield & Byers. He also is on the board of directors at Foundation Medicine, Inc. and Pacific Biosciences of California, Inc. as well as serving as a prior director of Genomic Health, Inc.

*Fred E. Cohen, M.D., D.Phil.*, has served on the board of directors since January 2007. Dr. Cohen is a partner at TPG and adjunct professor of cellular and molecular pharmacology at the University of California, San Francisco. He also serves as director of Aptalis Holdings Inc., BioCryst Pharmaceuticals, Inc., Five Prime Therapeutics, Inc., Genomic Health, Inc., Quintiles Transnational Holdings Inc., and Tandem Diabetes Care, Inc.

**Samuel D. Colella** is a director. He has been on the board since December 2006. Mr. Colella is a managing director and co-founder of Versant Ventures. Mr. Colella also serves as chairman of the board for Fluidigm Corporation and as a director for Genomic Health, Inc.

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**Karin Eastham** is a director and has served on the board since December 2012. Ms. Eastham serves on the boards of Geron Corporation, Illumina, Inc., and MorphoSys AG. She has also served as director for Amylin Pharmaceuticals, Inc., Genoptix Inc., Tercica, Inc., and Trius Therapeutics, Inc.

**Evan Jones** has served on the board as a director since February 2008. He is a managing member of jVen Capital, LLC. Mr. Jones is also executive chairman of OpGen, Inc. and co-founder of Digene Corporation. He also serves on the board for CAS Medical Systems Inc., Fluidigm Corporation, and Foundation Medicine, Inc.

*Jesse I. Treu, Ph.D.*, is a director. He has served on the board since June 2010. Dr. Treu is a partner at Domain Associates. Dr. Treu also serves as a director of Regado Biosciences Inc. and Tandem Diabetes Care, Inc.

# **Key Partnerships**

#### Genzyme

In January 2012, Veracyte entered a strategic partnership with Genzyme in which Genzyme would sell the Afirma test and in return receive a certain percentage of Afirma revenue cash collected. Genzyme, based in Cambridge, Massachusetts, was acquired by Sanofi in 2011 and now operates as a subsidiary. Genzyme currently has 10 products, including Thyrogen (a thyroid-stimulating hormone used for patients before treatment and during follow-up appointments), that it markets in more than 42 countries worldwide. Genzyme complements Veracyte's salesforce (eight representatives) with its own representatives who market Thyrogen and Afirma; the joint sales team is broken down into eight subteams by geography. Incentives are aligned at the corporate and field level to drive productivity and team work.

To enter the deal, Genzyme paid Veracyte an up-front \$10 million in cash. Genzyme also agreed to pay up to an additional \$3 million in milestone payments of \$600,000 for up to five additional countries in which Veracyte gains regulatory authorization to market Afirma and achieves a specific level of reimbursement. Genzyme has also agreed to fund \$0.5 million in R&D required for international expansion (this obligation expires in July 2014). For accounting purposes, the \$10 million will be amortized over a four-year period that began in 2012 and is recorded as a reduction of sales and marketing expense (\$625,000 per quarter). Veracyte must pay Genzyme a certain percentage of cash receipts collected for the Afirma test; this percentage declines in a step-wise function. Genzyme's co-promote fee is payable by roughly 210 days of cash receipt. From January 2012 to January 2013, Genzyme was paid 50% of cash received, which declined to 40% from January 2013 to February 2014. After February 2014 and into the future, Genzyme will be paid 32% of cash received for the Afirma test. Veracyte also granted Genzyme the right of first offer to co-promote any future thyroid cancer product that Veracyte commercializes.

The deal expires in January 2027 but is terminable by either party without cause given a six-month notice, subject to certain claw-backs. If Veracyte were to terminate the agreement before January 2014, the company would have to repay 50% of the up-front \$10 million; that percentage declines to 40% between January 2014 and January 2015. If Veracyte terminates the agreement from January 2015 to January 2016, the company has to repay 30% of the up-front payment; after January 2016, no repayment is necessary. The deal is negotiable and terminable on the occurrence of certain events or causes.

Our opinion of the deal is mixed. On the positive side, Veracyte gains access to additional sales reps, the reps' relationships and customers, and their technical know-how with the endocrinologist community. This is a relatively small community at about 3,500 endocrinologists in the United States, making these relationships even more valuable. International expansion is another positive aspect of the deal; Genzyme sales reps currently sell in 42 countries, which allows Veracyte to gain access to global markets. As previously stated, Genzyme markets 10 products, including Thyrogen, so the company has experience in commercializing drugs and gaining reimbursement from payers.

The downsides are within the terms of the deal and how that limits Veracyte's ability to control cost. We estimate that Genzyme by 2015 will have an internal rate of return of 58% on the \$10 million investment (ignoring any additional milestone payments). We project the Genzyme co-promotion fee at \$5.6 million in 2012, \$8.6 million in 2013, \$12.5 million in 2014, and \$22.1 million in 2015. The co-promotion represents 22% to 29% of operating expenses every year and 17% to 33% of total revenue. Given that Veracyte predominantly operates under cash accounting, this is reducing Veracyte's ability to leverage operating expenses and prolonging the time until profitability.

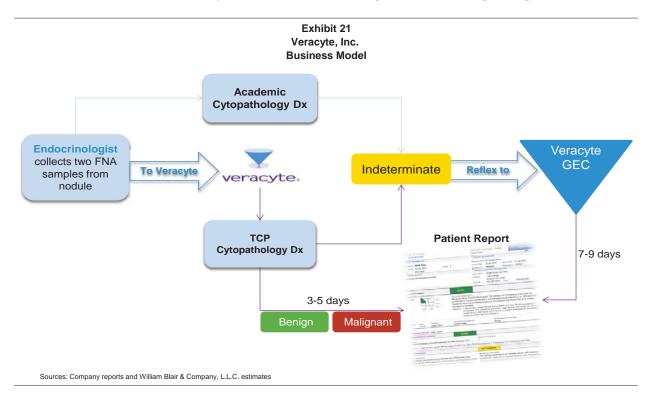
#### **Thyroid Cytology Partners**

In 2010, Veracyte entered an agreement with Pathology Resource Consultants to create and manage a specialized pathology practice; the result was Thyroid Cytology Partners (TCP). In May 2011, TCP was assigned the Veracyte contract, which was amended in December 2012. The agreement is effective until December 2015 and automatically renews annually unless terminated with a 12-month notice or a breach of contract. Within the contract, TCP has exclusive rights to provide cytopathology diagnoses for FNA samples submitted through Afirma at a fixed price per test and subject to volume discounts. The price is reviewed periodically for changes in market pricing. Also, TCP effectively rents space from Veracyte in facilities in Austin, Texas. Veracyte does not have ownership interest in nor does it provide any form of financial or other support to TCP. From an accounting perspective, TCP services fall within cost of revenue, and any amounts owed but not paid are included in accounts payable. TCP provided \$434,000 in cytopathology testing and evaluation services in 2011 and \$1.8 million in those services in 2012.

We view the partnership as a positive, yet it presents a business risk. On the positive side, TCP cytopathologists perform pathology services only on thyroid nodules, making the quality of work superior to competitors, a key selling point to endocrinologists. The indeterminate rate for TCP, 14% to 17%, is below the national average of 15% to 30%. Still, that indirectly cannibalizes would-be GEC volume from lower indeterminate results. In our view, that cannibalization is more than offset by ordering doctors' preference to have a specialized group looking at thyroid nodules. In addition, having an agreement with TCP allows the workflow process to be fluid and timely, since indeterminate tests are automatically reflexed for a GEC test. The streamlined process leads to quicker turnaround times and reduced patient visits, which is important given the ultimate decision concerning surgery. Risks of the partnership include Veracyte's dependence on TCP, disagreement on price, and TCP's inability to handle Afirma volumes, which would delay test results and damage the brand image. TCP may be able to leverage Veracyte's dependence in future contract negotiations, leading to above-market costs.

## **Product Overview**

The company has one product on the market and three others in the pipeline. The molecular cytology test that Veracyte sells is a package called Afirma. The Afirma test consists of supplies and instructions for sample collection and transportation for a routine fine needle aspiration (FNA) biopsy and the Gene Expression Classifier (GEC). The physician draws two samples from the patient and sends the Afirma package to Veracyte's office in Austin, Texas, using an overnight service. In Austin, Thyroid Cytology Partners (TCP) performs the initial cytopathology diagnosis on the FNA samples. If the initial FNA diagnosis is benign or malignant, the test is returned within three to five days. If the initial FNA is diagnosed as indeterminate, the second sample is sent from Austin to Veracyte's lab in South San Francisco to perform the GEC. The GEC will provide a result of benign or suspicious within seven to nine days. Exhibit 21 includes a diagram of the full diagnostic process.



#### Fine Needle Aspiration (FNA)

An FNA biopsy is a routine medical procedure that is used to diagnose nodules (lumps) found around the thyroid gland; FNA biopsies can be performed in the doctor's office by an endocrinologist or in an academic center/hospital setting. An ultra-thin needle is inserted into the nodule (usually located just under the Adam's apple on the neck) multiple times to collect sufficient sample from each nodule. The fluid is extracted and sent to a pathologist for cytology diagnosis. The cytopathologist looks at the sample under a microscope to determine if the cells are carcinogenic or benign. The results can be classified as 1) carcinoma or suspicious carcinoma; 2) follicular or Hürthle cell neoplasm; 3) Atypia or follicular lesion of undetermined significance; 4) thyroid lymphoma; 5) benign; or 6) insufficient biopsy or nondiagnostic. In plain terms, the categories are harmful, unknown, not harmful, and not enough information.

Veracyte has an agreement with TCP to perform the initial cytopathology diagnoses at a fixed price per test, which is included in cost of goods sold. The agreement lasts until December 2015 and automatically renews every year unless either party gives notice not to renew at least 12 months before the end of the current term. TCP is a specialized group that does cytopathology diagnoses only on thyroid samples. During 2012, TCP earned \$1.8 million in cytopathology testing and evaluation services. We believe the partnership yields reliable results, operational know-how, and efficient turnaround times.

#### Gene Expression Classifier (GEC)

The Afirma GEC is a proprietary molecular assay. The GEC evaluates the expression patterns of 142 genes within an FNA sample using Affymetrix arrays and a proprietary "machine-learning" algorithm. The test also evaluates 25 supplemental genes to improve classification of rare cancer subtypes. If the initial FNA is diagnosed as indeterminate, a GEC is performed in Veracyte's CLIA lab in South San Francisco, and results are given to the patient within seven to nine days. The GEC reduces the number of unnecessary surgeries by reclassifying about one-half of the indeterminate results as benign. We estimate that in a single year, this saves the healthcare system \$100 million. The test was launched commercially in January 2011 and obtained Medicare coverage a year later. A validation study for the GEC was published in *The New England Journal of Medicine* in 2012. The GEC meets new National Comprehensive Cancer Network guidelines for use of molecular diagnostic assay in management of thyroid cancer (added in 2012 and updated in 2013). Multiple peer-review journals have written articles demonstrating cost effectiveness and clinical utility of the Afirma GEC.

#### Exhibit 22 Veracyte, Inc. Afirma Test Kit and GeneChip



Sources: Company reports and William Blair & Company, L.L.C. estimates

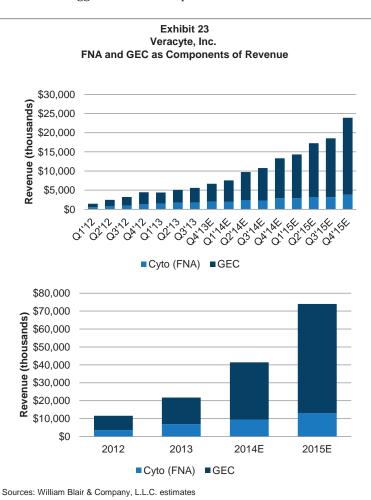
## **Financials**

#### Revenue

Veracyte generates revenue from the sale of the Afirma solution, which consists of FNAs and GECs. The company recognizes revenue on a cash basis, with the exception of Medicare (roughly 22% of revenue), for which it accrues revenue assuming roughly a \$3,000 to \$3,500 average selling price per Afirma GEC. For Medicare, Veracyte recognizes revenue on delivery of a patient report. For all tests, the company recognizes revenue on cash collection or third-party payer notification.

In our view, revenue can be broken down to FNA (30%) and GEC (70%). The FNA is considered a routine exam and will have 5 times the volume of GECs, but it carries a much lower list price at \$490 (\$150 realized ASP), versus the GEC list price of \$4,275 (\$3,500 estimated reimbursement). Over time, we forecast the FNA price to decrease given that it is a routine test and is reimbursed via a CPT code (88173) that is subject to CMS cuts. For the GEC, we project a realized price of \$1,726, but we forecast the price to increase as a result of additional payer contracts that will eventually switch to accrual accounting.

FNA volume quadrupled from 2011 to 2012, from 6,402 FNAs received to 25,890. In third quarter 2013, total FNAs received were 12,417, which annualized would be 49,668. We project a sequential increase in FNAs throughout the remainder of 2013 to reach a total of 50,111, almost doubling 2012 volumes. In 2014, we forecast total FNAs to grow 62%, to 81,215, and grow 46% in 2015, to 118,195. This growth would suggest FNA market penetration of 19% in 2015.



The Gene Expression Classifier (GEC) volume is forecast at 18% to 22% of FNA volume, given that only 15% to 30% of the FNAs will be indeterminate and reflexed to the GEC test. From 2011 to 2012, the number of GECs performed nearly tripled from 1,326 to 5,127. In the second quarter of 2013, 2,436 GEC tests were performed, which annualized would be 9,744. For full year 2013, we forecast 9,642 tests, as the third quarter tends to have slower growth sequentially. In 2014, we forecast growth of 69%, to 16,276, and in 2015, growth of 53%, to 24,908 GECs. In 2013, we project that GECs will be performed for 19% of total FNAs received, increasing to 21% in 2015. Revenue from academic centers and international sales will be predominantly GEC volume, which will allow GEC as a percent of FNA volume to reach an estimated 21%.

Total revenue grew 340% from 2011 to 2012, to \$11.6 million. We project total revenue to grow 87% in 2013, to \$21.8 million. We project total firm revenue to grow 90% (to \$41.5 million) in 2014and 79% (to \$74.2 million) in 2015. Upside to our numbers could be realized from better-thanexpected market penetration, additional payer contracts, and switching to accrual account once there is sufficient collection history. We believe switching to accrual accounting could pull forward roughly \$5 million to \$10 million in revenue.

Exhibit 24, on the following page, shows our revenue build.

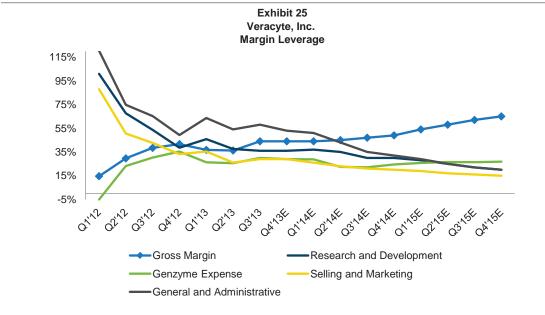
Exhibit 24 Veracyte, Inc. Revenue Build

	FY	FY			013		FY			014		FY	FY	FY
Revenue Build:	2011	2012	Q1'13	Q2'13	Q3'13E	Q4'13E	2013E	Q1'14E	Q2'14E	Q3'14E	Q4'14E	2014E	2015E	2016E
Total Revenue	\$2,645	\$11,628	\$4,385	\$5,067	\$5,594	\$6,753	\$21,799	\$7,566	\$9,719	\$10,674	\$13,519	\$41,478	\$74,222	\$119,190
Cyto (FNA)	NM	\$3,573	\$1,484	\$1,715	\$1,714	\$2,003	\$6,915	\$1,956	\$2,332	\$2,345	\$2,894	\$9,526	\$13,171	\$17,960
% Revenue	NM	31%	34%	34%	31%	30%	32%	26%	24%	22%	21%	23%	18%	15%
GEC	NM	\$8,055	\$2,900	\$3,353	\$3,880	\$4,750	\$14,883	\$5,611	\$7,387	\$8,329	\$10,625	\$31,952	\$61,051	\$101,229
% Revenue		69%	66%	66%	69%	70%	68%	74%	76%	78%	79%	77%	82%	85%
Cash Collections	2,345	\$11,100	\$4,450	\$4,800	\$5,314	\$6,483	\$21,047	\$7,566	\$8,747	\$9,286	\$12,302	\$37,902	\$69,099	\$97,632
% of Total	89%	95%	101%	95%	95%	96%	97%	100%	90%	87%	91%	91%	93%	82%
Accrued Revenue	\$300	\$528	-\$65	\$267	\$280	\$270	\$752	\$0	\$972	\$1,388	\$1,217	\$3,576	\$5,123	\$21,558
% of Total	11%	5%	-1%	5%	5%	4%	3%	0%	10%	13%	9%	9%	7%	18%
Key Metrics														
Fine Needle Aspiration														
Total Gross FNA's Received	6,402	25,890	10,757	12,424	12,417	14,513	50,111	16,673	19,878	19,991	24,672	81,215	118,195	169,656
Y/Y Growth	NM	304%	174%	121%	76%	56%	94%	55%	60%	61%	70%	62%	46%	44%
Q/Q Growth	48%	36%	16%	15%	0%	17%	12%	15%	19%	1%	23%	15%	9%	9%
Non-Dx Rate	NM	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Total Non-DX	NM	2,071	861	994	993	1,161	4,009	1,334	1,590	1,599	1,974	6,497	9,456	13,572
N. C. C. C.		00.040	0.000	44.400	44.404	10.050	10.100	45.000	40.000	40.000	00.000	74.740	400 700	450.000
Net Billable FNAs Y/Y Growth	NM NM	23,819 NM	9,896 174%	11,430 121%	11,424 <i>76%</i>	13,352 56%	46,102 107%	15,339 <i>5</i> 5%	18,288 <i>60%</i>	18,392 <i>61%</i>	22,698 70%	74,718 <i>6</i> 2%	108,739 <i>46%</i>	156,083 <i>44%</i>
Q/Q Growth	NM	34%	16%	15%	0%	17%	107%	15%	19%	1%	23%	15%	9%	9%
a) a Grown	14141	0470	1070	1070	070	1770	1270	1070	1370	170	2070	1070	370	370
FNA Realized ASP	NM	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13	\$0.12	\$0.12
Y/Y Growth	NM	NM	0%	0%	0%	0%	0%	-15%	-15%	-15%	-15%	-15%	-5%	-5%
Total Cyto (FNA) revenue	NM	\$3,573	\$1,484	\$1,715	\$1,714	\$2,003	\$6,915	\$1,956	\$2,332	\$2,345	\$2,894	\$9,526	\$13,171	\$17,960
Y/Y Growth	NM	NM	174%	121%	76%	56%	107%	32%	36%	37%	45%	37%	39%	37%
Q/Q Growth	NM	34%	16%	15%	0%	17%	12%	-2%	19%	1%	23%	10%	8%	8%
		0440	0.400	0.400	0.454	0.405	0.405	0.454	0.400	0504	05.10	0544	<b>#</b> 000	<b>#700</b>
Average Revenue / FNA Y/Y Growth	NM NM	\$449 NM	\$408 9.0%	\$408 -7.7%	\$451 -1.5%	\$465 -2.9%	\$435 -3.1%	\$454 11.3%	\$489 19.9%	\$534 18.5%	\$548 17.8%	\$511 17.4%	\$628 23.0%	\$703 11.9%
Q/Q Growth	NM	9%	-14.9%	0%	10%	3%	-0.3%	-2.5%	8%	9%	3%	4.3%	6.5%	0.9%
	TAIN	570	14.570	070	1070	070	0.070	2.070	070	570	070	4.070	0.070	0.070
Gene Expression Classifier														
GEC Rate as a % of FNA's	21%	20%	18%	20%	20%	19%	19%	19%	20%	21%	20%	20%	21%	21%
Total Gross GEC's Y/Y Growth	1,326 NM	5,127 287%	1,965 151%	2,436 104%	2,483 96%	2,757 47%	9,642 88%	3,168 61%	3,976 63%	4,198 69%	4,934 79%	16,276 69%	24,908 53%	35,628 43%
Q/Q Growth	49%	36%	5%	24%	2%	11%	10%	15%	25%	6%	18%	16%	12%	8%
Q Q 0.0	1070	0070	0,0	2170	270	1170	1070	1070	2070	070	1070	1070	1270	0,0
No-Result Rate	NM	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%
Total No Result	NM	564	216	268	283	303	1,071	348	437	462	543	1,790	2,740	3,919
Total Net GECs	NM	4,563	1,749	2,168	2,200	2,454	8,571	2,819	3,538	3,736	4,392	14,486	22,168	31,709
Y/Y Growth	NM	NM	151%	104%	95%	47%	99%	61%	63%	70%	79%	68%	54%	44%
Q/Q Growth	NM	36%	5%	24%	1%	12%	10%	15%	25%	6%	18%	16%	12%	8%
GEC Realized ASP	NM	\$1.71	\$1.7	\$1.5	\$1.76	\$1.94	\$1.73	\$2.0	\$2.1	\$2.2	\$2.4	\$2.18	\$2.7	\$3.19
Y/Y Growth	NM	NM	25%	-3%	-12%	2%	1%	20%	35%	26%	25%	26%	25%	17%
		40.055							AT 00T	40.005	440.005	004.050		0101.005
Total GEC revenue	NM	\$8,055	\$2,900	\$3,353	\$3,880	\$4,750	\$14,883	\$5,611	\$7,387	\$8,329	\$10,625	\$31,952	\$61,051	\$101,229

(In thousands, except volume, share and per share amounts) Sources: Company reports and William Blair & Company, L.L.C. estimates

#### Cost of Revenue and Gross Margin

Included in the cost of revenue is stock-based compensation, direct labor costs, equipment/infrastructure expenses, shipping charges, and overhead. Costs in performing the test are recognized when performed, not when billed; therefore, until the company is able to switch to accrual accounting, there may be some lumpiness in cost of revenue. Gross margins were 15% in first quarter 2012 and jumped to 30% in second quarter 2012, largely driven by the positive Medicare coverage decision for the Afirma GEC test. We forecast gross margin to expand based on increased payer contracts and coverage, higher reimbursement on the GEC test, and operational efficiencies as the business scales. In 2013, we estimate gross profit margin to be 40%, expanding to 46% in 2014 and 60% in 2015.



Sources: Company reports and William Blair & Company, L.L.C. estimates

#### **Operating Expenses**

Veracyte reports three lines of operating expenses: research and development, sales and marketing, and general and administrative. In addition to rapid adoption of the GEC test, Veracyte's ability to control operating expenses is essential to reaching profitability. Total operating expenses were 2.0 times reported revenue in 2012 as the firm ramped up its commercial operations. In 2013, we estimate total operating expenses to be 1.5 times revenue, driven by a decrease in the Genzyme co-promotion fee and lower R&D spending as percent of revenue. We project operating expenses to be 1.2 times revenue in 2014 and 0.9 times in 2015.

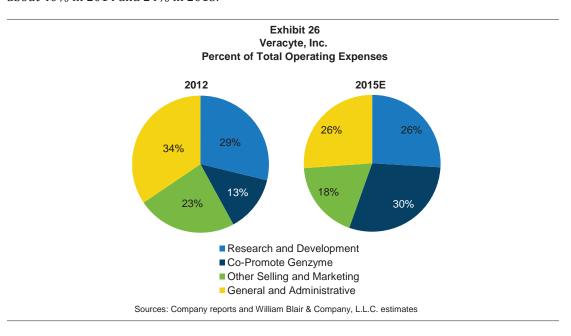
Research and development expense include costs incurred to develop technology and perform clinical studies, along with costs for prototype materials, laboratory supplies, and allocated overhead. R&D expense in total will increase but become a lower percentage of revenue. In 2013, we forecast \$8.4 million in R&D expense, representing 39% of revenue. However, we estimate R&D expenses of \$13.5 million in 2014, or 33% of revenue, and \$17.2 million in 2015, or 24% of revenue. R&D will be used to conduct further studies on the Afirma GEC test, to develop Afirma Malignant GEC and idiopathic pulmonary fibrosis tests, and genomic signature discovery for further molecular cytology-based tests.

Sales and marketing can be broken down into traditional sales and marketing and the Genzyme co-promotion fee. Traditional sales and marketing consists of direct marketing costs, stock-based compensation, consulting costs, and allocated overhead. The Genzyme co-promotion expense consists of Genzyme's negotiated percentage of cash collected for its sales representatives selling the Afirma test. Genzyme is paid 50% of cash received in 2012, 40% in 2013, and 32% in 2014 and beyond,

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which limits Veracyte's operational leverage. The total cash paid to Genzyme in 2012 was \$3.0 million. We estimate that the Genzyme co-promotion fee will be 6.1 million in 2013 and will increase to 10.0 million in 2014 and 10.0 million in 2015. The total amount paid to Genzyme by 2015 will be roughly 38.8 million, representing an IRR of 58% on the initial investment of 10 million. The traditional sales and marketing expense will increase in total, but at a rate slower than revenue growth.

General and administrative expenses include executive and non-salesforce employees and audit, legal, and overhead expenses. In 2013, G&A expenses will be abnormally higher because of IPO expenses, audit and SEC compliance costs, and NASDAQ Market expenses. In 2012, G&A expense was 68% of revenue; we project that will decline to 57% in 2013. We expect G&A expense to be about 40% in 2014 and 24% in 2015.



#### **Earnings and Share Count**

On October 9, 2013, Veracyte completed a four-for-one reverse split and had 15,989,890 shares outstanding before its IPO. The company offered 5 million shares and granted the underwriters the right to purchase up to 750,000 additional shares for the overallotment option. Following the IPO, there are 20,989,890 basic shares, with an additional 2,413,954 shares in options outstanding, 24,801 shares issuable for warrants if exercised, and 144,585 shares for future issuance. We estimate the fully diluted share count to be 23,531,675 for 2013 and to grow slightly in the future as additional options are granted. We forecast a loss per share of \$1.19 in 2013, a loss of \$1.21 in 2014, and a loss of \$0.82 in 2015.

#### **Capital Structure and Funding**

Veracyte has raised capital via public/private equity, debt through common stock, preferred shares, and loan agreements. In June 2013, Veracyte entered a loan agreement for up to \$10 million. The company drew down an initial \$5 million, which has a fixed rate of 6.06%. If the company draws the remaining \$5 million, the terms will be the greater of fixed 5.88% or the three-year treasury note plus 540 basis points. The loan agreement is secured by security interest on substantially all of the company's assets. The financial institution for the loan (which has not been disclosed) was granted a warrant for 24,801 shares, and if the remaining \$5 million is drawn, the institution will be granted an additional warrant for 24,801 shares. Before going public, Veracyte raised roughly \$78 million in venture capital through five rounds of series A, four rounds of series B, and two rounds of series C financing. Private investors included Domain Partners, Versant Ventures, TPG Biotechnology Partners, Kleiner Perkins Caufield & Byers (KPCB), GE Capital, and jVen Capital. Veracyte raised a net \$58 million in its IPO.

Exhibit 27 Veracyte, Inc. Projected Income Statement

	FY	FY		20	13		FY		20	)14		FY	FY	FY
	2011	2012	Q1'13	Q2'13	Q3'13E	Q4'13E	2013E	Q1'14E	Q2'14E	Q3'14E	Q4'14E	2014E	2015E	2016E
Revenue:	\$2,645	\$11,628	\$4,385	\$5,067	\$5,594	\$6,753	\$21,799	\$7,566	\$9,719	\$10,674	\$13,519	\$41,478	\$74,222	\$119,190
Cost of Services:	\$2,925	\$7,584	\$2,773	\$3,231	\$3,132	\$3,782	\$12,918	\$4,237	\$5,346	\$5,657	\$6,895	\$22,134	\$29,312	\$39,789
Gross Profit	-\$281	\$4,044	\$1,611	\$1,836	\$2,462	\$2,971	\$8,881	\$3,329	\$4,374	\$5,017	\$6,624	\$19,344	\$44,910	\$79,401
Operating expenses: Research and development Total Selling & Marketing General & Administrative Total Operating Expenses	\$6,680 \$2,934 \$5,371 \$14,985	\$6,608 \$8,447 \$7,918 \$22,973	\$2,010 \$2,703 \$2,791 \$7,504	\$1,902 \$2,615 \$2,737 \$7,254	\$2,028 \$3,291 \$3,244 \$8,563	\$2,431 \$3,926 \$3,579 \$9,936	\$8,371 \$12,536 \$12,351 \$33,257	\$2,800 \$4,142 \$3,859 \$10,800	\$3,402 \$4,410 \$4,179 \$11,991	\$3,202 \$4,588 \$3,736 \$11,526	\$4,056 \$6,016 \$4,326 \$14,398	\$13,459 \$19,155 \$16,100 \$48,714	\$49,210 \$17,220 \$31,847 \$17,364 \$66,430	\$63,599 \$20,718 \$46,001 \$17,599 \$84,318
Operating Income	-\$15,265	-\$18,929	-\$5,893	-\$5,418	-\$6,101	-\$6,965	-\$24,376	-\$7,471	-\$7,617	-\$6,509	-\$7,773	-\$29,370	-\$21,520	-\$4,916
Interest Income (Expense) Other Expense	\$2 \$819	\$2 \$278	\$1 -\$1,003	-\$5 -\$1,068	-\$126 -\$76	-\$124 \$0	-\$255 -\$2,147	-\$119 \$0	-\$121 \$0	-\$122 \$0	-\$123 \$0	-\$485 \$0	-\$388 \$0	-\$195 \$0
Net Income/Loss	-\$14,445	-\$18,649	-\$6,895	-\$6,491	-\$6,303	-\$7,090	-\$26,778	-\$7,590	-\$7,738	-\$6,632	-\$7,896	-\$29,855	-\$21,908	-\$5,112
EPS basic EPS fully diluted	-\$6.23 -\$0.72	-\$7.17 -\$0.89	-\$0.33 -\$0.32	-\$0.31 -\$0.30	-\$0.30 -\$0.27	-\$0.34 -\$0.30	-\$1.29 -\$1.19	-\$0.35 -\$0.32	-\$0.35 -\$0.32	-\$0.30 -\$0.27	-\$0.35 -\$0.31	-\$1.35 -\$1.21	-\$0.92 -\$0.82	-\$0.21 -\$0.18
W.Avg Shares Outstanding basic W.Avg Shares Outstanding diluted	2,320 19,992	2,601 20,910	20,690 21,846	20,690 21,846	20,690 23,070	21,104 23,532	20,793 22,574	21,526 24,002	21,956 24,482	22,395 24,972	22,843 25,471	22,180 24,732	24,009 26,771	25,351 28,267
Margin Analysis: Gross Margin Total Operating Expenses Research and development Selling & Marketing General & Administrative EBIT Tax Rate Net Income/Loss	-11% -567% 253% 111% 203% -577% NM -546%	35% -198% 57% 73% 68% -163%	37% -171% 46% 62% 64% -134%	36% -143% 38% 52% 54% -107%	44% -153% 36% 59% 58% -109%	44% -147% 36% 58% 53% -103%	40% -154% 39% 58% 57% -113%	44% -143% 37% 55% 51% -99%	45% -123% 35% 45% 43% -78%	47% -108% 30% 43% 35% -61%	49% -106% 30% 44% 32% -57%	46% -120% 33% 47% 40% -74%	60% -91% 24% 43% 24% -31%	67% -71% 18% 39% 15% -5%
Growth Metrics: Total Revenue Growth Gross Profit Total Operating Expenses Research and development Selling & Marketing General & Administrative EBIT Tax Rate Net Income/Loss	NM NM NM NM NM NM NM	340% -1541% 53% NM NM NM -24% NM -29%	199% 653% 68% 36% 122% 58% -39% 122% -62%	104% 150% 35% 13% 43% 48% -17% 43% -40%	74% 99% 39% 17% 40% 54% -24% 40% -28%	52% 60% 42% 41% 29% 63% -36% 29% -47%	87% 120% 45% 27% 48% 56% -29% NM -44%	73% 107% 44% 39% 53% 38% -27%	92% 138% 65% 79% 69% 53% -41%	91% 104% 35% 58% 39% 15% -7%	100% 123% 45% 67% 53% 21% -12%	90% 118% 46% 61% 53% 30% -20%	79% 132% 36% 28% 66% 8% 27%	61% 77% 27% 20% 44% 1% 77%
EPS Shares Outstanding	NM NM	86% 5%	81% 0%	83% 0%	84% 6%	82% 2%	-33% 699%	-6% 2%	-12% 2%	3% 2%	-3% 2%	-2% 7%	32% 8%	78% 6%

(In thousands, except volume, share and per share amounts) Sources: Company reports and William Blair & Company, L.L.C. estimates

William Blair & Company, L.L.C.

Exhibit 28 Veracyte, Inc. Projected Balance Sheet

	FY	FY			13		FY			14		FY	FY	FY
	2011	2012	Q1'13	Q2'13	Q3'13E	Q4'13E	2013	Q1'14E	Q2'14E	Q3'14E	Q4'14E	2014E	2015E	2016E
Assets														
Current assets														
Cash and cash equivalents	\$7,566	\$14,002	\$7,072	\$20,683	\$15,426	\$66,722	\$66,722	\$59,674	\$53,131	\$47,104	\$40,706	\$40,706	\$23,042	\$22,913
Accounts receivable, net of allowance	\$229	\$569	\$464	\$991	\$714	\$983	\$983	\$1,177	\$1,512	\$1,660	\$2,103	\$2,103	\$3,780	\$5,473
Supplies inventory	\$279	\$1,050	\$737	\$770	\$1,392	\$1,176	\$1,176	\$1,130	\$1,366	\$1,383	\$1,609	\$1,609	\$1,512	\$1,877
Prepaid expenses and other current assets	\$519	\$710	\$854	\$1,398	\$2,938	\$2,938	\$2,938	\$2,938	\$2,938	\$2,938	\$2,938	\$2,938	\$2,938	\$2,938
Restricted cash	\$0	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total current assets	\$8,593	\$16,381	\$9,127	\$23,841	\$20,470	\$71,820	\$71,820	\$64,919	\$58,947	\$53,085	\$47,355	\$47,355	\$31,272	\$33,201
Property and equipment, net	\$1,687	\$2,446	\$2,826	\$3,025	\$2,826	\$2,755	\$2,755	\$2,803	\$2,783	\$2,749	\$2,626	\$2,626	\$2,965	\$3,091
Restricted cash	\$168	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118
Other assets	\$3	\$122	\$108	\$175	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157	\$157
Total assets	\$10,451	\$19,067	\$12,179	\$27,159	\$23,571	\$74,850	\$74,850	\$67,997	\$62,005	\$56,109	\$50,257	\$50,257	\$34,513	\$36,567
Liabilities														
Accounts payable	\$550	\$1,888	\$1,651	\$1,906	\$5,604	\$3,782	\$3,782	\$4,002	\$4,752	\$4,714	\$5,363	\$5,363	\$5,198	\$6,881
Accrued liabilities	\$1,336	\$4,021	\$3,168	\$5,387	\$4,416	\$6,828	\$6,828	\$7,566	\$8,747	\$9,725	\$11,266	\$11,266	\$17,552	\$22,284
Deferred up-front fee	\$0	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500
Preferred stock liability	\$0	\$583	\$1,585	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total current liabilities	\$1,886	\$8,992	\$8,903	\$9,793	\$12,520	\$13,109	\$13,109	\$14,068	\$15,999	\$16,939	\$19,129	\$19,129	\$25,250	\$31,665
Long-term debt	\$0	\$0	\$0	\$4,826	\$4,863	\$4,863	\$4,863	\$4,863	\$4,864	\$4,864	\$4,864	\$4,864	\$2,945	\$1,027
Deferred rent, net of current portion	\$35	\$61	\$71	\$264	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250	\$250
Preferred stock warrant liability	\$0	\$0	\$0	\$175	\$252	\$252	\$252	\$252	\$252	\$252	\$252	\$252	\$252	\$252
Deferred Genzyme co-promotion fee, net of current portion	\$0	\$5,114	\$4,489	\$3,864	\$3,239	\$2,614	\$2,614	\$1,989	\$1,364	\$739	\$114	\$114	\$0	-\$114
Total liabilities	\$1,921	\$14,167	\$13,463	\$18,922	\$21,124	\$21,089	\$21,089	\$21,423	\$22,729	\$23,044	\$24,609	\$24,609	\$28,697	\$33,080
Convertible preferred stock	\$49,297	\$63,372	\$63,372	\$79,025	\$79,022	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Stockholders' Equity/Deficit														
Common stock, \$.001 par value	\$2	\$3	\$3	\$4	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
Additional paid-in capital	\$651	\$1,595	\$2,304	\$2,663	\$3,181	\$140,607	\$140,607	\$141,010	\$141,450	\$141,870	\$142,348	\$142,348	\$144,425	\$147,208
Accumulated deficit	-\$41,421	-\$60,069	-\$66,964	-\$73,455	-\$79,757	-\$86,847	-\$86,847	-\$94,437	-\$102,174	-\$108,806	-\$116,702	-\$116,702	-\$138,610	-\$143,722
Total stockholders' deficit	-\$40,767	-\$58,472	-\$64,656	-\$70,789	-\$76,575	\$53,761	\$53,761	\$46,574	\$39,276	\$33,065	\$25,648	\$25,648	\$5,815	\$3,488
Total Liabilities & Stockholder's Equity/Deficit	\$10,451	\$19,067	\$12,179	\$27,159	\$23,571	\$74,850	\$74,850	\$67,997	\$62,005	\$56,109	\$50,257	\$50,257	\$34,513	\$36,567

(In thousands, except share and per share amounts)
Sources: Company reports and William Blair & Company, L.L.C. estimates

Exhibit 29 Veracyte, Inc. Projected Cash Flow

	FY 2011	FY 2012	Q1'13	201 Q2'13	3 Q3'13E	Q4'13E	FY 2013	Q1'14E	201 Q2'14E	4 Q3'14E	Q4'14E	FY 2014E	FY 2015E	FY 2016E
Operating	2011	2012	QI IS	Q2 13	Q3 I3E	Q4 13E	2013	QT 14E	Q2 14E	Q3 14E	Q4 14E	2014E	2015E	2010E
Net Income/loss	-\$14.445	-\$18,649	-\$6,895	-\$6.491	-\$6,303	-\$7,090	-\$26,778	-\$7,590	-\$7,738	-\$6,632	-\$7,896	-\$29,855	-\$21,908	-\$5,112
Depreciation and amortization	\$611	\$706	\$197	\$231	\$289	\$321	\$1.038	\$303	\$369	\$384	\$473	\$1.529	\$1.061	\$1,274
Bad debt expense	\$235	\$225	\$93	\$25	\$66	\$68	\$252	\$76	\$97	\$107	\$135	\$415	\$491	\$596
Other	\$0	-\$1,730	\$581	\$731	-\$140	-\$321	\$851	-\$322	-\$285	-\$305	-\$246	-\$1,158	\$1.562	\$2,270
Changes in operating assets and liabilities:	\$0 \$0	\$12,280	-\$625	\$1.530	\$849	\$469	\$2,223	\$736	\$1,262	\$668	\$1,386	\$4.052	\$4.049	\$3,762
Net cash used in operating activities	-\$13,524	-\$7,167	-\$6,649	-\$3,974	-\$5,238	-\$6,554	-\$22,415	-\$6,799	-\$6,293	-\$5.777	-\$6,148	-\$25,018	-\$14.745	\$2,790
Net cash used in operating activities	-ψ13,324	-φ1,101	-ψ0,043	-ψ5,51-	-ψ3,230	-ψ0,554	-\$22,413	-ψ0,133	-\$0,233	-\$5,111	-ψ0,140	-φ23,010	-\$14,743	Ψ2,130
Investing														
CapEx	-\$276	-\$1,462	-\$577	-\$364	-\$120	-\$250	-\$1.311	-\$350	-\$350	-\$350	-\$350	-\$1,400	-\$1.400	-\$1,400
Change in restricted cash	-\$55	\$0	\$50	\$0	\$0	\$0	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net cash used in investing activities	-\$332	-\$1,462	-\$527	-\$364	-\$120	-\$250	-\$1,261	-\$350	-\$350	-\$350	-\$350	-\$1,400	-\$1,400	-\$1,400
	****	<b>4</b> .,	**	****	*	4	¥1,=11	****	****	*****	****	¥1,111	41,100	<b>4</b> 1,100
Financing														
Proceeds issuance of long-term debt	\$0	\$0	\$0	\$4,877	\$0	\$0	\$4,877	\$0	\$0	\$0	\$0	\$1	-\$1,919	-\$1,919
Proceeds issuance of convertible preferred stock	\$18,622	\$14,989	\$0	\$12,998	-\$53	\$0	\$12,945	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Proceeds issuance of common stock	\$0	\$0	\$0	\$0	\$0	\$58,000	\$58,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Repayments for repurchase of restricted common stock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Proceeds from the exercise of common stock options	\$24	\$76	\$247	\$73	\$154	\$100	\$574	\$100	\$100	\$100	\$100	\$400	\$400	\$400
Net cash provided by financing activities	\$18,646	\$15,065	\$247	\$17,948	\$102	\$58,100	\$76,396	\$100	\$100	\$100	\$100	\$401	-\$1,519	-\$1,519
Net increase/decrease cash & cash equivalents	\$4,791	\$6,436	-\$6,930	\$13,610	-\$5,257	\$51,296	\$52,720	-\$7,048	-\$6,543	-\$6,027	-\$6,398	-\$26,017	-\$17,664	-\$129
Beginning of period	\$2,775	\$7,566	\$14,002	\$7,072	\$20,683	\$15,426	\$14,002	\$66,722	\$59,674	\$53,131	\$47,104	\$66,722	\$40,706	\$23,042
End of period	\$7,566	\$14,002	\$7,072	\$20,683	\$15,426	\$66,722	\$66,722	\$59,674	\$53,131	\$47,104	\$40,706	\$40,706	\$23,042	\$22,913

(In thousands, except share and per share amounts) Sources: Company reports and William Blair & Company, L.L.C. estimates William Blair & Company, L.L.C.

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DJIA: 16,072.54 S&P 500: 1,802.48 NASDAQ: 3,994.57

The prices of the common stock of other public companies mentioned in this report follow:

\$68.80
\$7.97
\$5.89
\$8.51
\$1.50
\$57.44
\$0.78
\$9.00
\$31.84
\$25.75
\$35.02
\$5.36
\$103.48
\$98.35
\$105.84
\$3.92
\$62.36
\$42.70

Regado Biosciences, Inc.	\$4.85
Sanofi	\$78.53
Tandem Diabetes Care, Inc.	\$20.18
UnitedHealth Group Incorporated	\$74.07

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Coverage Universe Perc	ent	Inv. Banking Relationships*	Percent
Outperform (Buy)	62%	Outperform (Buy)	11%
Market Perform (Hold)	34%	Market Perform (Hold)	2%
Underperform (Sell)	1%	Underperform (Sell)	0%

<sup>\*</sup> Percentage of companies in each rating category that are investment banking clients, defined as companies for which William Blair has received compensation for investment banking services within the past 12 months.

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