



## CareDx Inc.- CDNA (6/13/19)

**Description:** CareDx, Inc is a transplant diagnostics company that focuses on the discovery, development, and commercialization of diagnostic solutions for transplant patients worldwide. CareDx was incorporated in 1998 and is headquartered in Brisbane, California.

**Ticker:** CDNA

**Price:** \$37.93

**Market Cap:** \$1.5B

**Performance:** +50.9% YTD

### Analysis

CareDx has been a high flyer this year up over 50% but that's just the tip of the iceberg. CDNA used to trade at just over a \$1 back in 2017. Shares have been on a tear because the company has been able to ramp up revenue growth dramatically over the last couple of years and even more so recently.





For example:

Q1 2017

Revenue: \$11.6M (+76.5% Y/Y)

Full Year 2017 Rev: \$48.3M

Q1 2018

Revenue: \$14.0M (+21.3% Y/Y)

Full Year 2018 Rev: \$76.6M

Q1 2019

Revenue: \$25.98M (+85% Y/Y)

2019 Rev Guidance: \$113M – 115M

As you can see, even though revenues have been growing they've been growing even faster now for CDNA and the company has also translated it into positive EPS with \$0.05 in its latest quarter.

In addition:

- Provided 5,710 AlloSure patient results for approximately 4,300 kidney transplant patients
- Continued progress in AlloSure Registry enrollment with 50 centers initiated and 1,006 patients enrolled as of March 31, 2019
- Provided 4,280 AlloMap patient results, increasing 11% year-over-year
- Testing services revenue of \$21.5 million, growth of 103% compared to prior year period
- Product revenue of \$4.4 million, increase of 34% year-over-year
- Generated GAAP net loss of \$7.5 million, adjusted net income of \$2.2 million and positive adjusted EBITDA of \$1.8 million

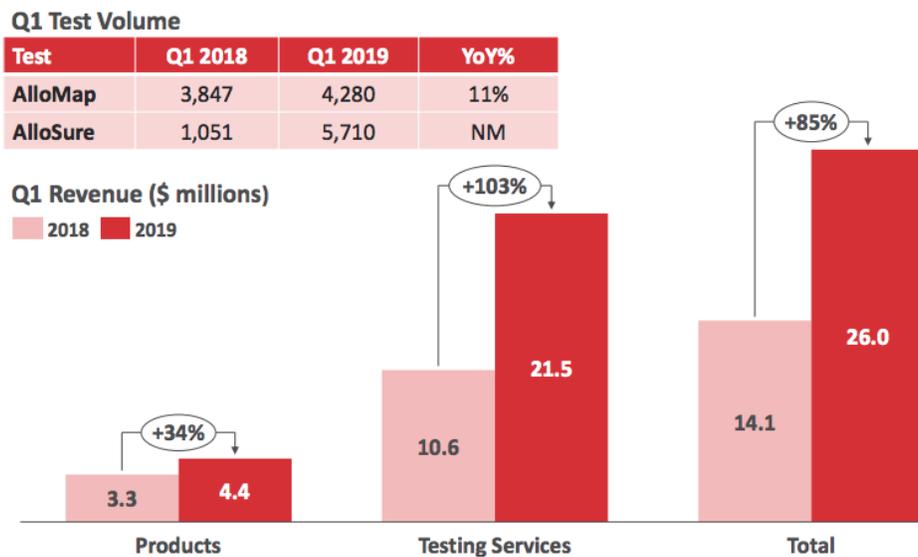
Just to further clarify what CDNA does. Their diagnostic services are intended to reduce the chances of organ rejection from the donor to the recipient with respect to a transplant. CDNA used to focus only on heart transplant-related diagnostics but now focuses on kidney transplants as well. CDNA tests detect fragmented DNA to determine if a transplanted kidney has suffered a graft injury and also monitors a patient for a possible rejection of the organ.

AlloMap is for heart transplants:

- Reduces patients’ pain, anxiety, and risk caused by biopsies through a simple, non-invasive method of blood sample collection
- Gives providers accurate information on the risk of acute cellular rejection in their patients following heart transplant

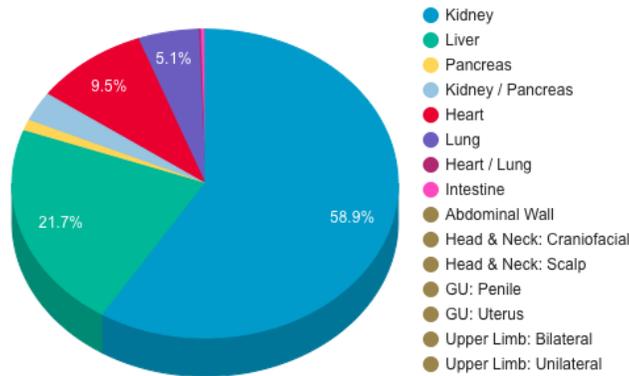
AlloSure assesses the health of a transplanted kidney and aids in the management of post-transplant care.

- Measures the level of donor-derived cell-free DNA (dd-cfDNA) in your blood
- When injury to the transplanted kidney occurs, dd-cfDNA is released into your blood. An increase in dd-cfDNA can be a sign of rejection.
- AlloSure provides information that can help your doctor determine the right treatment for you



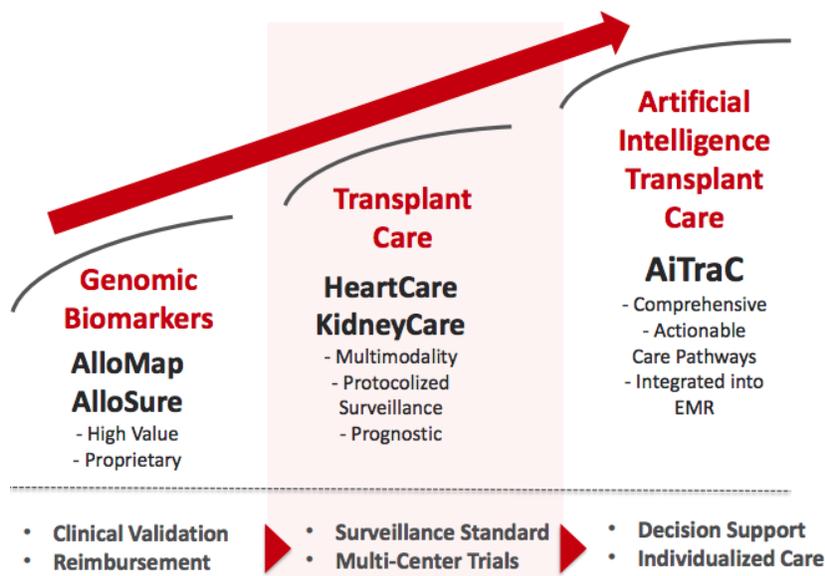
AlloMap and AlloSure, both of which are testing services, have propelled CDNA’s business but Y/Y it’s been AlloSure pulling most of the weight with a near 6x growth in testing volume.

It’s also worth noting that since launching AlloSure in October 2017, CDNA has provided results to over 8,000 patients which equates to approximately 4% of the total number of living kidney transplant patients. Taking it a step further, data I’ve found shows that there were over 21,000 kidney transplants performed in 2018 and over 3,400 heart transplants.



Furthermore, kidney transplants make up nearly 59% of all transplants and these numbers aren't slowing down as studies we've found also indicate that the global organ transplantation market is expected to grow at a CAGR of 9.8% from 2017-2023. The 36,527 organ transplants performed in the United States in 2018 set an annual record for the sixth straight year, according to preliminary data from the Organ Procurement and Transplantation Network (OPTN). In 2018, the total number of organ transplants exceeded 750,000 performed since 1988, the first full year national transplant data were collected.

The point we are making here is that there is a large addressable market for CDNA. In fact, in CDNA's last earnings report, they valued the total addressable market for AlloSure at \$2B.

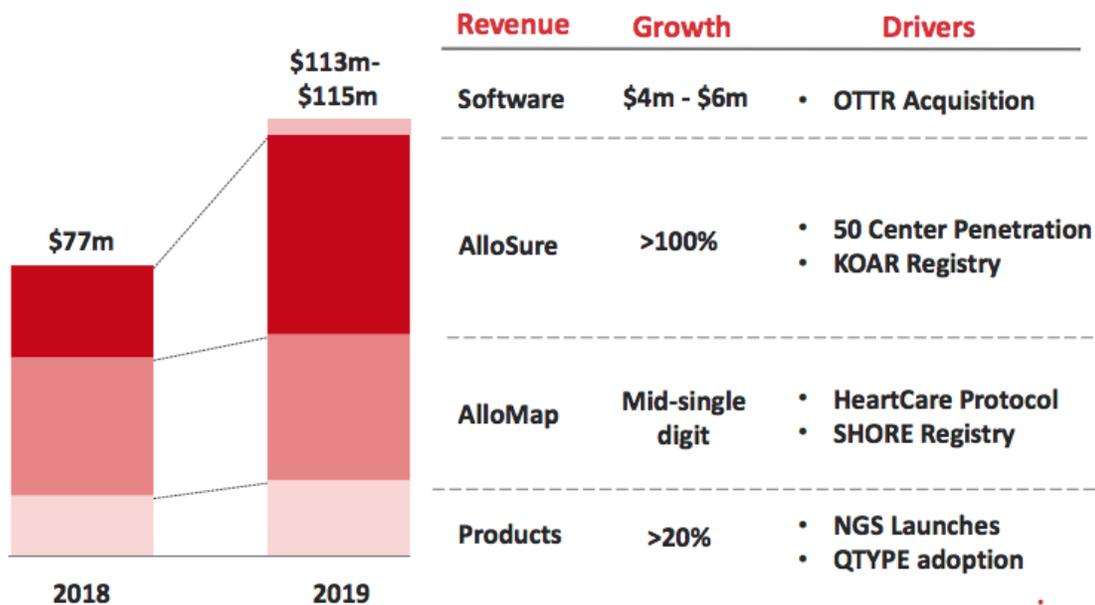


The major question we must ask ourselves is where can CDNA take this? There definitely appears to be solid growth in the testing services space but is there anything else on the horizon? According to the image above, the answer is, yes. CDNA begins with testing services via AlloSure and AlloMap to ensure the transplants performed are working properly in the new carriers but then also wants to take it two steps further via transplant care and a more-hands on approach with artificial intelligence transplant care.

CDNA has been pretty much a first mover in this space and as a way of building their moat they acquired organ transplant patient tracking software provider OTTR Complete Transplant Management for \$16M in an all cash deal. OTTR expects \$6M - 8M in revenue this year so CDNA was able to snag the company for roughly 2x sales.

As a result, the company increased their guidance for the full-year in the latest quarter from \$105M-107M to \$113-115M. The good news here is that when we dove into the conference call, management said, "... I think the growth on the guidance, yeah you're right. Roughly half of that comes from the acquisition of OTTR, the other is really, really being driven by our expectations on the continued AlloSure growth. I think again for the quarter, AlloSure slightly exceeded our expectations and so we increased the guidance to represent not so. So yes, it's just continued acceptance of AlloSure."

We also found another quote, "The increase is roughly half is coming from OTTR. So that some \$6 million to \$8 million is for the full year for OTTR, so probably for May through to December since the acquisition, we're looking at something like \$4 million to \$5 million revenue coming from OTTR. So the delta for the increase in the guidance which is about \$8 million at the midpoint is coming really from AlloSure and sort of continued expected growth of that."



If we break down the numbers we can see how well CDNA has grown the business. Gross margins have jumped to 67% and the company has finally gotten EBITDA to turn positive.

CEO Peter Maag also said on the call, “And so we'll be getting the full expense for those over the next couple of quarters. I think though, with our increased revenue guidance increased revenue guidance, we're still targeting to be EBITDA positive for that – throughout the full –throughout the year and from up a – from a margin perspective, AlloSure is going to be a breakeven from an EBITDA perspective, so very, very small impact on gross margins and very small impact on EBITDA margin overall.”

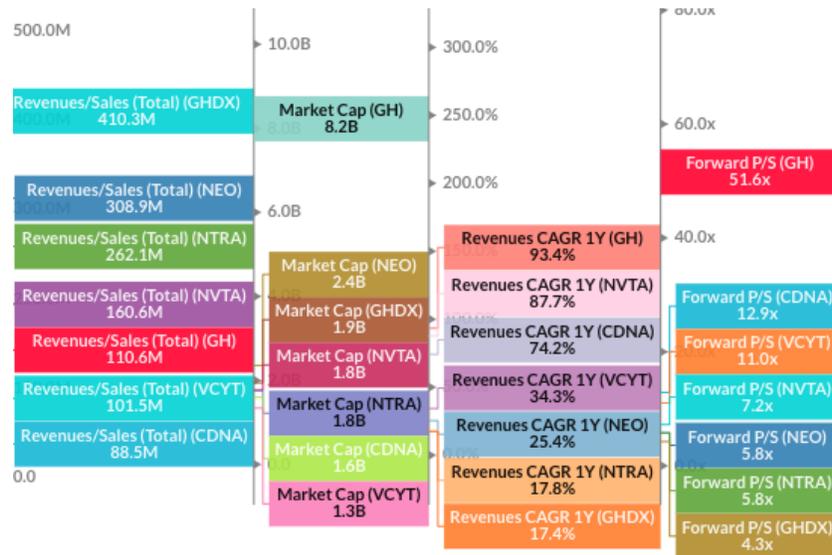
According to management, we can expect margins to remain around this range for the rest of the year. In that case, if CDNA does meet their midpoint revenue guide of \$114M and 7% EBITDA margins we should be looking at \$8M in EBITDA for FY19.

\$ millions

<b>Non-GAAP*</b>	<b>Q1 2018</b>	<b>Q2 2018</b>	<b>Q3 2018</b>	<b>Q4 2018</b>	<b>Q1 2019</b>
<b>Total Revenue</b>	<b>14.1</b>	<b>17.8</b>	<b>21.2</b>	<b>23.5</b>	<b>26.0</b>
<b>Gross Margin</b>	<b>60%</b>	<b>63%</b>	<b>61%</b>	<b>59%</b>	<b>67%</b>
<b>Adjusted EBITDA</b>	<b>(3.2)</b>	<b>(0.8)</b>	<b>0.2</b>	<b>0.8</b>	<b>1.8</b>
<b>Adjusted EBITDA Margin</b>	<b>-23%</b>	<b>-4%</b>	<b>1%</b>	<b>3%</b>	<b>7%</b>

To be frank, these margins aren't great but we do understand the business is in growth mode. Currently, the company has \$57.4M on hand, but that does not include the \$16M they spent to acquire OTTR in late April. So the company most likely has less than \$40M in the vault right now and expects to be cash flow breakeven this year. The company doesn't have any debt but that's mainly because the company appears to prefer secondary offerings. For example, just in November the company raised approximately \$49M by issuing an additional 2M shares at \$24.50 per share. In our eyes, there is a strong possibility of another equity raise in the near future even though taking on debt may be a better option now that the company is beginning to ramp up their business.

Moving forward, how does CDNA compare to peers in the testing space like that of Natera (NTRA), Veracyte (VCYT), Genomic Health (GHDX), NeoGenomics (NEO), and Guardant Health (GH)?



What we gather from the table above is that CDNA is one of the more expensive names on a price/sales basis (12.9x) but is also one of the faster growing names in the space.



Performance-wise, while over 50% is solid, CDNA actually hasn't been the best so far this year. What these names do allow us to do though is understand that CDNA can surely run some more if the others are. In addition, seeing a performer like GH have the ability to obtain a sky-high 51.6x sales also lets us know that these testing companies may have a taller ceiling than we think.

### Technical Analysis



Looking at the charts, CDNA has some serious momentum on its side. I want to dial into one part of the chart for a moment. If we look around May 13-20, the stock pulled back from the upper part of its Bollinger Band, around \$34. It was a resistance level and it didn't break it

so it retreated. The stock didn't tank though even though the run came from \$26. It pulled back exactly to its pivot point of \$31.12 and held. This is a strong sign as it held its support line and has since climbed back up. Where we are now is very crucial because the stock is gearing up to test its all-time high of \$39.38. Before it gets there though the upper Bollinger band of \$38.28 is going to be the first resistance level it has to take down. Remember it didn't on the last run up and returned to its support line. There's a good chance that happens again. So let's say it doesn't break above \$38.28, my estimate would be that it's going to come back down to \$35.67, the support line. If it holds, there is a good shot it will go back again to try and break to its all-time highs and if it does break that it will probably unleash a fury of traders who get it on the momentum. In the case it pulls back and \$35.67 doesn't hold, then the next support area will be the 20-day moving average of \$33.91. Considering the stock just hit overbought on the Williams %R, I personally believe a pullback to that \$35.67 is more of a possibility right now as volume hasn't been too strong as of late and will most likely be needed to break through to new highs.

All in all, this space is very hot right now and owning these names for the long-term seems like a good move and might be something we do ourselves. As we usually do, the first purchase won't be our full position, especially with these volatile names and we'd also diversify by buying more than one company in the space. As we said, these companies are not "cheap" or fundamentally healthy by any means. They are seeking to gain as much market share as possible as competition grows fierce. It should also be noted that over the course of the last 3 months, insiders have not been keen on buying shares as there has been a total of 253,696 shares sold by insiders vs. purchases of 1,663 shares. Over the course of the last 12 months, the numbers are bit closer as purchases amount to 706,365 shares vs. 924,062 shares sold as per NASDAQ. As with all pharma stocks especially, be sure to take into account your risk tolerance and if you decide to add these names to your portfolio ensure it's added to one that is diversified.