

Reason for report:

FLASH NOTE

CAREDx, INC.

Data Augments Bullish View

• **Bottom Line:** We consider the data presented at the annual International Society for Heart & Lung Transplantation (ISHLT) meeting supportive of our view that cell-free DNA (cfDNA) testing will enhance CDNA's growth opportunity in the transplant market. We continue to rate CDNA's stock Outperform.

• **Adding cfDNA to Allomap score can improve test performance.** Data presented at ISHLT show that adding cfDNA measurement to the existing Allomap score for heart transplant recipients increases the area under the receiver-operating characteristic (ROC) curve to 0.78 from 0.68 with Allomap alone. Area under the curve (AUC) is a common metric for assessing the potential performance of a diagnostic test; a higher number is better. This result thus suggests the cfDNA marker should improve the ability of Allomap to assess the likelihood of heart transplant rejection, and could be even superior to biopsy.

• **cfDNA marker could be multi-faceted.** Data presented at ISHLT suggest that cfDNA could be a multi-faceted biomarker in transplant recipients. Not only does it show the potential to assess risk of rejection, but it also shows potential to detect rejection earlier than biopsy, track response to treatment for rejection, and offer information that is independent and additive to the Allomap score.

• **Assay development non-trivial.** We consider CDNA's achievements in developing a cfDNA assay for transplant recipients non-trivial and underappreciated. While the testing concept is similar to non-invasive prenatal testing (NIPT), the concentration of target is much lower. CDNA's assay is capable of detecting cfDNA at concentrations of 3ng – 5ng / ml of blood. Additionally, CDNA's assay does not require donor and recipient genotyping in advance of assay administration, a significant process advantage.

• **Availability of analytically valid cfDNA assay targeted for December 2015.** It remains to be seen how CDNA will present the cfDNA data on the Allomap report, but we believe the data could be additive in multiple formats. The potential availability of cfDNA information on the Allomap report in 2016 augments our view that Allomap revenue growth will accelerate from ~12% in 2015 to 15% in 2016.

• **More kidney discussion at American Transplant Congress (ATC).** The cfDNA opportunity in kidney transplant recipients represents a larger market opportunity than heart. CDNA has suggested we could hear more information about this application at the annual ATC meeting in May in Philadelphia.

Key Stats:

(NASDAQ:CDNA)

S&P 600 Health Care Index:	1,662.26
Price:	\$5.38
52 Week High:	\$10.89
52 Week Low:	\$5.02
Shares Outstanding (mil):	12.0
Market Capitalization (mil):	\$64.6

Disclosures Appendix

Analyst Certification

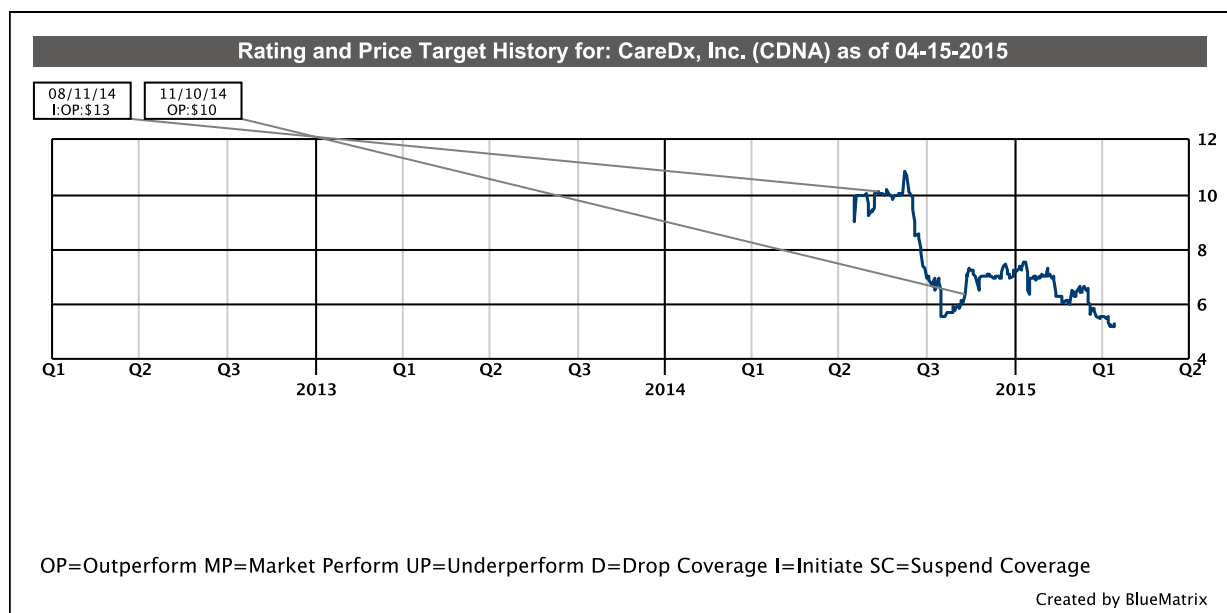
I, Dan Leonard, certify that the views expressed in this report accurately reflect my views and that no part of my compensation was, is, or will be directly related to the specific recommendation or views contained in this report.

Valuation

Our \$10 price target corresponds to an enterprise value (using projected levels of debt and cash) that is ~3.5x our revenue estimate for the twelve months ended Dec-16. This is a slight discount to the tools/diagnostics peer group median multiple of ~4x, which we believe adequately balances concerns over the size of CDNA's opportunity in heart transplant with its opportunities in kidney and other transplants.

Risks to Valuation

CDNA's risks include, but are not limited to: the trajectory of the AlloMap revenue ramp, the ability to successfully develop and commercialize products using cfDNA for transplant surveillance, and the impact of a changing regulatory environment in the U.S. for diagnostics.



Distribution of Ratings/Investment Banking Services (IB) as of 03/31/15				
Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [OP]	151	70.20	55	36.00
HOLD [MP]	64	29.80	2	3.00
SELL [UP]	0	0.00	0	0.00

Explanation of Ratings

Outperform (Buy): We expect this stock to outperform its benchmark over the next 12 months.

Market Perform (Hold/Neutral): We expect this stock to perform in line with its benchmark over the next 12 months.

Underperform (Sell): We expect this stock to underperform its benchmark over the next 12 months. The degree of outperformance or underperformance required to warrant an Outperform or an Underperform rating should be commensurate with the risk profile of the company.

For the purposes of these definitions the relevant benchmark will be the S&P 600® Health Care Index for issuers with a market capitalization of less than \$2 billion and the S&P 500® Health Care Index for issuers with a market capitalization over \$2 billion.

Important Disclosures

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In the past 12 months, the Firm has received compensation for providing investment banking services to CareDx, Inc. .

Leerink Partners LLC makes a market in CareDx, Inc.

Leerink Partners LLC has acted as the manager for a public offering of CareDx, Inc. in the past 12 months.

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